

CHAPTER SEVEN



Human Settlements

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POPULATION & POVERTY

7.1 The root cause of environmental degradation in India can be attributed to rapid growth of population. India has approximately 18 per cent of the world population but only 2 per cent of the geographical area.

7.2 In 1972, in the Stockholm Conference on Environment, the then Prime Minister of India, Smt. Indira Gandhi had said that poverty is a great pollutant. Twenty years later, in 1992, World Bank stated, “poor are the agents and victims of environmental degradation”. The poor become agents of environmental degradation when they are victims of it.

7.3 Human development is also adversely affected by the environmental degradation. Two of the environmental indicators, viz. access to the safe drinking water and the sanitation are closely linked with two of the very important human development indicators, viz. an infant mortality rate and the life expectancy. Polluted air and poor and unhygienic conditions in settlements contribute to reduction in life expectancy and increase in infant mortality. Life expectancy in India is still on very low ebb and an infant mortality rate is much more than desirable. The poor, therefore, take fertility decisions to compensate for all those factors and to avoid risks. Larger population leads to more poverty and worsens the environment, and creates vicious cycle.

HOUSING AND BASIC SERVICES

7.4 Access to safe drinking water and proper sanitation is both a right and a basic need. It has a significant bearing on the achievements of other Millennium

Development Goals including poverty reduction, and gender equality. However, despite two decades of concerted efforts by national governments and international communities, equitable access to safe drinking water supply and improved sanitation for all remains elusive. It is a pressing development issue.

7.5 Almost two-thirds of the world's population without access to safe water and 80 percent without access to improved sanitation, lives in Asia. In the last decade of the 20th century, Asian countries invested about \$60 billion in water supply and about \$ 11 billion in sanitation. This enabled about 585 million people in both rural and urban areas to gain access to safe water supply, and the Johannesburg Summit goal of halving the number of people without access to improved sanitation by 2015, are to be achieved, about 1 billion people in Asia would have to obtain access to safe drinking water and another 1 billion people to improved sanitation.

7.6 Water is a finite resource. Conserving water is one way of ensuring that more is available for those who do not have it. The reduction of non-revenue water in Asia (currently ranging from 25-70 per cent in most water utilities) will significantly lower capital requirements for new investments and conserve. It costs far less to reduce non-revenue water than to expand capacity and perpetuate system inefficiencies. Access can also be expanded by applying the results of research in new technologies that separate water use (e. g., for cooking, drinking, bathing, sanitation), and through natural means such as rainwater harvesting and storage. In conjunction, water quality must remain a key focus area.

7.7 We do not need only food, we also need potable drinking water, adequate system for disposal of excreta, good sanitation and personal hygiene to reduce prevalence of morbidity. Several studies carried out in our villages confirm that diarrhea and respiratory diseases are the most common and dangerous diseases affecting children. The majority of illness tends to synergies malnutrition both by demanding higher energy intake to meet the rise in BMR which accompany fever and by requiring higher intake of protein and other nutrients to form antibodies to fight the illness. It is this negative correlation that Japan used to formulate its policy in post war years to provide water for drinking, pit latrines to dispose of excreta, sanitation to control breeding of flies and mosquitoes, which in turn resulted an increase in life expectation of 12 years during the immediate post war decade.

SLUM POPULATION

7.8 A total of 42.6 million people living in 8.2 million households have been enumerated in slums of 640 cities/towns spread across 26 states and union territories in 2001 census. The slum population constitutes 4 percent of the total population of the country. The slum dwellers in the country constitute nearly a seventh of the total urban population of the states and union territories reporting slum population and 23.1 percent of the population of the 640 cities/towns reporting slums.

7.9 The large urban cities are the centres of economic growth and contributes significantly to the GDP of the country. Cities with population above 100,000 accounts for 60 percent of country's population in 2001. About 17.7 million population lives in the cities with population above one million, which is 41.6 percent of the total slum population in the country. In absolute numbers, Greater Mumbai has the highest slum population of around 6.5 million followed by Delhi 1.9

million and Kolkata 1.5 million. The slum areas of Surat, Hyderabad, Chennai and Nagpur have more than half a million population each.

SOLID WASTE AND HAZARDOUS MATERIAL MANAGEMENT

7.10 Due to a rapid growth of urbanization, there is a substantial increase in generation of solid waste in both absolute and per capita terms. Surveys have been conducted to assess for solid waste generation, collection, treatment and disposal in 291 Class I cities and 345 Class II cities. It has been indicated that very little amount of waste generated is treated. The problems in management of wastes relate to its collection, handling, transport and disposal. Segregation of solid wastes is not uncommon in India as much of recycling work is being done either by ragpickers or non-Governmental agencies in few areas. Proper sanitary landfilling sites need to be developed which are effective in keeping the surface and ground water free from leachates.

7.11 When this solid waste is not collected and disposed of efficiently and effectively, it attracts rodents and flies which then spread diseases. It also pollutes and degrades land and water resources. If these wastes are left untreated, they would ferment slowly and produce bio-gas which would be distributed in the atmosphere. The bio-gas contains 65-70% methane gas which is a green house gas, have a global warming potential 34 times more than that of Carbon Dioxide. Therefore, development of suitable technologies for utilization of wastes is essential to minimize adverse health and environment consequences. Comprehensive guidelines are available with Central Pollution Control Board for Toxic Waste Management including hospital wastes.

STUDY ON SOLID WASTES IN DELHI

7.11 As per a study conducted in 1999, to generate data on Solid Wastes produced in Delhi, it was found that an average daily generation of municipal solid wastes in Delhi is 5327 tons. Its physical analysis revealed that the wastes consist of about 47% of biodegradable component. The recyclable components include paper and cardboard (6.7%), plastics (4.17%) and metal (1%). Total revenues to be earned through selling out these recyclable components will be of the order of crores of rupees. Data revealed that a large amount of Municipal Solid Waste generated can be recycled and reused. Technique and technologies for the same are available. It is also economically attractive and commonly practised by many countries in the world.

PLASTICS WASTE MANAGEMENT

7.12 Use of plastics have grown manifolds all over the world as it has many advantages. They are light, easy to mould, durable and easy to adopt to different user requirements. However, plastics are difficult to destroy and are classified as non-biodegradable. On the other hand, it is easy to recycle plastics.

7.13 In the Indian context, it is seen that the growth of the plastic industries is phenomenal. Polymer demand in India has consistently recorded double digit growth rates, trebling every 10 years. India's per capita consumption of 1.6 kg of plastics in 1998 was expected to rise to around 4 Kg by the year 2000. However, as compared to the world's statistics of per capita consumption of plastics, it is still far less. In the year 1998, the per capita consumption of Western Europe was 60 Kg. that of Japan 70 Kg. and of USA 78 Kg. as against 1.6 Kg of India. Also, about 60% of the plastic wastes generated in India are recycled which is the highest in the world. However, the remaining 40 % of the plastic wastes remains uncollected, unsegregated, strewn on the ground, littered around in open drains or in unmanaged garbage dumps. The collection of such Soiled Waste including

the one recycled three or even four times earlier, is not only uneconomical for recovery of material, but also unhygienic and undermines the environmental benefits of materials recycling. These indiscriminately disposed solid plastic wastes are of concern in view of causing chokage of municipal sewers, blocking of the storm water run-offs in drains particularly in hilly areas, causing deaths to many animals, like, cows which feed on the garbage food thrown in polythene bags.

Table 7.1.1: Population Totals - India and States

(Numbers)

Sl. No.	States/U.Ts.	1981		1991		2001	
		Male	Female	Male	Female	Male	Female
1	2	3	4	5	6	7	8
	States						
1	Andhra Pradesh	27,109,616	26,441,410	33,724,581	32,783,427	38,527,413	37,682,594
2	Arunachal Pradesh	339,322	292,517	465,004	399,554	579,941	518,027
3	Assam	9,444,037	8,597,211	11,657,989	10,756,333	13,777,037	12,878,491
4	Bihar	35,930,560	33,984,174	33,838,238	30,692,316	43,243,795	39,754,714
5	Chhattisgarh++	..	..	8,872,620	8,742,308	10,474,218	10,359,585
6	Goa	510,152	497,597	594,790	575,003	687,248	660,420
7	Gujarat	17,552,640	16,533,159	21,355,209	19,954,373	26,385,577	24,285,440
8	Haryana	6,909,679	6,012,440	8,827,474	7,636,174	11,363,953	9,780,611
9	Himachal Pradesh	2,169,931	2,110,887	2,617,467	2,553,410	3,087,940	2,989,960
10	Jammu & Kashmir+	3,164,660	2,822,729	4,142,082	3,694,969	5,360,926	4,782,774
11	Jharkhand++	..	..	11,363,853	10,480,058	13,885,037	13,060,792
12	Karnataka	18,922,627	18,213,087	22,951,917	22,025,284	26,898,918	25,951,644
13	Kerala	12,527,767	12,925,913	14,288,995	14,809,523	15,468,614	16,372,760
14	Madhya Pradesh	26,886,305	25,292,539	25,394,673	23,171,569	31,443,652	28,904,371
15	Maharashtra	32,414,432	30,368,386	40,825,618	38,111,569	50,400,596	46,478,031
16	Manipur ¹	721,006	699,947	938,359	898,790	1,161,952	1,131,944
17	Meghalaya	683,710	652,109	907,687	867,091	1,176,087	1,142,735
18	Mizoram	257,239	236,518	358,978	330,778	459,109	429,464
19	Nagaland	415,910	359,020	641,282	568,264	1,047,141	942,895
20	Orissa	13,309,786	13,060,485	16,064,146	15,595,590	18,660,570	18,144,090
21	Punjab	8,937,210	7,851,705	10,778,034	9,503,935	12,985,045	11,373,954
22	Rajasthan	17,854,154	16,407,708	23,042,780	20,963,210	29,420,011	27,087,177
23	Sikkim	172,440	143,945	216,427	190,030	288,484	252,367
24	Tamil Nadu	24,487,624	23,920,453	28,298,975	27,559,971	31,400,909	31,004,770
25	Tripura	1,054,846	998,212	1,417,930	1,339,275	1,642,225	1,556,978
26	Uttaranchal++	..	..	3,674,540	3,438,943	4,325,924	4,163,425
27	Uttar Pradesh	58,819,535	52,042,977	70,362,417	61,636,387	87,565,369	78,632,552
28	West Bengal	28,560,901	26,019,746	35,510,633	32,567,332	41,465,985	38,710,212
	Union Territories						
1	A&N Islands	107,261	81,480	154,369	126,292	192,972	163,180
2	Chandigarh	255,278	196,332	358,614	283,401	506,938	393,697
3	D&N Haveli	52,515	51,161	70,953	67,524	121,666	98,824
4	Daman & Diu	38,298	40,683	51,595	49,991	92,512	65,692
5	Delhi	3,440,081	2,780,325	5,155,512	4,265,132	7,607,234	6,243,273
6	Lakshadweep	20,377	19,872	26,618	25,089	31,131	29,519
7	Pondicherry	304,561	299,910	408,081	399,704	486,961	487,384
All India⁺ & ¹		353,374,460	329,954,637	439,358,440	407,062,599	532,223,090	496,514,346

Source : Office of the Registrar General, India

+ : The 1991 Census was not held in Jammu & Kashmir. 1991 Census figures include interpolated Population of

++ : The States of Uttaranchal, Jharkhand and Chhattisgarh are carved out from Uttar Pradesh, Bihar, and Madhya Pradesh respectively, in 2001 Census. In 1991 the recasted figures for these States are given as per jurisdiction of 2001

1 India and Manipur figures include estimated figures for those of the three sub-divisions viz. Mao Maram, Paomata and Purul of Senapati district of Manipur as population Census 2001 in these three sub-divisions were cancelled due to technical and administrative reasons.

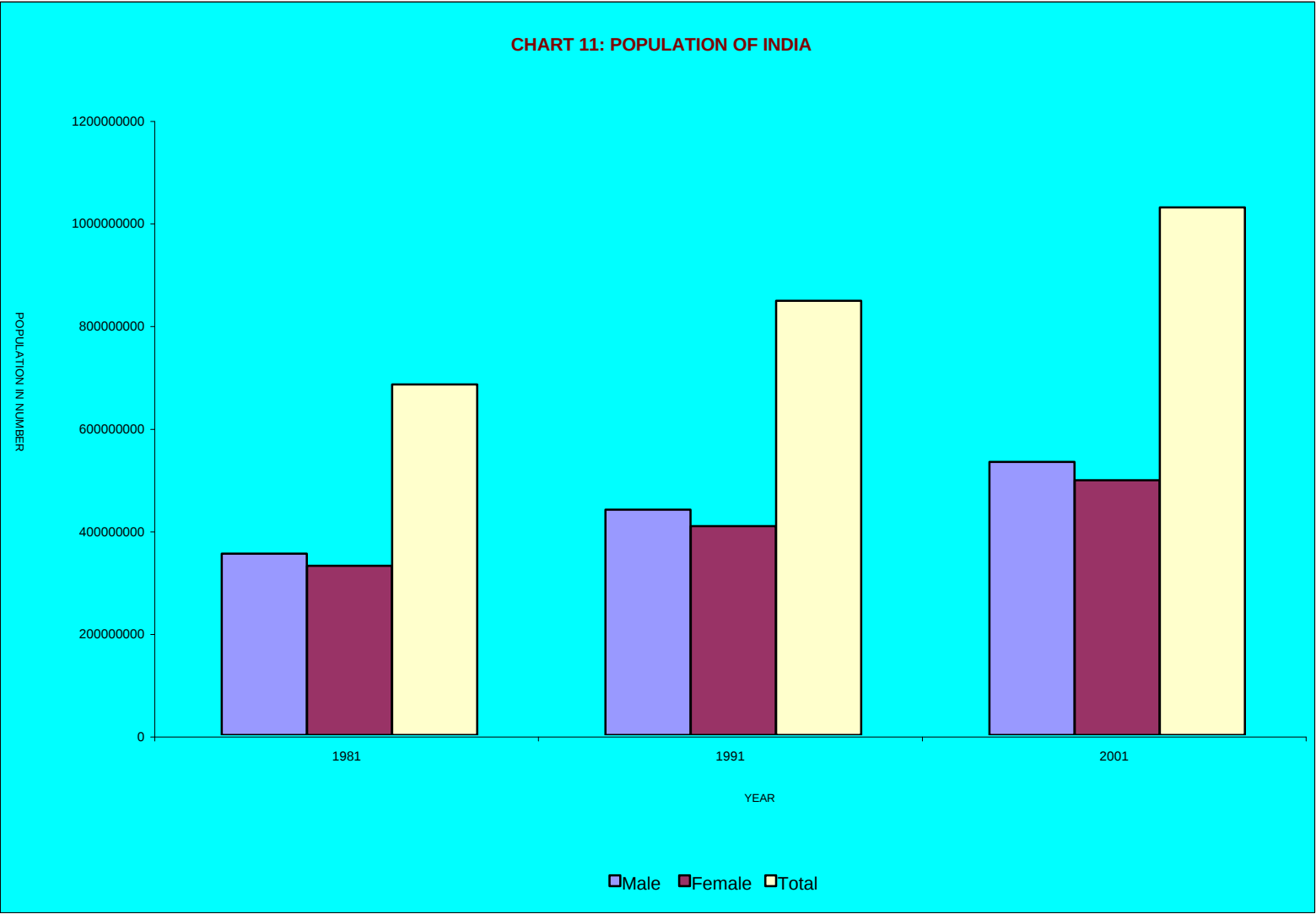


TABLE 7.1.2 : INFANT MORTALITY RATE*(Per Thousand Live Births)*

Sl. No.	Year	Sex		Sector		Overall
		Female	Male	Rural	Urban	
1	2	3	4	5	6	7
1	1985	98	96	107	59	97
6	1990	81	78	86	50	80
11	1995*	76	73	80	48	74
12	1996*	73	71	77	46	72
13	1997*	72	70	77	45	71
14	1998*	74	70	77	45	72
15	1999	70	71	75	44	70
16	2000	69	67	74	44	68
17	2001	68	64	72	42	66
18	2002**	62	62	69	40	63
19	2003	-	-	66	38	60

Source : Office of the Registrar General, India, Sample Registration System

* : Excludes Jammu and Kashmir due to non-receipt of returns.

