Chandramouli, Dr.C., I.A.S. "Slums In Chennai: A Profile" in Martin J. Bunch, V. Madha Suresh and T. Vasantha Kumaran, eds., *Proceedings of the Third International Conference on Environment and Health, Chennai, India, 15-17 December, 2003*. Chennai: Department of Geography, University of Madras and Faculty of Environmental Studies, York University. Pages 82 – 88.

SLUMS IN CHENNAI: A PROFILE

Dr. C.Chandramouli, I.A.S.
Director of Census Operations, Tamil Nadu

Living conditions have a direct impact on public health. One of the biggest challenges that face urban planners worldwide is the proliferation of slums in urban areas and the host of health hazards that they bring along in their wake. Though the prolific spread of slums has been a rampant problem in urban areas worldwide, there is little by way of an empirical database upon which scientific planning could be based. With a view to bridge this data gap, the Census of India 2001 has sought to collect and compile disaggregated data on slums. This paper presents a profile of Slums in Chennai, the Capital city of the State of Tamil Nadu in South India. The data is provisional and is subject to change.

Concept and Definition of Slums

The concept of slums and its definition vary from country to country depending upon the socio-economic conditions of society. The basic characteristics of slums are - dilapidated and infirm housing structures, poor ventilation, acute over-crowding, faulty alignment of streets, inadequate lighting, paucity of safe drinking water, water logging during rains, absence of toilet facilities and non-availability of basic physical and social services. The living conditions in slums are usually unhygienic and contrary to all norms of planned urban growth and are an important factor in accelerating transmission of various air and water borne diseases. The legal definition however differs from State to State.

'Slums' have been defined under Section 3 of the Slum Areas (Improvement and Clearance) Act, 1956 as areas where buildings -

- are in any respect unfit for human habitation;
- are by reason of dilapidation, overcrowding, faulty arrangement and design of such buildings, narrowness or faulty arrangement of streets, lack of ventilation, light, sanitation facilities or any combination of these factors which are detrimental to safety, health and morals.

Census of India 2001 has adopted the definition of 'Slum' areas as follows: -

(i) All areas notified as 'Slum' by State/Local Government and UT Administration under any Act;

(ii) All areas recognised as 'Slum' by State/Local Government and UT Administration, which have not been formally notified as slum under any Act;

(ii) A compact area of at least 300 population or about 60-70 households of poorly built congested tenements, in unhygienic environment usually with inadequate infrastructure and lacking in proper sanitary and drinking water facilities.

Method of Collection of Data

In order to collect the base line socio-economic and demographic characteristics of slums, no separate or additional questionnaire was canvassed during the Census of India 2001. The same schedule as canvassed during the Houselisting and Population Enumeration has been used to generate the data on slums. Care has been taken to maintain the geographical coverage of Slums as separate entities. While forming enumeration block in any ward or a town, separate block or blocks were formed for slum areas both at the Houselisting Stage and later during Population Enumeration. By keeping a separate identity of the 'Slum Enumeration Blocks', it is possible to compile and tabulate special data for 'Slums'. Particular care has been taken to see that a block formed out of 'Slum' does not cut across ward boundaries and no non-slum area was tagged to a 'Slum Enumeration Block', however small it may be. Similarly, wherever necessary, readjustments were made in the boundaries of Houselisting Blocks at the time of Population Enumeration, within the area of 'Slum' so that comparable data for Houselist and that collected through Household Schedule were available. It is also to be noted that only municipal towns having a population of 50,000 or more as per the 1991 Census were covered for slum demography. In Tamil Nadu, slum areas were identified in 63 municipal towns in Tamil Nadu.

Slum Population in Tamil Nadu

The total slum population of Tamil Nadu in the selected 63 Municipal Towns as per the Census of India 2001 (provisional) is 2,838,366. This forms around 20.02 % of the total population of the selected Towns. The largest slum population is found in the Chennai Corporation where 10,79,414 persons are reported as slum dwellers. This forms 25.6% of the total population. Madurai Corporation (1.76 lakhs/19%), Tiruchirappalli Corporation (1.62 lakhs/22%) and Salem Corporation (1.39 lakhs/20%) are the other two cities having more than one lakh slum dwellers.

Tamil Nadu: Proportion of Slum Population to Total Population 2001	
Range	**Number of Towns**
40-48%	3
30-39%	9
20-29%	13
10-19%	25
<10%	13
Total	63

Slum Population and Sex Ratio in Chennai

Chennai has returned a Slum Population of 1,079,414 persons. The number of males (548,517) outnumbers the number of females (530,897) in the slums of Chennai. The proportion of the Slum Population in Chennai to the total population is 26%. The ratio is higher than that returned for the City as a whole. This indicates that in general more males are migrating to the city in search of employment and otherwise.

Chennai: Sex ratio, 2001

				Sex Ratio
Chennai	4216268	2161605	2054663	951
Non Slum	3136854	1613088	1523766	945
Slum	1079414	548517	530897	968

Literacy rate among slum population

The Literacy rate for the Slum Population of Tamil Nadu is 71%. Males (77%) have a higher Literacy rate than Females (65%). Nagercoil (89.90%) has reported the highest literacy rate among the slum dwellers. Dindigul (87.91%) and Tiruvattiyur (85.77) follow.

Tamil Nadu: Literacy Rate in Slums 2001

	Persons	Male	Female
Range	**No.**	**No.**	**No.**
>90%	0	11	0
80-89%	24	41	2
70-79%	28	9	29
60-69%	9	2	22
50-59%	2	0	10
Total	63	63	63

As far as Chennai is concerned, the Literacy rate for the Slum Population is 80.09%. Males (85.77%) have a higher Literacy rate than Females (74.21%). It is noteworthy that the male literacy rate in slums is higher than that in non-slum areas.

Chennai: Literacy Rate, 2001

	Literates			Literacy rate		
	Persons	**Male**	**Female**	**Persons**	**Male**	**Female**
Chennai	3079004	1670094	1408910	80.14	84.71	75.32
Non Slum	2299888	1245858	1054030	81.64	81.82	81.46
Slum	779116	424236	354880	80.09	85.77	74.21

Type of Houses

Only 64% of the houses are of a permanent nature in Slum areas. Semi Permanent and Temporary houses form the rest in equal proportion. The picture in non-slum areas is in sharp

contrast- almost 91% of the houses are of a permanent nature. Semi-Permanent houses form 5% and the rest are of a Temporary kind.

Chennai: Type of Houses, 2000

	Total No. Of HH	Permanent	%	Semi-Permanent	%	Temporary	%
Total	827811	721492	87.16	59469	7.18	46465	5.61
Non Slum	702086	640364	91.21	37054	5.28	24283	3.46
Slum	125725	81128	64.53	22415	17.83	22182	17.64

Number of Dwelling