** : Excludes Nagaland (Rural) due to part-receipt of returns.

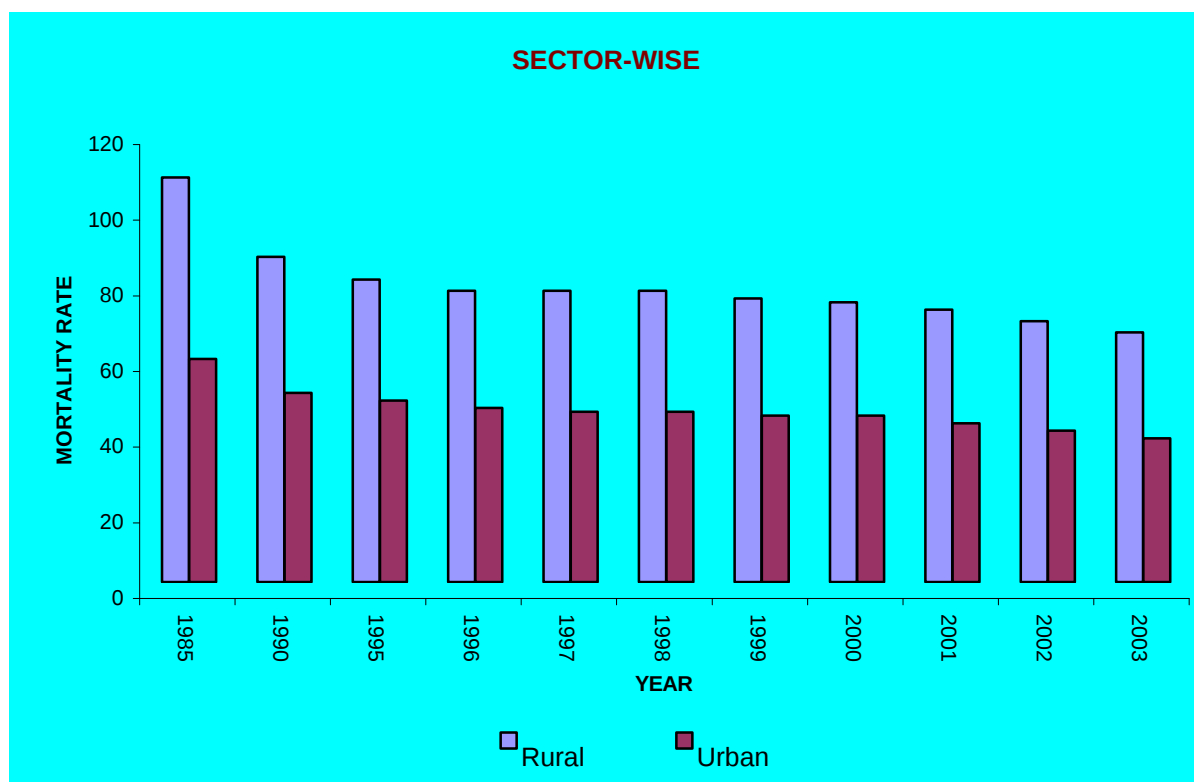
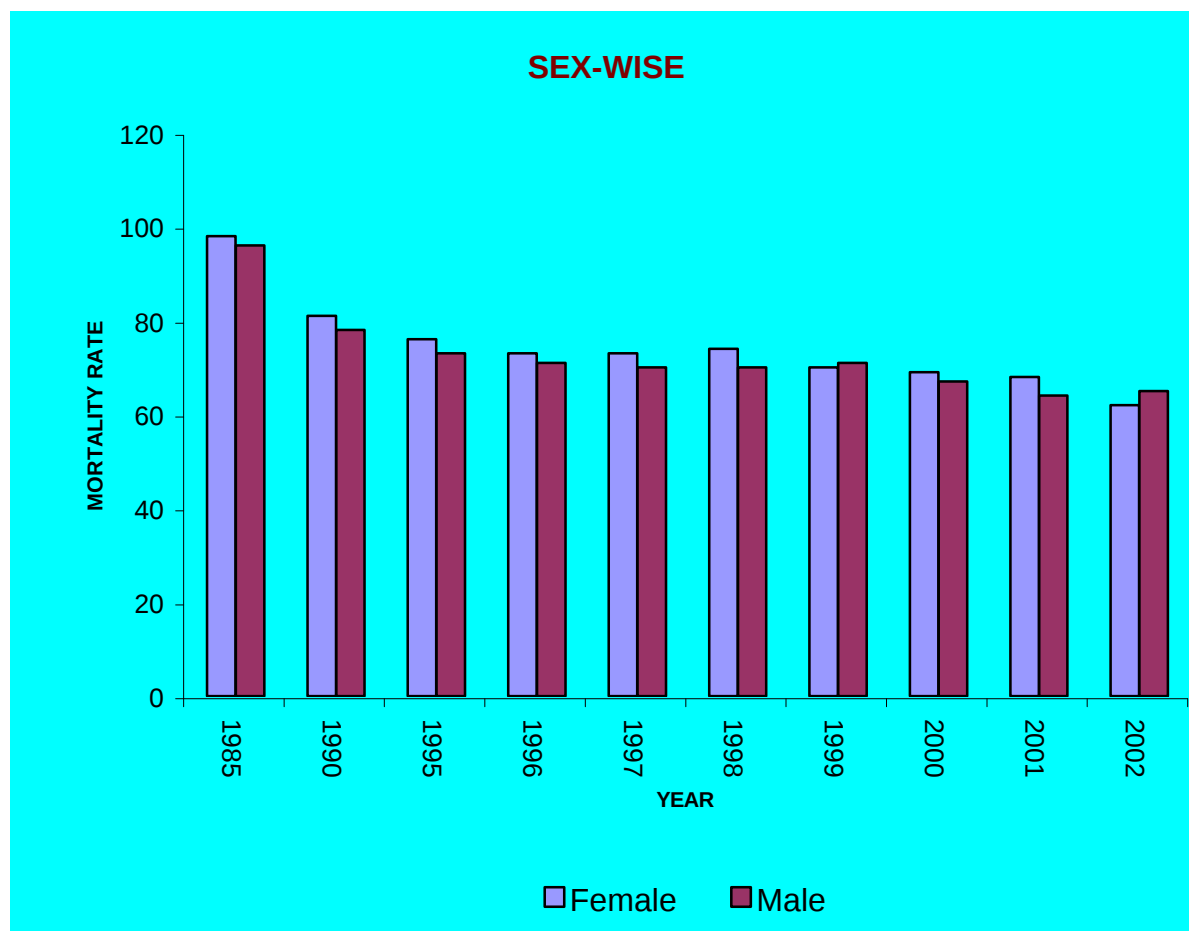
CHART 12 : INFANT MORTALITY RATE (PER THOUSAND LIVE BIRTHS)

Table 7.1.3 : EXPECTATION OF LIFE AT BIRTH*(In Years)*

Sl. No.	Year	Female	Male	Combined
1	2	3	4	5
1	1901-11	23.3	22.6	22.9
2	1911-21	20.9	19.4	20.1
3	1921-31	26.6	26.9	26.8
4	1931-41	31.4	32.1	31.8
5	1941-51	31.7	32.4	32.1
6	1951-61	40.6	41.9	41.3
7	1961-71	44.7	46.4	45.6
8	1970-75	49.0	50.5	49.7
9	1976-80	52.1	52.5	52.3
10	1981-85	55.7	55.4	55.5
11	1986-90	58.1	57.7	57.7
12	1987-91*	58.6	58.1	58.3
13	1988-92*	59.0	58.6	58.7
14	1989-93*	59.7	59.0	59.4
15	1990-94*	60.4	59.4	60.0
16	1991-95*	60.9	59.7	60.3
17	1992-96*	61.4	60.1	60.7
18	1993-97*	61.8	60.4	61.1
19	1994-98	62.2	60.6	61.4
20	1995-99	62.5	60.8	61.7
21	1996-00	62.7	61.0	61.9
22	1997-01	63.0	61.3	62.2
23	1998-02	63.3	61.6	62.5

Source : Office of the Registrar General, India.

Notes : Figures for 1901-11 to 1961-71 are based on Census Actuarial Reports and for 1970-75 onwards on the basis of estimate from Sample Registration System

* : Excludes Jammu and Kashmir

The expectation of life at birth of female which was lower than that of male till 1980 has shown an upward trend during the decade 1981-90 and thereafter. This trend is similar in respect of almost all the states except in a few states i.e. Bihar and Orissa. This may be one of the reasons that in these States the combined expectation of life at birth is much lower than the National Average of 61.7(1995-99).

One of the major reasons for the decline in expectation of life in these states can be attributed to rapid growth of population and poverty, more than forty percent population living below the poverty line which is much more than National Average of 26.1 percent.

CHART 13 : EXPECTATION OF LIFE AT BIRTH

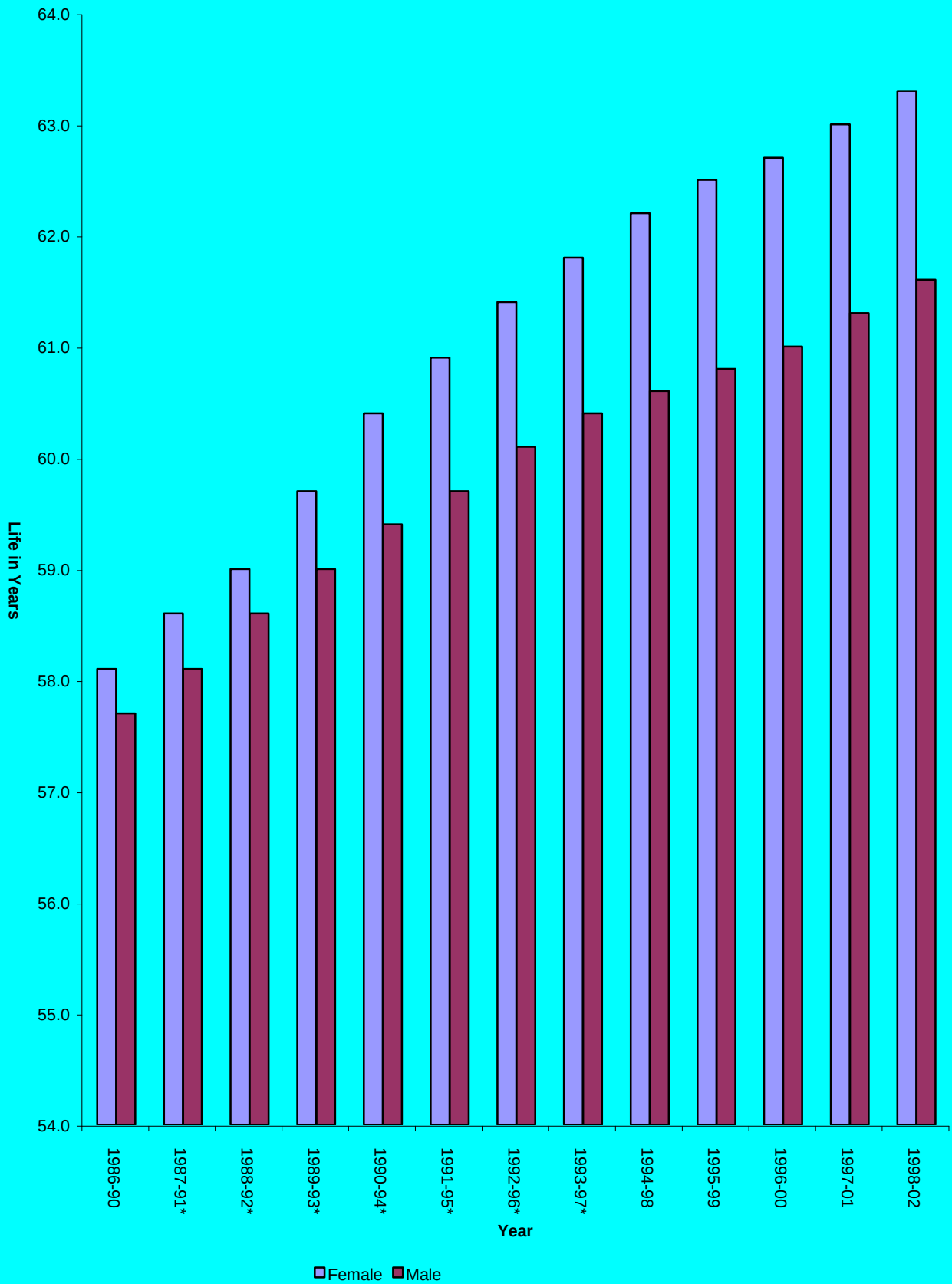


TABLE 7.1.4 (a): STATE-WISE PERCENTAGE OF POPULATION BELOW THE POVERTY LINE -RURAL

Sl. No.	States/Union Territories	1973-74	1977-78	1983	1987-88	1993-94	1999-2000
1	2	3	4	5	6	7	8
	States						
1	Andhra Pradesh	48.41	38.11	26.53	20.92	15.92	11.05
2	Arunachal Pradesh	52.67	59.82	42.60	39.35	45.01	40.04
3	Assam	52.67	59.82	42.60	39.35	45.01	40.04
4	Bihar	62.99	63.25	64.37	52.63	58.21	44.30
5	Goa	46.85	37.64	14.81	17.64	5.34	1.35
6	Gujarat	46.35	41.76	29.80	28.67	22.18	13.17
7	Haryana	34.23	27.73	20.56	16.22	28.02	8.27
8	Himachal Pradesh	27.42	33.49	17.00	16.28	30.34	7.94
9	Jammu & Kashmir	45.51	42.86	26.04	25.70	30.34	3.97
10	Karnataka	55.14	48.18	36.33	32.82	29.88	17.38
11	Kerala	59.19	51.48	39.03	29.10	25.76	9.38
12	Madhya Pradesh	62.66	62.52	48.90	41.92	40.64	37.06
13	Maharashtra	57.71	63.97	45.23	40.78	37.93	23.72
14	Manipur	52.67	59.82	42.60	39.35	45.01	40.04
15	Meghalaya	52.67	59.82	42.60	39.35	45.01	40.04
16	Mizoram	52.67	59.82	42.60	39.35	45.01	40.04
17	Nagaland	52.67	59.82	42.60	39.35	45.01	40.04
18	Orissa	67.28	72.38	67.53	57.64	49.72	48.01
19	Punjab	28.21	16.37	13.20	12.60	11.95	6.35
20	Rajasthan	44.76	35.89	33.50	33.21	26.46	13.74
21	Sikkim	52.67	59.82	42.60	39.35	45.01	40.04
22	Tamil Nadu	57.43	57.68	53.99	45.80	32.48	20.55
23	Tripura	52.67	59.82	42.60	39.35	45.01	40.04
24	Uttar Pradesh	56.53	47.60	46.45	41.10	42.28	31.22
25	West Bengal	73.16	68.34	63.05	48.30	40.80	31.85
	Union Territories						
1	Andman & Nicobar Island	57.43	57.68	53.99	45.80	32.48	20.55
2	Chandigarh	27.96	27.32	23.79	14.67	11.35	5.75
3	Dadra & Nagar Haveli	46.85	37.64	14.81	67.11	51.95	17.57
4	Daman & Diu	NA	NA	NA	NA	5.34	1.35
5	Delhi	24.44	30.19	7.66	1.29	1.90	0.40
6	Lakshadweep	59.19	51.48	39.03	29.10	25.76	9.38
7	Pondicherry	57.43	57.68	53.99	45.80	32.48	20.55
	All India	56.44	53.07	45.65	39.09	37.27	27.09

Source : Planning Commission Estimates.

- Notes :
1. Poverty Ratio of Assam is used for Sikkim, Arunachal Pradesh, Meghalaya, Mizoram, Manipur, Nagaland, and Tripura.
 2. Poverty Line of Maharashtra and expenditure distribution of Goa is used to estimate Poverty Ratio of Goa.
 3. Poverty Line of Himachal Pradesh and expenditure distribution of Jammu & Kashmir is used to estimate poverty ratio of Jammu & Kashmir.
 4. Poverty Ratio of Tamilnadu is used for Pondicherry and A & N Islands.
 5. Urban Poverty Ratio of Punjab used for both rural and urban Poverty of Chandigarh.
 - 6 . Poverty Line of Maharashtra and expenditure distribution of Dadra & Nagar Haveli is used to estimate Poverty Ratio of Dadra & Nagar Haveli.
 7. Poverty Ratio of Goa is used for Daman & Diu.
 8. Poverty ratio of Kerala is used for Lakshadweep.
 9. Urban poverty ratio of Rajasthan for the Year 1999-2000 may be treated as tentative.
 10. Poverty Ratio of Himachal Pradesh is used for Jammu & Kashmir for 1993-94.

TABLE 7.1.4 (b) : STATE-WISE PERCENTAGE OF POPULATION BELOW THE POVERTY LINE- URBAN

Sl. No.	States	1973-74	1977-78	1983	1987-88	1993-94	1999-2000
1	2	3	4	5	6	7	8
	States						
1	Andhra Pradesh	50.61	43.55	36.30	40.11	38.33	26.63
2	Arunachal Pradesh	36.92	32.71	21.73	9.94	7.73	7.47
3	Assam	36.92	32.71	21.73	9.94	7.73	7.47
4	Bihar	52.96	48.76	47.33	48.73	34.50	32.91
5	Goa	37.69	36.31	27.00	35.48	27.03	7.52
6	Gujarat	52.57	40.02	39.14	37.26	27.89	15.59
7	Haryana	40.18	36.57	24.15	17.99	16.38	9.99
8	Himachal Pradesh	13.17	19.44	9.43	6.29	9.18	4.63
9	Jammu & Kashmir	21.32	23.71	17.76	17.47	9.18	1.98
10	Karnataka	52.53	50.36	42.82	48.42	40.14	25.25
11	Kerala	62.74	55.62	45.68	40.33	24.55	20.27
12	Madhya Pradesh	57.65	58.66	53.06	47.09	48.38	38.44
13	Maharashtra	43.87	40.09	40.26	39.78	35.15	26.81
14	Manipur	36.92	32.71	21.73	9.94	7.73	7.47
15	Meghalaya	36.92	32.71	21.73	9.94	7.73	7.47
16	Mizoram	36.92	32.71	21.73	9.94	7.73	7.47
17	Nagaland	36.92	32.71	21.73	9.94	7.73	7.47
18	Orissa	55.62	50.92	49.15	41.63	41.64	42.83
19	Punjab	27.96	27.32	23.79	14.67	11.35	5.75
20	Rajasthan	52.13	43.53	37.94	41.92	30.49	19.85
21	Sikkim	36.92	32.71	21.73	9.94	7.73	7.47
22	Tamil Nadu	49.40	48.69	46.96	38.64	39.77	22.11
23	Tripura	36.92	32.71	21.73	9.94	7.73	7.47
24	Uttar Pradesh	60.09	56.23	49.82	42.96	35.39	30.89
25	West Bengal	34.67	38.20	32.32	35.08	22.41	14.86
	Union Territories						
1	Andman& Nicobar Islands	49.40	48.69	46.96	38.64	39.77	22.11
2	Chandigarh	27.96	27.32	23.79	14.67	11.35	5.75
3	Dadra & Nagar Haveli	37.69	36.31	27.00	-	39.93	13.52
4	Daman & Diu	NA	NA	NA	NA	27.03	7.52
5	Delhi	52.23	33.51	27.89	13.56	16.03	9.42
6	Lakshadweep	62.74	55.62	45.68	40.33	24.55	20.27
7	Pondicherry	49.40	48.69	46.96	38.64	39.77	22.11
	All India	49.01	45.24	40.79	38.20	32.36	23.62

Source : Planning Commission Estimates.

- Notes : 1. Poverty Ratio of Assam is used for Sikkim, Arunachal Pradesh, Meghalaya, Mizoram, Manipur, Nagaland, and Tripura.
2. Poverty Line of Maharashtra and expenditure distribution of Goa is used to estimate Poverty Ratio of Goa.
3. Poverty Line of Himachal Pradesh and expenditure distribution of Jammu & Kashmir is used to estimate poverty ratio of Jammu & Kashmir.
4. Poverty Ratio of Tamilnadu is used for Pondicherry and A & N Islands.
5. Urban Poverty Ratio of Punjab used for both rural and urban Poverty of Chandigarh.
6. Poverty Line of Maharashtra and expenditure distribution of Dadra & Nagar Haveli is used to estimate Poverty Ratio of Dadra & Nagar Haveli.
7. Poverty Ratio of Goa is used for Daman & Diu.
8. Poverty ratio of Kerala is used for Lakshadweep.
9. Urban poverty ratio of Rajasthan for the Year 1999-2000 may be treated as tentative.
10. Poverty Ratio of Himachal Pradesh is used for Jammu & Kashmir for 1993-94.

TABLE 7.1.4 (c): STATE-WISE PERCENTAGE OF POPULATION BELOW THE POVERTY LINE -(RURAL-URBAN)

Sl. No.	States	1973-74	1977-78	1983	1987-88	1993-94	1999-2000
1	2	3	4	5	6	7	8
	States						
1	Andhra Pradesh	48.86	39.31	28.91	25.86	22.19	15.77
2	Arunachal Pradesh	51.93	58.32	40.88	36.22	39.35	33.47
3	Assam	51.21	57.15	40.47	36.21	40.86	36.09
4	Bihar	61.91	61.55	62.22	52.13	54.96	42.60
5	Goa	44.26	37.23	18.90	24.52	14.92	4.40
6	Gujarat	48.15	41.23	32.79	31.54	24.21	14.07
7	Haryana	35.36	29.55	21.37	16.64	25.05	8.74
8	Himachal Pradesh	26.39	32.45	16.40	15.45	28.44	7.63
9	Jammu & Kashmir	40.83	38.97	24.24	23.82	25.17	3.48
10	Karnataka	54.47	48.78	38.24	37.53	33.16	20.04
11	Kerala	59.79	52.22	40.42	31.79	25.43	12.72
12	Madhya Pradesh	61.78	61.78	49.78	43.07	42.52	37.43
13	Maharashtra	53.24	55.88	43.44	40.41	36.86	25.02
14	Manipur	49.96	53.72	37.02	31.35	33.78	28.54
15	Meghalaya	50.20	55.19	38.81	33.92	37.92	33.87
16	Mizoram	50.32	54.38	36.00	27.52	25.66	19.47
17	Nagaland	50.81	56.04	39.25	34.43	37.92	32.67
18	Orissa	66.18	70.07	65.29	55.58	48.56	47.15
19	Punjab	28.15	19.27	16.18	13.20	11.77	6.16
20	Rajasthan	46.14	37.42	34.46	35.15	27.41	15.28
21	Sikkim	50.86	55.89	39.71	36.06	41.43	36.55
22	Tamil Nadu	54.94	54.79	51.66	43.39	35.03	21.12
23	Tripura	51.00	56.88	40.03	35.23	39.01	34.44
24	Uttar Pradesh	57.07	49.05	47.07	41.46	40.85	31.15
25	West Bengal	63.43	60.52	54.85	44.72	35.66	27.02
	Union Territories						
1	Andman & Nicobar Islands	55.56	55.42	52.13	43.89	34.47	20.99
2	Chandigarh	27.96	27.32	23.79	14.67	11.35	5.75
3	Dadra & Nagar Haveli	46.55	37.20	15.67	67.11	50.84	17.14
4	Daman & Diu	NA	NA	NA	NA	15.80	4.44
5	Delhi	49.61	33.23	26.22	12.41	14.69	8.23
6	Lakshadweep	59.68	52.79	42.36	34.95	25.04	15.60
7	Pondicherry	53.82	53.25	50.06	41.46	37.40	21.67
	All India	54.88	51.32	44.48	38.86	35.97	26.1

Source : Planning Commission Estimates.

Notes : 1. Poverty Ratio of Assam is used for Sikkim, Arunachal Pradesh, Meghalaya, Mizoram, Manipur, Nagaland, and Tripura.

2. Poverty Line of Maharashtra and expenditure distribution of Goa is used to estimate Poverty Ratio of Goa.

3. Poverty Line of Himachal Pradesh and expenditure distribution of Jammu & Kashmir is used to estimate poverty ratio of Jammu & Kashmir.

4. Poverty Ratio of Tamilnadu is used for Pondicherry and A & N Islands.

5. Urban Poverty Ratio of Punjab used for both rural and urban Poverty of Chandigarh.

6. Poverty Line of Maharashtra and expenditure distribution of Dadra & Nagar Haveli is used to estimate Poverty Ratio of Dadra & Nagar Haveli.

7. Poverty Ratio of Goa is used for Daman & Diu.

8. Poverty ratio of Kerala is used for Lakshadweep.

9. Urban poverty ratio of Rajasthan for the Year 1999-2000 may be treated as tentative.

10. Poverty Ratio of Himachal Pradesh is used for Jammu & Kashmir for 1993-94.

The estimates of poverty have been released from the year 1973-74 onward using the full survey data on household consumption expenditure collected by the National Sample Survey Organization (NSSO) at an interval of approximately five years. The estimates are available for the year 1973-74, 1977-78, 1983, 1987-88, 1993-94 and 1999-2000. The methodology behind these estimates, often termed as "official methodology", has been outlined in the Appendix VI.

The results show that during the last three decades the percentage of population below poverty line has declined significantly in rural areas as well as in urban areas. The 1999-2000 survey results have revealed that 27.09% of rural population and 23.62% of urban population is living below the poverty line.

CHART 14: PERCENTAGE OF POPULATION BELOW POVERTY LINE

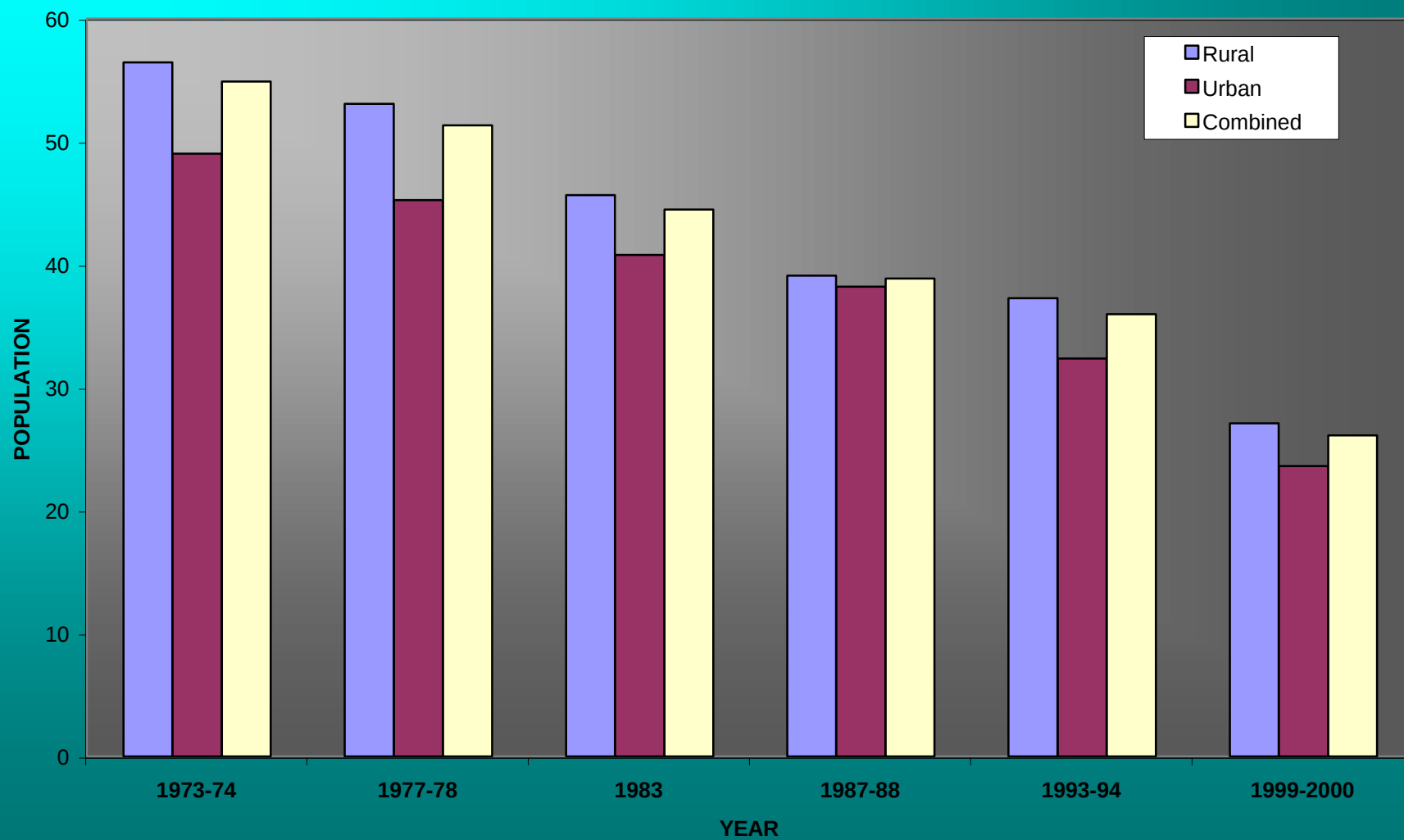


TABLE 7.2.1 : URBAN-RURAL BREAKUP OF TOTAL POPULATION, NUMBER OF HOUSEHOLDS, HOUSES AND AVERAGE SIZE OF HOUSEHOLDS, AVERAGE NO. OF HOUSEHOLDS AND PERSONS PER HOUSE

Sl. No.	Year	Total Population	No. of Households	No. of Houses	Av. Size of Households	Av. No of Household Per House	Av. No. of Persons Per House
1	2	3	4	5	6	7	8
1	1981*						
	Total	665,287,849	119,772,545	121782109**	5.6	1.0	5.5
	Urban	157,680,171	28,905,949	29,897,491	5.5	1.0	5.3
	Rural	507,607,678	90,866,596	91,884,618	5.6	1.0	5.5
2	1991+						
	Total	838,583,988	152,009,467	159425666**	5.5	1.0	5.3
	Urban	215,771,612	40,418,141	43,518,317	5.3	0.9	5.0
	Rural	622,812,376	111,591,326	115,907,349	5.6	1.0	5.4
3	2001++						
	Total	1,028,610,328	193,579,954	202973364#	5.3	1.0	5.1
	Urban	286,119,689	55,832,570	58,514,738	5.1	1.0	4.9
	Rural	742,490,639	137,747,384	144,458,626	5.4	1.0	5.1

Source : Office of Registrar General of India

* : Excluding Assam

+ : Excluding J & K

** : No. of Occupied residential houses + No. of Census houses vacant at the time of house listing.

++ India figures are final and exclude those of the three sub-divisions viz. Mao Maram, Paomata and Purul of Senapati district of Manipur as population Census 2001 in these three sub-divisions were cancelled due to technical and administrative reasons although a population census was carried out in these sub-divisions as per schedule.

The occupied residential houses and vacant houses are based on Census 2001 Houselisting data.

TABLE 7.2.2 : NUMBER OF HOUSEHOLDS, POPULATION AND OCCUPIED RESIDENTIAL AND VACANT HOUSES WITH RURA/ URBAN BREAK UP

Sl. No.	Total/ Urban/ Rural		Number of Households	Population			No. of Houses at the time of Houselisting		
				Total	Male	Female	Total #	Occupied residential	Vacant
1	2	3	4	5	6	7	8	9	10
1	Total	1981*							
		Total	119,772,545	665,287,849	343,930,423	321,357,426	121,782,109	113,735,542	8,046,567
		Institutional	247,457	3,790,700	3,116,289	674,411			
	Urban	Total	28,905,949	157,680,171	83,876,403	73,803,768	29,897,491	27,604,947	2,292,544
		Institutional	143,015	2,377,559	1,956,711	420,848			
	Rural	Total	90,866,596	507,607,678	260,054,020	247,553,658	91,884,618	86,130,595	5,754,023
		Institutional	104,442	1,413,141	1,159,578	253,563			
2	Total	1991+							
		Total	152,009,467	838,583,988	435,216,358	403,367,630	159,425,666	147,013,766	12,411,900
		Institutional	244,881	4,252,976	3,351,584	901,392			
	Urban	Total	40,418,141	215,771,612	113,936,953	101,834,659	43,518,317	39,073,337	4,444,980
		Institutional	140,702	2,406,841	1,893,949	512,892			
	Rural	Total	111,591,326	622,812,376	321,279,405	301,532,971	115,907,349	107,940,429	7,966,920
		Institutional	104,179	1,846,135	1,457,635	388,500			
3	Total	2001++							
		Total	193,579,954	1,028,610,328	532,156,772	496,453,556	202,973,364	187,162,172	15,811,192
		Institutional	460,717	7,802,866	5,460,238	2,342,628			
	Urban	Total	55,832,570	286,119,689	150,554,098	135,565,591	58,514,738	52,062,718	6,452,020
		Institutional	208,470	3,758,714	2,717,220	1,041,494			
	Rural	Total	137,747,384	742,490,639	381,602,674	360,887,965	144,458,626	135,099,454	9,359,172
		Institutional	252,247	4,044,152	2,743,018	1,301,134			

Source : Office of Registrar General of India

Note :

: No. of census houses (occupied residential + vacant)

* : Excluding Assam

+ : Excluding Jammu & Kashmir

++ India figures are final and exclude those of the three sub-divisions viz. Mao Maram, Paomata and Purul of Senapati district of Manipur as population Census 2001 in these three sub-divisions were cancelled due to technical and administrative reasons although a population census was carried out in these sub-divisions as per schedule.

TABLE 7.2.3 : HOUSEHOLD BY NUMBER OF DWELLING ROOMS

	No. of Households	Households having number of dwelling rooms						
		One Room	Two Room	Three Rooms	Four Room	Five or More Rooms	No exclusive room	Un-specified rooms
1	2	3	4	5	6	7	8	9
1981*								
Total	118,614,803	53,046,175	33,948,809	14,496,724	7,482,461	6,852,624	769,506	2,018,504
Rate	100.00	44.70	28.60	12.20	6.30	5.80	0.65	1.70
Urban	28,541,877	13,072,617	7,947,026	3,484,741	1,804,721	1,626,979	149,001	456,792
Rate	100.00	45.80	27.80	12.30	6.30	5.70	0.52	1.60
Rural	90,072,926	39,973,558	26,001,783	11,011,983	5,677,740	5,225,645	620,505	1,561,712
Rate	100.00	44.40	28.90	12.20	6.30	5.80	0.69	1.73
1991+								
Total	151,032,898	61,154,743	46,180,064	20,910,465	10,791,101	10,608,294	43,538	1,344,693
Rate	100.00	40.50	30.60	13.80	7.20	7.00	0.03	0.89
Urban	39,493,450	15,620,078	11,992,915	5,852,191	3,070,829	2,751,947	16,578	188,912
Rate	100.00	39.50	30.40	14.80	7.80	7.00	0.04	0.48
Rural	111,539,448	45,534,665	34,187,149	15,058,274	7,720,272	7,856,347	26,960	1,155,781
Rate	100.00	40.80	30.70	13.50	6.90	7.00	0.02	1.04
2001								
Total	191,963,935	73,856,117	57,571,314	27,541,899	14,361,957	12,660,232	5,972,416	-
Rate	100.00	38.47	29.99	14.35	7.48	6.60	3.11	-
Urban	53,692,376	18,852,794	15,857,448	9,176,931	4,656,850	3,900,405	1,247,948	-
Rate	100.00	35.11	29.53	17.09	8.67	7.26	2.32	-
Rural	138,271,559	55,003,323	41,713,866	18,364,968	9,705,107	8,759,827	4,724,468	-
Rate	100.00	39.78	30.17	13.28	7.02	6.34	3.42	-

Source: Office of the Registrar General of India

* : Excluding Assam Excluding houseless and Institutional Households

+ : Excluding J& K ,Excluding houseless and Institutional Households

**TABLE 7.2.4(b) : STATE WISE GAP IN SEWAGE GENERATION AND INSTALLED
TREATMENT CAPACITY IN CLASS II TOWNS**

(Sewage generation estimated on the basis of 2001 population)

Sl.No.	Name of State/ U.T.s	Number of cities	Estimated Sewage generation, MLD	Installed sewage treatment capacity MLD	Capacity gap in cities having STPs, MLD (A)	Sewage gap in cities having STPs, MLD (B)	Total capacity gap, MLD (A+B)	Planned sewage treatment capacity, MLD
1	2	3	4	5	6	7	8	9
1	Andaman & Nicobar Islands	0						
		52	177.001	10.42 (>3.441) (in 1 city)	Nil	173.56	173.56	
2	Andhra Pradesh							
3	Arunachal Pradesh	0	-	-	-	-	-	-
4	Assam	9	73.411			73.411	73.411	
5	Bihar	18	124.984	2.0 (In 1 city)	5.6	117.35	122.95	
6	Chandigarh	0						
7	Chhatisgarh	7	37.469			37.469	37.469	
8	Dadra & Nagar Haveli	0						
9	Daman and Diu	0						
10	Delhi	0						
				18.18 (> 4.703) (In 1 city)	Nil			
11	Goa	3	18.741			14.038	14.038	
12	Gujarat	36	286.777			286.777	286.777	
13	Haryana	7	30.053			30.053	30.053	
14	Himachal Pradesh	0						
15	Jammu & Kashmir	4	26.640			26.64	26.64	
16	Jharkhand	17	123.313			123.313	123.313	
				12.18 (>11.984) (In 2 cities)	Nil			
17	Karnataka	30	186.478			171.494	171.494	
18	Kerala	24	209.021			209.021	209.021	
19	Lakshadweep	0						
				9 (>6.95) (In 1 city)	Nil			
20	Madhya Pradesh	25	154.387			147.437	147.437	
				29 (>9.807) (In 2 cities)				
21	Maharashtra	44	238.954		2.9	229.002	231.902	
22	Manipur	0						
23	Meghalaya	1	6.540			6.54	6.54	
24	Mizoram	0						
25	Nagaland	1	8.801			8.8	8.801	
26	Orissa	15	97.875			97.875	97.875	
27	Pondicherry	1	8.325			8.325	8.325	
				19.3 (>12.654) (In 1 city)	Nil			
28	Punjab	20	208.252			188.952	188.952	23.500
29	Rajasthan	28	139.197	-		139.197	139.197	
30	Sikkim	0						
				29.3 (>10.795) (IN 3 cities)	Nil			
31	Tamil Nadu	57	202.879			192.084	192.084	
32	Tripura	0						
33	Uttar Pradesh	57	379.100	4.5 (In 2 cities)	0.9	373.728	374.628	8.110
34	Uttaranchal	4	39.617	6.3 (In 1 city)	4.4	28.876	33.276	-
35	West Bengal	29		59.4 (>24.556) (In 6 cities)		134.938	134.938	2.48
			160.656					
All-India		489	2965	200 (>143*) (In 22 cities)	14**	2822	2836	34.1

Source: Status of Sewage Treatment in India, (February.,2006)

TABLE 7.2.4 (c) : SEWAGE GENERATION AND TREATMENT CAPACITY IN CLASS I CITIES AND CLASS II TOWNS

City category & population (x)	Number of cities	Sewage generation, MLD	Installed sewage treatment capacity, MLD	Capacity gap in cities having STPs, MLD (A)	Sewage generation in cities having no STPs, MLD (B)	Total capacity gap, MLD (A+B)	Planned treatment capacity MLD
Class I > 10 lac	39	13503	4472 (in 29 cities)	6135	2896	9031	1549
Class I : 5 lakh < x > to 10 lakh	32	3836	485 (In 13 cities)	1293	2058	3351	123
Class I : 2 < x < 5 lakh	119	4807	768 (In 34 cities)	804	3235	4039	4
Class I : 1 lakh < x < 2 lakh	224	4018	322 (In 36 cities)	373	3323	3696	32.5
All Class I Cities :	414	26164 (100%)	6047 (23.1%) (in 112 cities)	8605 (32.9%)	11512 (44%)	20117 (76.9%)	1708.5 (6.5%)
ClassII : 0.5 lakh < x < 1 lakh	489	2965 (100%)	200(>143*) (4.8%) (In 22 town)	Nil	2822 (95.2%)	2822 (95.2%)	34.1 (1.15%)
All Class I cities and Class II towns	893	29129 (100%)	6190 (21.3%)	8605 (29.5%)	14334 (49.2%)	22939 (78.7%)	1742.6 (6.0%)

Source: Status of Sewage Treatment in India, (February, 2006)

Figures arrived at using data provided in Annexure I tables 2 to 5

* Estimated sewage of the cities having STPs.

**TABLE 7.2.5 : NUMBER OF HOMELESS HOUSEHOLDS AND
POPULATION SEX GROUP WISE WITH RURAL/URBAN
BREAK-UP**

Sl. No.		Numbers of Homeless households	Homeless Population		
			Total	Male	Female
1	2	3	4	5	6
1	1981*				
	Total	629929	2342954	1376512	966442
	Urban	209520	618843	406154	212689
	Rural	420409	1724111	970358	753753
2	1991+				
	Total	522,445	2,007,489	1,180,368	827,121
	Urban	216,917	725,592	471,077	254,515
	Rural	305,528	1,281,897	709,291	572,606
3	2001				
	Total	447,585	1,943,766	1,136,496	807,270
	Urban	187,810	778,599	502,344	276,255
	Rural	259,775	1,165,167	634,152	531,015

Source: Office of the Registrar General of India

* : Excluding Assam

+ : Excludes Jammu & Kashmir

TABLE 7.2.6 (a) : TOTAL URBAN POPULATION, POPULATION OF CITIES/TOWN REPORTING SLUMS AND SLUM POPULATION IN SLUM AREA- INDIA, STATES, UNION TERRITORIES- 2001

Sl. No.	State/Uts	Number of cities towns reporting slums	Total urban population of State/Ut	Population of cities/towns reporting slums	Total slum population	percentage of slum population to total	
						Urban population of States/Uts	Population of cities/towns reporting slums
1	2	3	4	5	6	7	8
1	Jammu & Kashmir	5	2516638	1446148	268513	10.7	18.6
2	Punjab	27	8262511	5660268	1159561	14.0	20.5
3	Chandigarh*	1	808515	808515	107125	13.2	13.2
4	Uttaranchal	6	2179074	1010188	195470	9.0	19.3
5	Haryana	22	6115304	4296670	1420407	23.2	33.1
6	Delhi*	16	12905780	11277586	2029755	15.7	18.0
7	Rajasthan	26	13214375	7668508	1294106	9.8	16.9
8	Uttar Pradesh	69	34539582	21256870	4395276	12.7	20.7
9	Bihar	23	8681800	4814512	531481	6.1	11.0
10	Tripura	1	545750	189998	29949	5.5	15.8
11	Meghalaya	1	454111	132867	86304	19.0	65.0
12	Assam	7	3439240	1371881	82289	2.4	6.0
13	West Bengal	59	22427251	15184596	4115980	18.4	27.1
14	Jharkhand	11	5993741	2422943	301569	5.0	12.4
15	Orissa	15	5517238	2838014	629999	11.4	22.2
16	Chhattisgarh	12	4185747	2604933	817908	19.5	31.4
17	Madhya Pradesh	43	15967145	9599007	2417091	15.1	25.2
18	Gujarat	41	18930250	12697360	1866797	9.9	14.7
19	Maharashtra	61	41100980	33635219	11202762	27.3	33.3
20	Andhra Pradesh	77	20808940	16090585	5187493	24.9	32.2
21	Karnataka	35	17961529	11023376	1402971	7.8	12.7
22	Goa	2	670577	175536	14482	2.2	8.3
23	Kerala	13	8266925	3196622	64556	0.8	2.0
24	Tamil Nadu	63	27483998	14337225	2866893	10.4	20.0
25	Pondicherry*	3	648619	513010	73169	11.3	14.3
26	A & N Island *	1	116198	99984	16244	14.0	16.2
INDIA		640	283741818	184352421	42578150	15.0	23.1

Source : Slum Population -Census of India, 2001

Note : Himachal Pradesh, Sikkim, Arunachal Pradesh, Nagaland, Manipur, Mizoram, Daman & Diu, Dadra & Nagar Haveli and Lakshadweep have not reported any slums in 201

**TABLE 7.2.6 (b) : TOTAL POPULATION, SLUM AND THEIR PERCENTAGE IN
MUNICIPAL CORPORATIONS WITH POPULATION ABOVE ONE MILLION - 2001**

Sl. No.	Name of Million Plus Municipal Corporations	State/Union territory*	Total populaiton	Total slum populaiton	Percentage of slum population to total population
1	2	3	4	5	6
1	Greater Mumbai	Maharashtra	11978450	6475440	54.1
2	Delhi*	Delhi*	9879172	1851231	18.7
3	Kolkatta	West Bengal	4572876	1485309	32.5
4	Chennai	Tamil Nadu	4343645	819873	18.9
5	Bangalore	Karnataka	4301326	430501	10.0
6	Hyderabad	Andhra Pradesh	3637483	626849	17.2
7	Ahmadabad	Gujarat	3520085	473662	13.5
8	Surat	Gujarat	2433835	508485	20.9
9	Kanpur	Uttar Pradesh	2551337	367980	14.4
10	Pune	Maharashtra	2538473	492179	19.4
11	Jaipur	Rajasthan	2322575	368570	15.9
12	Lucknow	Uttar Pradesh	2185927	179176	8.2
13	Nagpur	Maharashtra	2052066	737219	35.9
14	Indore	Madhya Pradesh	1474968	260975	17.7
15	Bhopal	Madhya Pradesh	1437354	125720	8.7
16	Ludhiana	Punjab	1398467	314904	22.5
17	Patna	Bihar	1366444	3592	0.3
18	Vadodara	Gujarat	1306227	186020	14.2
19	Agra	Uttar Pradesh	1275134	121761	9.5
20	Thane	Maharashtra	1262551	351065	27.8
21	Kalyan-Dombivli	Maharashtra	1193512	34860	2.9
22	Varanasi	Uttar Pradesh	1091918	137977	12.6
23	Nashik	Maharashtra	1077236	138797	12.9
24	Meerut	Uttar Pradesh	1068772	471581	44.1
25	Faridabad	Haryana	1055938	490981	46.5
26	Pimpri Chinchwad	Maharashtra	1012472	123957	12.2
27	Haora	West Bengal	1007532	118286	11.7
Total			73345775	17696950	24.1

Source :Slum Population -Census of India, 2001

TABLE 7.2.6 (c) : POPULATION OF SCHEDULED CASTES AND SCHEDULED TRIBES LIVING IN SLUM AREAS AND THEIR PROPORTION TO THE TOTAL SLUM POPULATION - INDIA/STATE/UNITON TERRITORY REPORTING SLUM-2001

Sl. No	State/Uts	Population in slum areas		Percentage of populaiton in slum areas		Percentage of populaiton in urban areas	
		Scheduled Castes population	Scheduled Tribes populaiton	Scheduled Caste	Scheduled Tribes	Scheduled Castes	Scheduled Tribes
1	2	3	4	5	6	7	8
1	Jammu & Kashmir	17147	1091	6.4	0.4	5.3	2.0
2	Punjab	331320	NST	28.6	0.0	20.7	0.0
3	Chandigarh*	41869	NST	39.1	0.0	17.7	0.0
4	Uttaranchal	44865	362	23.0	0.2	12.0	0.7
5	Haryana	267975	NST	18.9	0.0	14.4	0.0
6	Delhi*	552784	NST	27.2	0.0	16.7	0.0
7	Rajasthan	349473	52763	27.0	4.1	14.8	2.9
8	Uttar Pradesh	898790	2495	20.4	0.1	12.5	0.0
9	Bihar	94523	7724	17.8	1.5	10.0	0.5
10	Tripura	7136	619	23.8	2.1	18.3	4.7
11	Meghalaya	720	43843	0.8	50.8	0.9	68.3
12	Assam	12355	211	15.0	0.3	7.9	4.5
13	West Bengal	567522	50810	13.8	1.2	13.1	1.2
14	Jharkhand	26105	50425	8.7	16.7	10.0	9.8
15	Orissa	108961	72763	17.3	11.5	12.7	8.1
16	Chhattisgarh	143533	64945	17.5	7.9	12.4	8.4
17	Madhya Pradesh	510034	91399	21.1	3.8	14.0	4.9
18	Gujarat	259986	83741	13.9	4.5	7.5	3.2
19	Maharashtra	1292808	284010	11.5	2.5	9.2	2.7
20	Andhra Pradesh	767272	130997	14.8	2.5	10.2	1.8
21	Karnataka	339218	64863	24.2	4.6	12.0	2.9
22	Goa	294	7	2.0	0.0	1.9	0.1
23	Kerala	4870	120	7.5	0.2	6.9	0.2
24	Tamil Nadu	744558	14196	26.0	0.5	12.9	0.4
25	Pondicherry*	18255	NST	24.9	0.0	10.7	0.0
26	A & N Island *	NSC	24	0.0	0.1	0.0	0.9
INDIA		7402373	1017408	17.4	2.4	11.8	2.2

Source :Slum Population -Census of India, 2001

Note : In case of Himachal Pradesh, Sikkim, Arunachal Pradesh, Nagaland, Manipur, Mizoram, Daman & Diu, Dadra & Nagar Haveli and Lakshadweep no slum population has been reported at the Census of India - 2001

NSC : No notified Scheduled Castes, NST : No notified Scheduled Tribes.

TABLE 7.2.6 (D) : POPULATION AND PERCENTAGE OF SCHEDULED CASTES AND SCHEDULED TRIBES POPULAITON LIVING IN SLUMS IN MILLION PLUS CITIES -2001

Sl. No.	Name of Million Plus Municipal Corporations	State/Union territory*	Population in slum of million plus cities		Percentage of populaiton in slum		populaiton in urban areas	
			Scheduled Castes	Scheduled Tribes	Scheduled Caste	Scheduled Tribes	Scheduled Castes	Scheduled Tribes
1	2	3	3	4	5	6	7	8
1	Greater Mumbai	Maharashtra	385626	56567	6.0	0.9	4.9	0.8
2	Delhi*	Delhi*	483640	NST	26.1	0.0	15.8	0.0
3	Kolkatta	West Bengal	92812	2507	6.2	0.2	6.0	0.2
4	Chennai	Tamil Nadu	269301	1830	32.8	0.2	13.8	0.2
5	Bangalore	Karnataka	139920	6957	32.5	1.6	11.1	1.1
6	Hyderabad	Andhra Pradesh	89860	8875	14.3	1.4	7.4	0.9
7	Ahmadabad	Gujarat	95633	6692	20.2	1.4	12.1	1.0
8	Surat	Gujarat	30112	36236	5.9	7.1	3.6	3.5
9	Kanpur	Uttar Pradesh	84255	786	22.9	0.2	11.1	0.1
10	Pune	Maharashtra	125127	5264	25.4	1.1	11.8	1.0
11	Jaipur	Rajasthan	90607	19957	24.6	5.4	12.6	3.7
12	Lucknow	Uttar Pradesh	24943	107	13.9	0.1	10.1	0.1
13	Nagpur	Maharashtra	151111	107936	20.5	14.6	16.7	8.9
14	Indore	Madhya Pradesh	61244	4429	23.5	1.7	13.7	2.5
15	Bhopal	Madhya Pradesh	36073	5794	28.7	4.6	12.4	3.0
16	Ludhiana	Punjab	47917	NST	15.2	0.0	13.1	0.0
17	Patna	Bihar	944	0	26.3	0.0	8.5	0.3
18	Vadodara	Gujarat	20765	12823	11.2	6.9	6.6	3.6
19	Agra	Uttar Pradesh	39054	22	32.1	Neg	21.5	Neg
20	Thane	Maharashtra	23722	10955	6.8	3.1	4.6	2.5
21	Kalyan-Dombivli	Maharashtra	7111	323	20.4	0.9	5.8	2.1
22	Varanasi	Uttar Pradesh	16622	0	12.0	0.0	7.2	0.0
23	Nashik	Maharashtra	44198	16749	31.8	12.1	12.5	6.8
24	Meerut	Uttar Pradesh	111345	25	23.6	Neg	16.3	Neg
25	Faridabad	Haryana	57763	NST	11.8	0.0	9.1	0.0
26	Pimpri Chinchwad	Maharashtra	50607	2355	40.8	1.9	13.9	1.9
27	Haora	West Bengal	9430	368	8.0	0.3	4.8	0.4
Total			2589742	307557	14.6	1.7	10.3	1.2

Source :Slum Population -Census of India, 2001

NST : No notified Scheduled Tribes

Neg : Negligible population

TABLE 7.2.7 : SLUM ESTIMATED POPULATION IN METROPOLITAN CITIES

Sl. No.	Name of City	(Population in lakh)								
		1981			1991			2001*		
		Total Population	Slum Population	%age	Total Population	Slum Population	%age	Total Population	Slum Population	%age
1	2	3	4	5	6	7	8	9	10	11
1	Kolkata UA	91.940	30.280	32.9	110.219	36.262 @	32.9	131.147	43.147	32.9
2	Greater Mumbai UA	89.887	30.831	34.3	125.962	43.205 @	34.3	170.701	58.550	34.3
3	Delhi UA	57.228	18.000	31.5	84.191	22.480	26.7	122.204	32.628	26.7
4	Chennai UA	42.893	13.769	32.1	54.220	15.251	28.1	69.823	19.620	28.1
5	Hyderabad UA	25.500	5.000	19.6	43.444	8.593	19.8	62.964	12.466	19.8
6	Bangalore UA	29.218	3.650	12.5	41.303	5.162	12.5	63.597	7.949	12.5
7	Ahmedabad UA	25.480	5.172	20.3	33.122	6.724 @	20.3	43.629	8.859	20.3
8	Pune UA	17.222	2.807	16.3	24.940	4.065 @	16.3	35.299	5.753	16.3
9	Kanpur UA	16.391	6.140	37.5	20.299	4.172	20.6	24.875	5.124	20.6
10	Lucknow UA	10.076	2.850	28.3	16.692	2.778	16.6	22.581	3.748	16.6
11	Nagpur UA	12.195	3.890	31.9	16.640	5.308 @	31.9	23.212	7.405	31.9
12	Jaipur UA	10.152	2.958	29.1	15.182	4.418 @	29.1	22.108	6.433	29.1
13	Surat UA	9.239	2.347	25.4	15.190	3.858 @	25.4	22.916	5.821	25.4
14	Coimbatore UA	9.204	0.801 +	8.7	11.007	0.958	8.7	13.283	1.156	8.7
15	Cochin UA	8.249	2.046	24.8	11.406	2.829 @	24.8	15.364	3.810	24.8
16	Vadodara UA	7.449	1.182	15.9	11.268	2.063	18.3	17.074	3.125	18.3
17	Indore UA	8.293	1.263	15.2	11.091	1.686 @	15.2	15.430	2.345	15.2
18	Patna UA	9.189	5.837	63.5	10.996	6.982 @	63.5	15.273	9.698	63.5
19	Madurai UA	9.077	1.634 +	18.0	10.859	1.953	18.0	13.134	2.364	18.0
20	Bhopal UA	6.710	0.568	8.5	10.628	1.487 **	14.0	15.327	2.145	14.0
21	Vishakhapatnam UA	6.036	1.520	25.2	10.571	2.664	25.2	16.683	4.204	25.2
22	Varanasi UA	7.972	2.600	32.6	10.309	2.074	20.1	13.314	2.676	20.1
23	Ludhiana	6.071	3.104	51.1	10.427	3.687	35.4	16.342	5.785	35.4
Total		515.671	148.249	28.7	709.966	188.659	26.6	966.280	254.811	26.4

Source : T.C.P.O., Ministry of Urban Affairs & Employment

@ : Based on the percentage identified slum population of 1981.

+ : Based on the percentage identified slum population of 1991.

* : Estimated

** : Based on the no. of identified Jhuggi collected by the State Govt. in 1991-92

Note : Classification of the size of cities is based on 1991 census.

HOUSING, SLUMS AND BASIC FACILITIES

HOUSING, SLUMS AND BASIC FACILITIES

TABLE 7.2.8 : HOUSEHOLDS CLASSIFIED BY SUPPLY OF WATER AND TOILET INSTALLATION BY RURAL AND URBAN

Sl. No		Total number of Households	Water Supply With Tap Water			Toilet Installation	
			Total	Inside	Outside	With Toilet of Any Type	Without Toilet of Any Type
1	2	3	4	5	6	7	8
1	1981*						
	Total	118,614,803	27,317,532	12,851,006	14,466,526		
	Percentage	100.0	23.0	10.8	12.2		
	Urban	28,541,877	18,049,114	10,302,247	7,746,867	16,596,103	11,945,774
	Percentage	100.0	63.2	36.1	27.1	58.1	41.9
	Rural	90,072,926	9,268,418	2,548,759	6,719,659		
	Percentage	100.0	10.3	2.8	7.5		
2	1991+						
	Total	151,111,383	48,745,490	23,414,175	25,331,315	35,819,780	115,291,603
	Percentage	100.0	32.3	15.5	16.8	23.7	76.3
	Urban	39,523,184	25,713,794	16,691,096	9,022,698	25,236,449	14,286,735
	Percentage	100.0	65.1	42.3	22.8	63.9	36.1
	Rural	111,588,199	23,031,696	6,723,079	16,308,617	10,583,331	101,004,868
	Percentage	100.0	20.6	6.0	14.6	9.5	90.5
3	2001						
	Total	191,963,935	70,448,827	39,966,085	30,482,742	69,885,799	122,078,136
	Percentage	100.0	36.7	20.8	15.9	36.4	63.6
	Urban	53,692,376	36,865,072	26,676,440	10,188,632	39,581,440	14,110,936
	Percentage	100.0	68.7	49.7	19.0	73.7	26.3
	Rural	138,271,559	33,583,755	13,289,645	20,294,110	30,304,359	107,967,200
	Percentage	100.0	24.3	9.6	14.7	21.9	78.1

Source : Office of the Registrar General of India

* : Excluding Assam, Excluding Institutional and houseless households

+ : Excluding J&K

Access to safe drinking water remains an urgent need as only 68.7% of occupied housing unit in urban areas received organized piped water supply and rest have to depend on surface or ground water which is untreated. The situation in rural areas is much worst. In India, almost all surface water sources are contaminated and unfit for human consumption. The diseases commonly caused due to contaminated water are diarrhea, trachoma, intestine worms, hepatitis. Inadequate access to safe drinking water and sanitation facilities leads to infant mortality and intestinal diseases.

TABLE 7.2.9 (a) NUMBER OF HOUSEHOLDS BY MAJOR SOURCE OF DRINKING WATER PER 1000 HOUSEHOLDS FOR EACH STATE/UT RURAL)

State/UT	major source of drinking water										number of households	
	tap	tube well/hand pump	well	tank/pond (reserved for drinking)	other tank/pond	river/canal/lake	spring	other	n.r.	all	estimated	sample
Rural												
Jammu & Kashmir	557	187	30	3	2	59	154	8	0	1000	1087315	1150
Himachal Pradesh	741	93	59	4	1	3	97	1	0	1000	1145207	1199
Punjab	220	765	13	0	0	0	0	3	0	1000	3150742	1204
Chandigarh	899	101	0	0	0	0	0	0	0	1000	28388	96
Uttaranchal	562	307	4	11	0	12	77	27	0	1000	1191388	559
Haryana	388	450	149	13	0	0	0	0	0	1000	2628646	943
Delhi	913	57	4	0	26	0	0	0	0	1000	717683	95
Rajasthan	251	457	176	84	20	10	1	2	0	1000	6839890	2709
Uttar Pradesh	22	855	123	0	0	0	0	0	0	1000	23286557	7069
Bihar	9	888	102	0	0	0	0	1	0	1000	11866728	4337
Sikkim	536	1	0	0	0	3	459	1	0	1000	81980	671
Arunachal Pradesh	787	24	35	0	12	15	37	88	2	1000	106411	852
Nagaland	513	43	51	239	12	0	142	0	0	1000	82602	528
Manipur	294	83	48	144	109	155	143	21	3	1000	255172	1094
Mizoram	142	5	11	70	24	14	701	32	0	1000	72178	432
Tripura	219	420	350	4	1	0	0	7	0	1000	600139	1248
Meghalaya	406	45	191	73	18	2	262	2	0	1000	344447	768
Assam	69	547	266	17	58	37	7	0	0	1000	4183959	2708
West Bengal	125	776	89	2	0	0	7	0	1	1000	12536495	4440
Chhattisgarh	18	762	200	0	0	15	4	0	0	1000	3556797	1000
Orissa	46	627	258	1	3	33	21	12	0	1000	6462237	2276
Jharkhand	36	378	536	0	1	37	2	10	0	1000	3838341	1548
Madhya Pradesh	69	599	316	1	1	11	2	2	0	1000	8301488	2904
Gujarat	582	299	96	18	0	3	2	0	0	1000	5949669	1428
Daman & Diu	753	182	31	34	0	0	0	0	0	1000	23260	96
D & N Haveli	148	724	50	4	5	66	0	2	0	1000	32871	144
Maharashtra	485	255	226	2	1	26	0	6	0	1000	12225921	3492
Andhra Pradesh	543	297	131	10	2	11	2	2	0	1000	14612748	3668
Karnataka	595	267	120	5	1	10	0	2	0	1000	6809687	2107
Goa	567	6	356	0	0	16	55	0	0	1000	154528	96
Lakshadweep	122	1	877	0	0	0	0	0	0	1000	4430	96
Kerala	108	15	838	15	3	2	19	0	0	1000	5078075	1932
Tamil Nadu	769	132	65	4	0	18	5	8	0	1000	10676451	2715
Pondicherry	933	49	12	0	0	0	0	6	0	1000	75647	144
A & N Island	795	0	129	0	0	59	17	0	0	1000	43079	218
All India	275	513	179	8	4	11	8	3	0	1000	148081155	55966

Source : NSS Reoprt No. 489: Housing Condition in India : Household Amenities and Other Characteristics

n.r. : not reported

TABLE 7.2.9 (b) NUMBER OF HOUSEHOLDS BY MAJOR SOURCE OF DRINKING WATER PER 1000 HOUSEHOLDS FOR EACH STATE/UT (URBAN)

State/UT	major source of drinking water										number of households	
	tap	tube well/hand pump	well	tank/pond (reserved for drinking)	other tank/pond	river/canal/lake	spring	other	n.r.	all	estimated	sample
Urban												
Jammu & Kashmir	944	42	13	0	0	0	1	0	0	1000	326486	864
Himachal Pradesh	957	40	2	0	0	0	1	0	0	1000	172585	240
Punjab	784	215	0	0	0	0	0	1	0	1000	1674246	1248
Chandigarh	976	24	0	0	0	0	0	0	0	1000	299066	240
Uttaranchal	798	186	0	14	0	2	0	0	0	1000	329812	384
Haryana	773	221	6	0	0	0	0	0	0	1000	1089711	767
Delhi	849	138	1	0	0	0	0	12	0	1000	2653502	1686
Rajasthan	805	161	25	3	0	0	0	6	0	1000	2536776	1662
Uttar Pradesh	486	502	10	0	0	0	0	0	1	1000	6565552	3684
Bihar	285	691	23	0	1	0	0	0	0	1000	1537895	1008
Sikkim	992	0	0	0	0	0	8	0	0	1000	13046	192
Arunachal Pradesh	889	84	1	0	0	0	1	10	15	1000	25853	396
Nagaland	578	69	146	95	27	0	85	0	0	1000	44463	228
Manipur	630	67	11	62	86	106	0	32	7	1000	89266	708
Mizoram	599	36	6	92	10	1	228	27	0	1000	56365	912
Tripura	615	359	24	0	0	0	0	2	0	1000	94457	480
Meghalaya	888	0	29	14	1	0	64	4	0	1000	68708	384
Assam	355	495	130	1	0	2	4	9	3	1000	435469	804
West Bengal	595	365	29	4	0	0	1	4	2	1000	4647497	3383
Chhattisgarh	644	293	63	0	0	0	0	0	0	1000	782011	480
Orissa	554	321	119	2	0	4	0	0	0	1000	1170986	803
Jharkhand	577	169	251	0	0	3	0	0	0	1000	974414	911
Madhya Pradesh	637	243	112	2	0	0	0	5	0	1000	3149590	2160
Gujarat	917	73	2	0	0	0	0	8	0	1000	3728078	1617
Daman & Diu	971	27	1	0	0	0	0	0	0	1000	13408	192
D & N Haveli	563	405	32	0	0	0	0	0	0	1000	5983	144
Maharashtra	917	52	18	0	0	1	0	11	0	1000	8981672	5020
Andhra Pradesh	783	112	45	0	1	1	0	57	0	1000	5892701	2660
Karnataka	885	70	43	0	0	0	0	2	0	1000	3257320	2242
Goa	836	0	164	0	0	0	0	0	0	1000	90314	95
Lakshadweep	27	26	909	17	0	0	0	21	0	1000	5827	96
Kerala	426	20	553	0	0	0	0	0	0	1000	1733296	1295
Tamil Nadu	833	79	44	8	0	1	1	35	0	1000	5909063	4259
Pondicherry	979	11	3	0	0	0	0	7	0	1000	144890	480
A & N Island	943	0	57	0	0	0	0	0	0	1000	20748	192
All India	736	196	51	2	0	1	1	13	0	1000	58521059	41916

Source : NSS Reoprt No. 489: Housing Condition in India : Household Amenities and Other Characteristics

n.r. : not reported

TABLE 7.2.9 (c) NUMBER OF HOUSEHOLDS BY MAJOR SOURCE OF DRINKING WATER PER 1000 HOUSEHOLDS FOR EACH STATE/UT (RURAL+ URBAN)

State/UT	major source of drinking water										number of households	
	tap	tube	well	tank/pond	other	river/	spring	other	n.r.	all	estimated	sample
Rural + Urban												
Jammu & Kashmir	646	154	26	2	2	46	118	6	0	1000	1413801	2014
Himachal Pradesh	770	86	52	4	1	3	85	0	0	1000	1317792	1439
Punjab	416	574	8	0	0	0	0	2	0	1000	4824988	2452
Chandigarh	970	30	0	0	0	0	0	0	0	1000	327454	336
Uttaranchal	613	281	3	12	0	10	60	21	0	1000	1521200	943
Haryana	501	383	107	9	0	0	0	0	0	1000	3718357	1710
Delhi	863	121	1	0	6	0	0	9	0	1000	3371185	1781
Rajasthan	401	377	135	62	14	7	0	3	0	1000	9376666	4371
Uttar Pradesh	124	777	98	0	0	0	0	0	0	1000	29852109	10753
Bihar	41	866	93	0	0	0	0	1	0	1000	13404623	5345
Sikkim	599	1	0	0	0	3	397	1	0	1000	95025	863
Arunachal Pradesh	807	36	28	0	10	12	30	73	4	1000	132264	1248
Nagaland	536	52	84	189	17	0	122	0	0	1000	127070	756
Manipur	381	79	38	123	103	142	106	24	4	1000	344438	1802
Mizoram	343	19	9	80	18	8	494	30	0	1000	128543	1344
Tripura	273	411	305	3	1	0	0	6	0	1000	694596	1728
Meghalaya	486	37	164	63	15	2	229	3	0	1000	413155	1152
Assam	96	542	253	15	52	34	7	1	0	1000	4619428	3512
West Bengal	252	665	72	2	0	0	6	1	1	1000	17183992	7823
Chhattisgarh	131	678	175	0	0	13	4	0	0	1000	4338807	1480
Orissa	124	580	236	1	3	28	18	10	0	1000	7633223	3079
Jharkhand	145	336	478	0	1	30	2	8	0	1000	4812755	2459
Madhya Pradesh	225	501	260	1	1	8	2	3	0	1000	11451077	5064
Gujarat	711	212	60	11	0	2	1	3	0	1000	9677747	3045
Daman & Diu	833	125	20	22	0	0	0	0	0	1000	36669	288
D & N Haveli	212	675	47	4	4	56	0	1	0	1000	38854	288
Maharashtra	668	169	138	1	1	15	0	8	0	1000	21207593	8512
Andhra Pradesh	612	244	106	7	2	8	2	18	0	1000	20505449	6328
Karnataka	689	203	95	3	1	7	0	2	0	1000	10067008	4349
Goa	666	4	285	0	0	10	35	0	0	1000	244841	191
Lakshadweep	68	15	895	10	0	0	0	12	0	1000	10256	192
Kerala	189	16	765	11	2	2	14	0	0	1000	6811371	3227
Tamil Nadu	792	113	58	5	0	12	3	17	0	1000	16585514	6974
Pondicherry	963	24	6	0	0	0	0	6	0	1000	220537	624
A & N Island	843	0	106	0	0	40	12	0	0	1000	63827	410
All India	405	423	143	7	3	8	6	6	0	1000	206572215	97882

Source : NSS Reoprt No. 489: Housing Condition in India : Household Amenities and Other Characteristics

n.r. : not reported

**TABLE 7.2.10 (a) NUMBER OF HOUSEHOLDS BY PRIMARY SOURCE OF ENERGY FOR COOKING PER 1000 HOUSEHOLDS
FOR EACH STATE/UT (RURAL)**

State/UT	primary source of energy for cooking												number of households	
	coke, coal	firewood and chips	LPG	gobar gas	dung cake	charcoal	kerosene	electricity	other	no cooking arrangement	n.r.	all	estimated	sample
Jammu & Kashmir	0	670	204	0	110	0	9	8	0	0	0	1000	1087315	1150
Himachal Pradesh	0	752	216	0	0	0	24	0	0	8	0	1000	1145207	1199
Punjab	0	369	247	7	337	0	10	0	26	4	0	1000	3150742	1204
Chandigarh	32	13	437	0	16	0	475	0	0	28	0	1000	28388	96
Uttaranchal	1	689	204	10	49	0	34	0	0	13	0	1000	1191388	559
Haryana	0	586	102	1	296	0	7	1	0	7	0	1000	2628646	943
Delhi	0	121	550	0	122	0	206	0	0	0	0	1000	717683	95
Rajasthan	1	950	31	0	9	0	8	0	0	1	0	1000	6839890	2709
Uttar Pradesh	2	577	37	1	359	0	3	0	16	3	1	1000	23286557	7069
Bihar	9	591	7	0	264	0	2	0	127	0	0	1000	11866728	4337
Sikkim	1	602	257	0	9	4	92	1	0	33	0	1000	81980	671
Arunachal Pradesh	2	855	120	0	0	0	10	0	10	0	3	1000	106411	852
Nagaland	6	871	115	0	0	0	8	0	0	0	0	1000	82602	528
Manipur	0	810	184	0	0	0	4	0	0	0	0	1000	255172	1094
Mizoram	0	836	164	0	0	0	0	0	0	0	0	1000	72178	432
Tripura	1	935	54	0	3	0	5	1	0	0	0	1000	600139	1248
Meghalaya	2	976	18	0	0	4	0	0	0	0	0	1000	344447	768
Assam	1	922	71	0	5	0	0	0	1	1	0	1000	4183959	2708
West Bengal	39	758	25	2	35	0	5	1	132	3	1	1000	12536495	4440
Chhattisgarh	24	893	27	4	19	1	5	0	0	27	0	1000	3556797	1000
Orissa	9	835	11	0	51	0	1	0	69	25	0	1000	6462237	2276
Jharkhand	113	790	12	0	7	0	1	3	3	71	0	1000	3838341	1548
Madhya Pradesh	3	901	28	1	60	0	3	0	0	3	1	1000	8301488	2904
Gujarat	1	857	86	5	16	0	26	0	0	9	0	1000	5949669	1428
Daman & Diu	0	284	392	0	0	0	299	0	0	25	0	1000	23260	96
D & N Haveli	0	670	240	0	0	0	45	0	0	45	0	1000	32871	144
Maharashtra	1	782	122	6	1	0	27	1	51	9	0	1000	12225921	3492
Andhra Pradesh	1	832	124	3	1	0	12	0	1	26	0	1000	14612748	3668
Karnataka	0	889	66	13	2	0	17	2	0	12	0	1000	6809687	2107
Goa	0	302	602	0	0	0	18	0	0	77	0	1000	154528	96
Lakshadweep	0	817	13	0	0	0	43	0	0	127	0	1000	4430	96
Kerala	0	820	159	2	0	0	4	0	0	14	0	1000	5078075	1932
Tamil Nadu	0	853	112	1	0	0	31	0	0	3	0	1000	10676451	2715
Pondicherry	0	794	138	0	0	0	67	0	0	0	0	1000	75647	144
A & N Island	0	787	99	0	0	0	102	0	0	11	0	1000	43079	218
All India	9	759	74	3	103	0	12	0	32	10	0	1000	148051155	55966

Source : NSS Reoprt No. 489: Housing Condition in India : Household Amenities and Other

n.r. : not reported

**TABLE 7.2.10(b) NUMBER OF HOUSEHOLDS BY PRIMARY SOURCE OF ENERGY FOR COOKING PER 1000 HOUSEHOLDS
FOR EACH STATE/UT (URBAN)**

State/UT	primary source of energy for cooking												number of households	
	coke, coal	firewood and chips	LPG	gobar gas	dung cake	charcoal	kerosene	electricity	other	no cooking arrangement	n.r.	all	estimated	sample
Jammu & Kashmir	0	188	673	0	19	0	109	10	0	1	0	1000	326486	864
Himachal Pradesh	15	65	716	0	2	0	29	157	0	16	0	1000	172585	240
Punjab	14	61	636	0	46	0	237	0	5	0	0	1000	1674246	1248
Chandigarh	0	25	609	0	0	0	323	0	0	43	0	1000	299066	240
Uttaranchal	0	181	701	0	9	0	103	0	0	7	0	1000	329812	384
Haryana	1	133	697	4	63	0	88	0	0	15	0	1000	1089711	767
Delhi	0	13	671	0	5	0	276	0	0	34	0	1000	2653502	1686
Rajasthan	2	417	445	1	6	1	75	0	0	54	0	1000	2536776	1662
Uttar Pradesh	10	281	550	2	77	0	62	0	1	16	1	1000	6565552	3684
Bihar	118	274	376	0	85	1	58	0	22	65	1	1000	1537895	1008
Sikkim	0	0	565	0	0	0	65	0	0	370	0	1000	13046	192
Arunachal Pradesh	0	401	561	0	2	0	31	0	0	0	5	1000	25853	396
Nagaland	0	321	619	0	0	0	53	0	0	8	0	1000	44468	228
Manipur	0	377	561	1	1	0	55	0	1	0	4	1000	89266	708
Mizoram	0	156	813	0	3	0	22	6	0	0	0	1000	56365	912
Tripura	0	408	515	0	0	0	75	0	0	1	2	1000	94457	480
Meghalaya	5	195	399	0	0	62	227	8	0	104	0	1000	68708	384
Assam	5	187	698	0	4	0	70	0	0	36	0	1000	435469	804
West Bengal	216	149	399	0	12	0	158	2	23	40	1	1000	4647497	3383
Chhattisgarh	67	449	408	0	2	2	24	20	28	0	0	1000	782011	480
Orissa	19	302	325	0	6	1	114	27	57	149	0	1000	1170986	803
Jharkhand	515	61	289	0	13	0	17	8	0	97	0	1000	974414	911
Madhya Pradesh	23	354	500	1	17	0	93	0	0	12	0	1000	3149590	2160
Gujarat	6	120	621	0	10	2	128	1	55	58	0	1000	3728078	1617
Daman & Diu	0	103	797	0	12	0	58	0	0	29	0	1000	13408	192
D & N Haveli	0	33	789	0	0	0	103	0	0	76	0	1000	5983	144
Maharashtra	2	110	584	0	1	0	240	0	6	57	0	1000	8981672	5020
Andhra Pradesh	2	247	529	0	1	0	108	0	3	109	0	1000	5892701	2660
Karnataka	4	277	453	1	1	0	176	3	0	84	0	1000	3257320	2242
Goa	0	43	585	0	0	0	319	0	0	52	0	1000	90314	95
Lakshadweep	0	620	314	0	0	0	46	0	0	19	0	1000	5827	96
Kerala	0	455	442	6	0	0	19	2	0	76	0	1000	1733296	1295
Tamil Nadu	1	240	506	0	0	1	187	1	0	63	0	1000	5909063	4259
Pondicherry	0	241	547	0	0	0	114	0	0	98	0	1000	144890	480
A & N Island	0	90	545	0	0	0	331	0	0	34	0	1000	20748	192
All India	34	215	524	1	17	0	143	2	9	54	0	1000	58521059	41916

Source : NSS Reoprt No. 489: Housing Condition in India : Household Amenities and Other
n.r. : not reported

**TABLE 7.2.10 (c) NUMBER OF HOUSEHOLDS BY PRIMARY SOURCE OF ENERGY FOR COOKING PER 1000 HOUSEHOLDS
FOR EACH STATE/UT (RURAL + UNBAN)**

State/UT	primary source of energy for cooking												number of households	
	coke, coal	firewood and chips	LPG	gobar gas	dung cake	charcoal	kerosene	electricity	other	no cooking arrangement	n.r.	all	estimated	sample
Jammu & Kashmir	0	559	312	0	89	0	32	8	0	0	0	1000	1413801	2014
Himachal Pradesh	2	662	281	0	1	0	24	21	0	9	0	1000	1317792	1439
Punjab	5	262	382	5	236	0	89	0	19	2	0	1000	4824988	2452
Chandigarh	3	24	594	0	1	0	336	0	0	42	0	1000	327454	336
Uttaranchal	1	579	312	8	40	0	49	0	0	11	0	1000	1521200	943
Haryana	0	453	276	2	228	0	30	1	0	10	0	1000	3718357	1710
Delhi	0	36	646	0	30	0	261	0	0	27	0	1000	3371185	1781
Rajasthan	1	806	143	0	9	0	26	0	0	15	0	1000	9376666	4371
Uttar Pradesh	4	512	150	1	297	0	16	0	13	6	1	1000	29852109	10753
Bihar	21	555	50	0	243	0	8	0	115	8	0	1000	13404623	5345
Sikkim	1	520	300	0	8	3	88	1	0	79	0	1000	95025	863
Arunachal Pradesh	2	766	206	0	1	0	14	0	8	0	3	1000	132264	1248
Nagaland	4	678	291	0	0	0	24	0	0	3	0	1000	127070	756
Manipur	0	697	282	0	0	1	17	0	0	0	1	1000	344438	1802
Mizoram	0	538	448	0	1	0	9	3	0	0	0	1000	128543	1344
Tripura	1	864	116	0	3	0	14	1	0	0	0	1000	694596	1728
Meghalaya	3	846	82	0	0	13	38	2	0	17	0	1000	413155	1152
Assam	1	853	130	0	5	0	7	0	1	4	0	1000	4619428	3512
West Bengal	87	593	126	1	29	0	46	1	102	13	1	1000	17183992	7823
Chhattisgarh	32	813	96	3	16	1	9	4	5	22	0	1000	4338807	1480
Orissa	11	753	59	0	44	0	18	4	67	44	0	1000	7633223	3079
Jharkhand	194	642	68	0	8	0	4	4	2	77	0	1000	4812755	2459
Madhya Pradesh	8	751	159	1	48	0	28	0	0	5	0	1000	11451077	5064
Gujarat	3	573	292	3	13	1	65	0	21	28	0	1000	9677747	3045
Daman & Diu	0	218	540	0	4	0	211	0	0	26	0	1000	36669	288
D & N Haveli	0	572	325	0	0	0	54	0	0	50	0	1000	38854	288
Maharashtra	1	497	318	4	1	0	117	1	32	29	0	1000	21207593	8512
Andhra Pradesh	1	664	240	2	1	0	39	0	1	50	0	1000	20505449	6328
Karnataka	1	691	191	9	2	0	68	2	0	35	0	1000	10067008	4349
Goa	0	207	596	0	0	0	129	0	0	68	0	1000	244841	191
Lakshadweep	0	705	184	0	0	0	45	0	0	66	0	1000	10256	192
Kerala	0	727	231	3	0	0	8	0	0	30	0	1000	6811371	3227
Tamil Nadu	0	635	252	0	0	0	87	0	0	24	0	1000	16585514	6974
Pondicherry	0	431	407	0	0	0	98	0	0	64	0	1000	220537	624
A & N Island	0	561	244	0	0	0	176	0	0	19	0	1000	63827	410
All India	16	604	201	2	78	0	49	1	25	22	0	1000	206572215	97882

Source : NSS Reoprt No. 489: Housing Condition in India : Household Amenities and Other

n.r. : not reported

TABLE 7.2.11 (a) NUMBER OF HOUSEHOLDS BY PRIMARY SOURCE FOR LIGHTING PER 1000 HOUSEHOLDS FOR EACH STATE/UT (RURAL)

State/UT	primary source of energy for lighting									number of households	
	kerosene	other oil	gas	candle	electricity	others	no lighting arrangement	n.r.	all	estimated	sample
Jammu & Kashmir	34	0	2	2	963	0	0	0	1000	1087315	1150
Himachal Pradesh	10	1	0	0	983	3	3	0	1000	1145207	1199
Punjab	30	1	0	9	957	0	3	0	1000	3150742	1204
Chandigarh	0	0	0	0	999	0	1	0	1000	28388	96
Uttaranchal	408	0	0	0	563	29	0	0	1000	1191388	559
Haryana	133	3	1	3	859	0	0	0	1000	2628646	943
Delhi	0	0	0	0	1000	0	0	0	1000	717683	95
Rajasthan	529	9	0	0	448	1	13	0	1000	6839890	2709
Uttar Pradesh	751	2	0	1	243	1	2	0	1000	23286557	7069
Bihar	900	1	0	0	97	0	1	1	1000	11866728	4337
Sikkim	137	10	0	2	851	0	0	0	1000	81980	671
Arunachal Pradesh	233	3	2	5	503	112	133	9	1000	106411	852
Nagaland	54	0	0	0	946	0	0	0	1000	82602	528
Manipur	134	1	5	0	858	0	1	1	1000	255172	1094
Mizoram	189	0	0	14	755	3	40	0	1000	72178	432
Tripura	418	0	4	0	575	3	0	1	1000	600139	1248
Meghalaya	432	0	0	0	568	0	0	0	1000	344447	768
Assam	754	0	0	0	246	0	0	0	1000	4183959	2708
West Bengal	738	0	0	0	257	1	2	1	1000	12536495	4440
Chhattisgarh	466	0	0	0	521	0	13	0	1000	3556797	1000
Orissa	712	0	1	0	286	0	1	0	1000	6462237	2276
Jharkhand	737	0	0	0	251	10	1	0	1000	3838341	1548
Madhya Pradesh	319	0	1	0	679	0	1	0	1000	8301488	2904
Gujarat	167	3	0	0	822	0	8	0	1000	5949669	1428
Daman & Diu	5	0	0	0	995	0	0	0	1000	23260	96
D & N Haveli	25	0	0	0	975	0	0	0	1000	32871	144
Maharashtra	221	0	0	0	776	0	3	0	1000	12225921	3492
Andhra Pradesh	217	1	0	0	781	0	1	0	1000	14612748	3668
Karnataka	172	0	0	0	825	0	3	0	1000	6809687	2107
Goa	3	0	13	0	984	0	0	0	1000	154528	96
Lakshadweep	0	0	0	0	1000	0	0	0	1000	4430	96
Kerala	244	0	0	0	755	0	0	0	1000	5078075	1932
Tamil Nadu	191	0	0	0	803	0	6	0	1000	10676451	2715
Pondicherry	121	0	0	0	879	0	0	0	1000	75647	144
A & N Island	277	0	0	0	723	0	0	0	1000	43079	218
All India	464	1	0	0	530	1	3	0	1000	148051155	55966

Source : NSS Reoprt No. 489: Housing Condition in India : Household Amenities and Other Characteristics

n.r. : not reported

TABLE 7.2.11 (b) NUMBER OF HOUSEHOLDS BY PRIMARY SOURCE FOR LIGHTING PER 1000 HOUSEHOLDS FOR EACH STATE/UT (URBAN)

State/UT	primary source of energy for lighting									number of households	
	kerosene	other iol	gas	candle	electricity	others	no lighting arrangement	n.r.	all	estimated	sample
Jammu & Kashmir	3	0	0	0	995	0	2	0	1000	326486	864
Himachal Pradesh	1	0	0	0	998	0	1	0	1000	172585	240
Punjab	18	0	0	2	980	0	0	0	1000	1674246	1248
Chandigarh	3	0	0	0	997	0	0	0	1000	299066	240
Uttaranchal	20	0	0	0	980	0	0	0	1000	329812	384
Haryana	13	1	0	6	977	0	2	0	1000	1089711	767
Delhi	5	0	0	0	995	0	0	0	1000	2653502	1686
Rajasthan	114	0	0	7	871	0	8	0	1000	2536776	1662
Uttar Pradesh	133	0	0	3	863	0	1	0	1000	6565552	3684
Bihar	336	0	0	0	660	3	2	0	1000	1537895	1008
Sikkim	0	0	0	0	991	9	0	0	1000	13046	192
Arunachal Pradesh	37	3	0	0	958	2	0	0	1000	25853	396
Nagaland	25	0	0	0	975	0	0	0	1000	44468	228
Manipur	66	0	0	0	928	0	0	6	1000	89266	708
Mizoram	2	1	0	0	998	0	0	0	1000	56365	912
Tripura	88	3	4	0	903	0	0	1	1000	94457	480
Meghalaya	61	0	0	0	939	0	0	0	1000	68708	384
Assam	131	0	0	0	868	1	0	0	1000	435469	804
West Bengal	160	0	1	1	837	0	0	0	1000	4647497	3383
Chhattisgarh	134	0	1	0	865	0	0	0	1000	782011	480
Orissa	134	0	0	0	866	0	0	0	1000	1170986	803
Jharkhand	125	8	0	0	865	0	2	0	1000	974414	911
Madhya Pradesh	79	0	0	0	920	0	0	0	1000	3149590	2160
Gujarat	35	0	0	0	959	0	5	0	1000	3728078	1617
Daman & Diu	1	0	0	0	999	0	0	0	1000	13408	192
D & N Haveli	0	0	0	0	1000	0	0	0	1000	5983	144
Maharashtra	41	0	0	0	959	0	0	0	1000	8981672	5020
Andhra Pradesh	63	0	0	0	937	0	0	0	1000	5892701	2660
Karnataka	49	0	0	0	949	0	2	0	1000	3257320	2242
Goa	3	0	0	0	997	0	0	0	1000	90314	95
Lakshadweep	0	0	0	0	1000	0	0	0	1000	5827	96
Kerala	96	0	0	0	904	0	0	0	1000	1733296	1295
Tamil Nadu	61	0	0	0	937	0	2	0	1000	5909063	4259
Pondicherry	47	0	0	0	953	0	0	0	1000	144890	480
A & N Island	28	0	0	0	972	0	0	0	1000	20748	192
All India	81	0	0	1	916	0	1	0	1000	58521059	41916

Source : NSS Reoprt No. 489: Housing Condition in India : Household Amenities and Other Characteristics

n.r. : not reported

TABLE 7.2.11 (c) NUMBER OF HOUSEHOLDS BY PRIMARY SOURCE FOR LIGHTING PER 1000 HOUSEHOLDS FOR EACH STATE/UT (RURAL + URBAN)

State/UT	primary source of energy for lighting									number of households	
	kerosene	other iol	gas	candle	electricity	others	no lighting arrangement	n.r.	all	estimated	sample
Jammu & Kashmir	26	0	1	1	971	0	0	0	1000	1413801	2014
Himachal Pradesh	9	1	0	0	985	3	3	0	1000	1317792	1439
Punjab	26	1	0	6	965	0	2	0	1000	4824988	2452
Chandigarh	3	0	0	0	997	0	0	0	1000	327454	336
Uttaranchal	324	0	0	0	653	23	0	0	1000	1521200	943
Haryana	98	3	1	4	894	0	1	0	1000	3718357	1710
Delhi	4	0	0	0	996	0	0	0	1000	3371185	1781
Rajasthan	417	7	0	2	562	1	11	0	1000	9376666	4371
Uttar Pradesh	615	1	0	2	379	1	2	0	1000	29852109	10753
Bihar	835	1	0	0	161	1	1	1	1000	13404623	5345
Sikkim	118	8	0	2	870	1	0	0	1000	95025	863
Arunachal Pradesh	195	3	1	4	592	91	107	7	1000	132264	1248
Nagaland	44	0	0	0	956	0	0	0	1000	127070	756
Manipur	116	1	3	0	876	0	1	2	1000	344438	1802
Mizoram	107	0	0	8	861	1	22	0	1000	128543	1344
Tripura	373	1	4	0	620	2	0	1	1000	694596	1728
Meghalaya	370	0	0	0	630	0	0	0	1000	413155	1152
Assam	695	0	0	0	304	0	0	0	1000	4619428	3512
West Bengal	581	0	0	0	414	1	2	1	1000	17183992	7823
Chhattisgarh	406	0	0	0	583	0	11	0	1000	4338807	1480
Orissa	624	0	1	0	375	0	1	0	1000	7633223	3079
Jharkhand	613	2	0	0	375	8	1	0	1000	4812755	2459
Madhya Pradesh	253	0	1	0	746	0	1	0	1000	11451077	5064
Gujarat	116	2	0	0	875	0	7	0	1000	9677747	3045
Daman & Diu	4	0	0	0	996	0	0	0	1000	36669	288
D & N Haveli	21	0	0	0	979	0	0	0	1000	38854	288
Maharashtra	145	0	0	0	853	0	2	0	1000	21207593	8512
Andhra Pradesh	173	1	0	0	826	0	0	0	1000	20505449	6328
Karnataka	132	0	0	0	865	0	2	0	1000	10067008	4349
Goa	3	0	8	0	989	0	0	0	1000	244841	191
Lakshadweep	0	0	0	0	1000	0	0	0	1000	10256	192
Kerala	207	0	0	0	793	0	0	0	1000	6811371	3227
Tamil Nadu	145	0	0	0	851	0	4	0	1000	16585514	6974
Pondicherry	72	0	0	0	928	0	0	0	1000	220537	624
A & N Island	196	0	0	0	804	0	0	0	1000	63827	410
All India	356	1	0	1	639	1	2	0	1000	206572215	97882

Source : NSS Reoprt No. 489: Housing Condition in India : Household Amenities and Other Characteristics

n.r. : not reported

TABLE 7.2.12 : NUMBER OF HOUSEHOLDS BY ARRANGEMENT OF GARBAGE DISPOSAL PER 1000 HOUSEHOLDS LIVING IN A HOUSE FOR EACH STATE/UT

State/UT	arrangement of garbage disposal						no. of households living in a house	
	by panchayat/ municipality/co rporation	by residents	others	no arrangement	n.r.	all	estimated	sample
Urban								
Jammu & Kashmir	577	108	1	314	0	1000	326486	864
Himachal Pradesh	703	112	52	133	0	1000	172585	240
Punjab	464	209	47	280	0	1000	1673799	1247
Chandigarh	593	132	70	207	0	1000	299066	240
Uttaranchal	693	201	71	36	0	1000	329812	384
Haryana	361	329	29	281	0	1000	1089711	767
Delhi	519	412	11	58	0	1000	2652640	1685
Rajasthan	440	302	39	219	0	1000	2531266	1659
Uttar Pradesh	544	243	58	151	4	1000	6559728	3676
Bihar	393	70	35	498	3	1000	1534197	1003
Sikkim	954	32	0	14	0	1000	13046	192
Arunachal Pradesh	18	731	109	141	2	1000	25452	387
Nagaland	138	699	96	67	0	1000	44468	228
Manipur	110	531	176	163	20	1000	89020	707
Mizoram	80	498	82	339	2	1000	56285	910
Tripura	254	51	63	633	0	1000	94457	480
Meghalaya	504	194	98	204	0	1000	68708	384
Assam	268	496	75	160	0	1000	435469	804
West Bengal	536	102	42	315	0	1000	4644618	3376
Chhattisgarh	515	138	61	286	4	1000	779300	479
Orissa	512	62	157	268	0	1000	1170317	802
Jharkhand	298	209	48	446	1	1000	972694	910
Madhya Pradesh	496	96	23	384	0	1000	3149590	2160
Gujarat	500	372	41	86	0	1000	3723817	1615
Daman & Diu	525	392	22	62	0	1000	13408	192
D & N Haveli	359	520	54	67	0	1000	5983	144
Maharashtra	807	71	12	110	0	1000	8976198	5014
Andhra Pradesh	683	134	40	143	0	1000	5881294	2650
Karnataka	670	135	23	171	0	1000	3252093	2240
Goa	433	0	4	562	0	1000	90314	95
Lakshadweep	117	0	0	883	0	1000	5827	96
Kerala	231	159	63	547	0	1000	1732564	1294
Tamil Nadu	768	114	10	107	0	1000	5898627	4245
Pondicherry	564	292	67	77	0	1000	144890	480
A & N Island	870	54	0	76	0	1000	20748	192
All India	590	175	36	199	1	1000	584584753	41841

Source : NSS Reoprt No. 489: Housing Condition in India : Household Amenities and Other Characteristics

n.r. : not reported

**TABLE 7.2.13 : STATE-WISE ESTIMATED ANNUAL REQUIREMENT OF WATER FOR DOMESTIC PURPOSES
INCLUDING FOR CATTLE IN DIFFERENT STATES**

Sl. No.	State/UT	Population in Thousand					Water Requirement in BCM				
		1991	2001	2004	2006	2025	1991	2001	2004	2006	2025
1	2	3	4	5	6	7	8	9	10	11	12
1	Andhra Pradesh	66508	75728	78527	80430	94276	2.50	3.20	3.45	3.63	4.91
2	Arunachal Pradesh	865	1091	1139	1170	1429	0.03	0.05	0.05	0.05	0.07
3	Assam	22414	26638	28050	29009	36766	0.84	1.13	1.23	1.31	1.91
4	Bihar	86374	82879	87810	90830	114845	3.25	3.50	3.86	4.09	5.98
5	Chandigarh	642	901	969	1013	1642	0.02	0.04	0.04	0.05	0.09
6	Chhattisgarh	@	20796	22011	22859	29513	@	0.88	0.97	1.03	1.54
7	Goa	1170	1344	1451	1537	2703	0.04	0.06	0.06	0.07	0.14
8	Gujarat	41310	50597	53195	54814	67402	1.55	2.14	2.34	2.47	3.51
9	Haryana	16464	21083	22296	23040	28941	0.62	0.89	0.98	1.04	1.51
10	Himachal Pradesh	5171	6077	6294	6425	7345	0.19	0.26	0.28	0.29	0.38
11	Jammu & Kashmir	7719	10070	10935	11603	21767	0.29	0.43	0.48	0.52	1.13
12	Jharkhand	@	26909	28303	29173	35730	@	1.14	1.24	1.32	1.86
13	Karnataka	44977	52734	54824	56137	65879	1.69	2.23	2.41	2.53	3.43
14	Kerala	29099	31839	32862	33569	38360	1.09	1.34	1.45	1.51	2
15	Madhya Pradesh	66181	60385	64237	66801	88062	2.49	2.55	2.82	3.01	4.58
16	Maharashtra	78937	96752	101275	104104	127719	2.97	4.09	4.45	4.69	6.65
17	Manipur	1837	2389	2499	2561	3128	0.07	0.10	0.11	0.12	0.16
18	Meghalaya	1775	2306	2411	2472	3021	0.07	0.10	0.11	0.11	0.16
19	Mizoram	690	891	932	955	1167	0.03	0.04	0.04	0.04	0.06
20	Nagaland	1210	1989	2090	2132	2606	0.05	0.08	0.09	0.10	0.14
21	Orissa	31660	36707	38139	39053	45763	1.19	1.55	1.68	1.76	2.38
22	Punjab	20282	24289	25336	25976	30609	0.76	1.03	1.11	1.17	1.59
23	Rajasthan	44006	56473	60127	62431	80005	1.66	2.39	2.64	2.81	4.16
24	Sikkim	406	540	566	579	708	0.02	0.02	0.02	0.03	0.04
25	Tamil Nadu	55859	62111	64019	65261	73569	2.10	2.62	2.82	2.94	3.83
26	Tripura	2757	3191	3326	3421	4180	0.10	0.13	0.15	0.15	0.22
27	Uttar Pradesh	139112	166053	176765	183856	245772	5.23	7.01	7.77	8.29	12.79
28	Uttaranchal	@	8480	8925	9216	11506	@	0.36	0.39	0.42	0.6
29	West Bengal	68078	80221	83585	85780	103194	2.56	3.39	3.68	3.70	5.37
30	A. & N. Islands	281	356	377	394	606	0.01	0.02	0.02	0.02	0.03
31	D. & N. Haveli	138	220	237	248	429	0.01	0.01	0.01	0.01	0.02
32	Lakshadweep	52	61	64	66	97	0.00	0.00	0	0.00	0.01
33	Pondicherry	808	974	1013	1042	1427	0.03	0.04	0.04	0.05	0.07
34	Delhi	9421	13783	15128	16065	28394	0.35	0.58	0.67	0.72	1.48
35	Daman & Diu	102	158	170	178	301	0.00	0.01	0.01	0.01	0.023
TOTAL		846303	1027015	1079887	1114200	1398861	31.84	43.38	47.49	50.23	72.81

Source: Central Water Commission

BCM : Billion Cubic Metres

Note : + : All India figures relate to the estimated requirement as worked out by the standing sub committee for Assessment of availability and requirement of water for diverse uses in the country, 2000. (distributed prorata in the states in proportion to population).

@ : Three States namely Jharkhand, Uttaranchal & Chhatisgarh have been formed after 1991 as such their population as well water requirement in year 1991 have been included in the respective states: Chhattisgarh in M.P., Jharkhand in Bihar and Uttaranchal in Uttar Pradesh.

TABLE 7.3.1 : HAZARDOUS WASTE REGULATORY QUANTITIES

Waste Category (Numbers)	Types of Wastes	Regulatory Quantities
1	2	3
1	Cyanide wastes	1 kilogram per year calculated as cyanide
2	Metal finishing wastes	10 kilograms per year the sum of the specified substance 'calculated as pure metal
3	Waste containing water soluble chemical compounds of lead, copper, zinc, chromium, nickle, selenium, barium and antimony	10 kilograms per year the sum of the specified substance 'calculated as pure metal
4	Mercury, arsenic, thallium, and cadmium bearing wastes	5 kilograms per year the sum of the specified substance 'calculated as pure metal
5	Non-halogenated hydrocarbons including solvents	200 kilograms per year calculated as non-halogenated 'hydrocarbons
6	Halogenated hydrocarbons including solvents	50 kilograms per year calculated as halogenated 'hydrocarbons
7	Wastes from paints, pigments, glue, varnish and printing ink	250 kilograms per year calculated as oil or oil emulsions
8	Wastes from dyes and dye intermediates containing inorganic chemical compounds	200 kilograms per year calculated as inorganic chemicals
9	Wastes from dyes and dye intermediates containing organic chemical compounds	50 kilograms per year calculated as organic chemicals
10	Waste oils and oil-emulsions	1000 kilograms per year calculated as oil and oil emulsions
11	Tarry wastes from refining and tar residues from distillation or pyrolytic treatment	200 kilograms per year calculated as tar
12	Sludge arising from treatment of waste water containing heavy metals, toxic organics, oils, emulsions, and spend chemicals and incineration ash	Irrespective of any quantity
13	Phenols	5 kilograms per year calculated as phenols
14	Asbestos	200 kilograms per year calculated as asbestos
15	Wastes from manufacture of pesticides, herbicides, and residues from pesticides and herbicide formulation units.	5 kilograms per year calculated as pesticides and their intermediate products
16	Acidic/alkaline/slurry wastes	200 kilograms per year calculated as acids/alkalies
17	Off-specification and discarded products	Irrespective of any quantity
18	Discarded containers and container liners of hazardous and toxic wastes	Irrespective of any quantity

Source : TERI Energy Data Directory and Yearbook 2002-2003

TABLE 7.3.2 : QUANTITIES AND WASTE GENERATION RATES IN 59 CITIES

Sl. No.	Name of city	Population (as per 2001 census)	Area (Sq. Km)	Waste Quantity (TPD)	Waste generation rate (Kg/c/day)
1	Kavarati	10119	4	3	0.30
2	Gangtok	29354	15	13	0.44
3	Itanagar	35022	22	12	0.34
4	Daman	35770	7	15	0.42
5	Silvassa	50463	17	16	0.32
6	Panjim	69066	69	32	0.54
7	Kohima	77030	30	13	0.17
8	Port Blair	99984	18	76	0.76
9	Shilong	132867	10	45	0.34
10	Simla	142555	20	39	0.27
11	Agartala	189998	63	77	0.40
12	Gandhinagar	195985	57	44	0.22
13	Dhanbad	199258	24	77	0.39
14	Pondicherry	220865	19	130	0.59
15	Impal	221492	34	43	0.19
16	Aizwal	228280	117	57	0.25
17	Jammu	369659	102	215	0.58
18	Dehradun	426674	67	131	0.31
19	Asansol	745439	127	207	0.44
20	Kochi	595575	98	400	0.67
21	Raipur	605747	56	184	0.30
22	Bhubaneswar	648032	135	234	0.36
23	Tiruvananthapuram	744983	142	171	0.23
24	Chandigarh	808515	114	326	0.40
25	Guwahati	809895	218	166	0.20
26	Ranchi	847093	224	208	0.25
27	Vijaywada	851282	58	374	0.44
28	Srinagar	989440	341	428	0.48
29	Madurai	928868	52	275	0.30
30	Coimbatore	930882	107	530	0.57
31	Jabalpur	932484	134	216	0.23
32	Amritsar	966862	77	438	0.45
33	Rajkot	967476	105	207	0.21
34	Allahabad	975393	71	509	0.52
35	Vishakhapatnam	982904	110	584	0.59
36	Faridabad	1055938	216	448	0.42
37	Meerut	1068772	142	490	0.46
38	Nashik	1077236	269	200	0.19
39	Varanasi	1091918	80	425	0.39
40	Jamshedpur	1104713	64	338	0.31
41	Agra	1275135	140	654	0.51
42	Vadodara	1306227	240	357	0.27
43	Patna	1366444	107	511	0.37
44	Ludhiana	1398467	159	735	0.53
45	Bhopal	1437354	286	574	0.40
46	Indore	1474968	130	557	0.38
47	Nagpur	2052066	218	504	0.25
48	Lucknow	2185927	310	475	0.22
49	Jaipur	2322575	518	904	0.39
50	Surat	2433835	112	1000	0.41
51	Pune	2538473	244	1175	0.46
52	Kanpur	2551337	267	1100	0.43
53	Ahemdabad	3520085	191	1302	0.37
54	Hyderabad	3843585	169	2187	0.57
55	Bangalore	4301326	226	1669	0.39
56	Chennai	4343645	174	3036	0.62
57	Kolkata	4572876	187	2653	0.58
58	Delhi*	10306452	1483	5922	0.57
59	Greater Mumbai	11978450	437	5320	0.45

Source :Central Pollution Control Board (CPCB)

CPCB with the assistance of NEERI conducted survey of solid waste management in 59 cities (35 metro cities and 24 State capital -2004-05)

TABLE 7.3.3 : WASTRE CHARACTERISATION IN 59 CITIES

Sr. No.	Name of City	Compostables (%)	Recyclables (%)	C/N Ratio	HCV* (Kcal/Kg)	Moisture
1	Kavarati	46.01	27.20	18.04	2242	25
2	Gangtok	46.52	16.48	25.61	1234	44
3	Itanagar	52.02	20.57	17.68	3414	50
4	Daman	29.60	22.02	22.34	2588	53
5	Silvassa	71.67	13.97	35.24	1281	42
6	Panjim	61.75	17.44	23.77	2211	47
7	Kohima	57.48	22.67	30.84	2844	65
8	Port Blair	48.25	27.66	35.88	1474	63
9	Shilong	62.54	17.27	28.86	2736	63
10	Simla	43.02	36.64	23.76	2572	60
11	Agartala	58.57	13.68	30.02	2427	60
12	Gandhinagar	34.30	13.20	36.05	698	24
13	Dhanbad	46.93	16.16	18.22	591	50
14	Pondicherry	49.96	24.29	36.86	1846	54
15	Impal	60.00	18.51	22.34	3766	40
16	Aizwal	54.24	20.97	27.45	3766	43
17	Jammu	51.51	21.08	26.79	1782	40
18	Dehradun	51.37	19.58	25.90	2445	60
19	Asansol	50.33	14.21	14.08	1156	54
20	Kochi	57.24	19.36	18.22	591	50
21	Raipur	51.40	16.31	223.50	1273	30
22	Bhubaneswar	49.81	12.69	20.57	742	59
23	Tiruvananthapuram	72.96	14.36	35.19	2378	60
24	Chandigarh	57.18	10.91	20.52	1408	64
25	Guwahati	53.69	23.28	17.71	1519	61
26	Ranchi	51.49	9.86	20.23	1060	49
27	Vijaywada	59.43	17.40	33.90	1910	46
28	Srinagar	61.77	17.76	22.46	1264	61
29	Madurai	55.32	17.25	32.69	1813	46
30	Coimbatore	50.06	15.52	45.83	2381	54
31	Jabalpur	58.07	16.61	28.22	2051	35
32	Amritsar	65.02	13.94	30.69	1836	61
33	Rajkot	41.50	11.20	52.56	687	17
34	Allahabad	35.49	19.22	19.00	1180	18
35	Vishakhapatnam	45.96	24.20	41.70	1602	53
36	Faridabad	42.06	23.31	18.58	1319	34
37	Meerut	54.54	10.96	19.24	1089	32
38	Nashik	39.52	25.11	37.20	2762	62
39	Varanasi	45.18	17.23	19.40	804	44
40	Jamshedpur	43.36	15.69	19.69	1009	48
41	Agra	46.38	15.76	21.56	520	28
42	Vadodara	47.43	14.50	40.34	1781	25
43	Patna	51.96	12.57	18.62	819	36
44	Ludhiana	49.80	19.32	52.17	2559	65
45	Bhopal	52.44	22.33	21.58	1421	43
46	Indore	48.97	12.57	29.30	1437	31
47	Nagpur	47.41	15.53	26.37	2632	41
48	Lucknow	47.41	15.53	21.41	1557	60
49	Jaipur	45.50	12.10	43.29	834	21
50	Surat	56.87	11.21	42.16	990	51
51	Pune	62.44	16.66	35.54	2531	63
52	Kanpur	47.52	11.93	27.64	1571	46
53	Ahmedabad	40.81	11.65	29.64	1180	32
54	Hyderabad	54.20	21.60	25.90	1969	46
55	Bangalore	51.84	22.43	35.12	2386	55
56	Chennai	41.34	16.34	29.25	2594	47
57	Kolkata	50.56	11.48	31.81	1201	46
58	Delhi	54.42	15.52	34.87	1802	49
59	Greater Mumbai	62.44	16.66	39.04	1786	54

Source : Central Pollution Control Board (CPCB)

CPCB with the assistance of NEERI conducted survey of solid waste management in 59 cities (35 metro cities and 24 State capital -2004-05)

TABLE 7.3.4 : STATUS OF LANDFILL SITES IN 59 CITIES

Sr. No.	Name of City	No. of landfill sites	Area of landfill (ha)	Life of landfill (years)	New site proposed
1	Indore	1	59.50	-	No
2	Bhopal	1	-	-	No
3	Dhanbad	3	-	-	No
4	Jabalpur	1	60.70	-	Yes
5	Jamshedpur	2	4.10	-	No
6	Patna	-	-	-	Yes
7	Ranchi	1	15.00	-	No
8	Bhubaneswar	4	-	-	Yes
9	Ahemdabad	1	84.00	30	Yes
10	Nashik	1	34.40	15	No
11	Raipur	1	14.60	-	Yes
12	Asansol	1	2.00	7	No
13	Bangalore	2	40.70	-	No
14	Agartala	1	6.80	14	Yes
15	Agra	1	1.50	30	No
16	Allahabad	2	-	-	No
17	Daman	2	-	-	No
18	Faridabad	3	2.40	-	No
19	Lucknow	1	1.40	3	Yes
20	Meerut	2	14.20	-	No
21	Nagpur	1	-	-	No
22	Vadodara	1	8.1	-	Yes
23	Gandhinagar	-	-	-	Yes
24	Vishakhapatnam	1	40.5	25	No
25	Dehradun	1	4.5	-	Yes
26	Ludhiana	1	40.4	-	No
27	Guwahati	1	13.2	-	No
28	Kohima	1	-	-	No
29	Amritsar	1	-	-	Yes
30	Imphal	1	-	-	No
31	Itanagar	1	-	-	No
32	Aizwal	1	-	-	No
33	Rajkot	2	1.20	-	Yes
34	Pune	1	-	-	No
35	Simla	1	0.60	-	No
36	Madurai	1	48.60	35	No
37	Jaipur	3	31.40	-	No
38	Kochi	1	-	-	No
39	Coimbatore	2	292.00	-	No
40	Vijayawada	-	-	-	No
41	Kavarati	1	0.20	-	No
42	Chandigarh	1	18.00	-	No
43	Thiruvananthapuram	1	12.15	-	No
44	Panjim	1	1.20	30	No
45	Silvassa	1	-	-	No
46	Hyderabad	1	121.50	-	No
47	Gangtok	1	2.80	-	No
48	Varanasi	1	2.00	-	Yes
49	Kanpur	1	27.00	-	No
50	Port Blair	1	0.20	6	Yes
51	Pondicherry	-	-	-	Yes
52	Surat	1	200.00	-	No
53	Srinagar	1	30.40	-	No
54	Jammu	1	-	10	Yes
55	Greater Mumbai	3	140.00	-	No
56	Chennai	2	465.50	1	No
57	Kolkata	1	24.70	35	Yes
58	Shillong	1	-	-	No
59	Delhi'	3	66.40	-	No

Source :Central Pollution Control Board (CPCB)

CPCB with the assistance of NEERI conducted survey of solid waste management in 59 cities (35 metro cities and 24 State capital -2004-05)

TABLE 7.3.5 : CONSUMPTION OF PLASTIC IN THE WORLD IN 2000
(Thousands Metric Tonnes)

Sl. No.	Country/Region	Consumption
1	2	3
1	Europe W, C, E	40000
2	Eurasia, Russia, Others	4000
3	North America	45000
4	Latin America	11000
5	Middle East, Incl. TR	4000
6	Africa, North & South	2500
7	Other Africa	500
8	China	19000
9	India	4000
10	Japan	11000
11	Other Asia Pacific, Rest	13000
Total World		154000

Source : www.envis-icpe.com

CHART 15: CONSUMPTION OF PLASTIC IN (000 M.T.) THE WORLD IN 2000

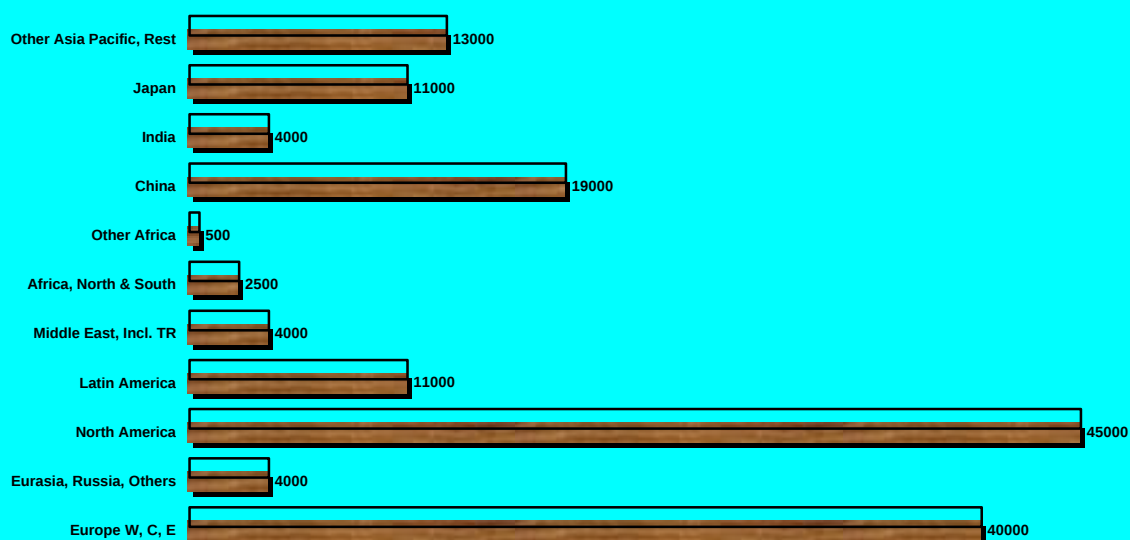


TABLE 7.3.6 : CONSUMPTION OF PLASTIC IN PACKAGING AND CONSUMER PRODUCTS
(In Thousand Tonnes)

Sl. No.	Item	1984	1990	1994	2000
1	2	3	4	5	6
1	Packaging	162	386	664	1518
2	Consumer Products	79	165	319	904
3	Building & Construction	73	159	228	490
4	Industrial Goods	80	137	222	478
5	Others	40	57	122	267

Source : Parivesh Newsletter, Sept.1998, CBCB

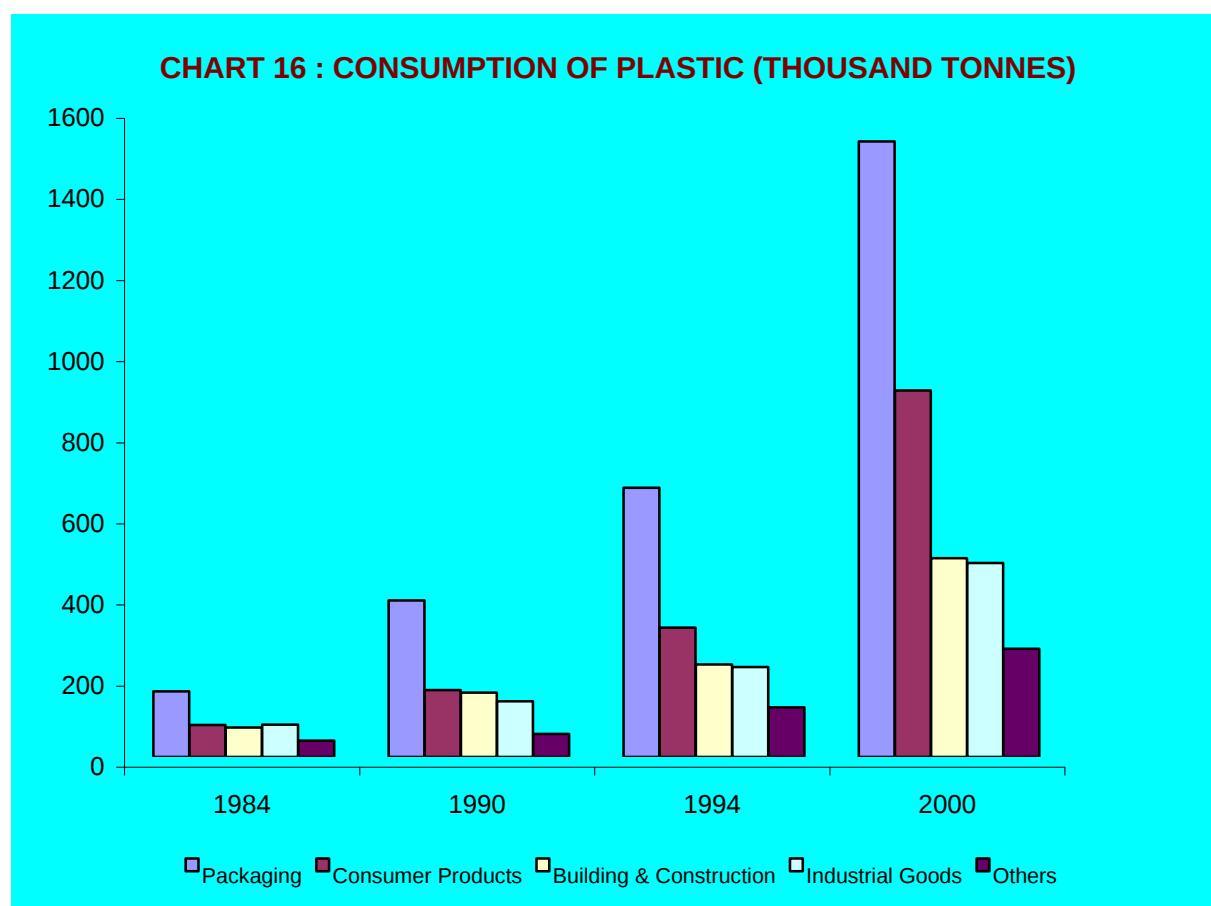


TABLE 7.3.7 : PLASTIC WASTE MANAGEMENT STATUS IN INDIA*(In thousand tonnes)*

Sl. No.	Item	1995-96	2001
1	2	3	4
1	Consumption of Plastic	1889	4374
2	Waste available for Recycling	800	2000
3	Total	2689	6374

Source : Parivesh Newsletter, CPCB

TABLE 7.3.8 : CHARACTERISTIC LAND - FILL LEACHATES

Sl. No.	Parameters	Concentration (mg/l)
1	2	3
1	pH	3.7 - 8.3
2	Tot. Dis. Solid	725 - 55,000
3	Chlorides	2 - 11,373
4	Tot. Kj. Nitrogen	2 - 3,320
5	Lead	0 - 14.2
6	COD	50 - 99,000
7	BODS	0 - 19,500

Source : Central Pollution Control Board

Above characteristics of Leachate are typical characteristics of leachate (Ref. Datta, M. (1997)

Generation and Control of Leachate and Landfill Gas P. 90. In waste Disposal in engineering Landfill.

Narson Publishing House, New Delhi)

TABLE 7.3.9 : CURRENT STATUS OF MANAGEMENT OF MUNICIPAL SOLID WASTE

Sl. No.	Cities	Class I	Class II
1	2	3	4
1	No. of Cities	299	345
2	Total Population	1281138655	22375588
3	Waste Generation (MT/d)	48134	1454
4	Mode of Collection		
I.	Manually	50%	78%
II.	Trucks	49%	21%
III.	Others	1%	1%
5	Disposal		
I.	Dumping	94%	93%
II.	Composting	5%	6%
III.	Others	1%	1%

Source : Central Pollution Control Board

Note : No. of cities and Total population are as per 1991 census and other data is for 1994-95.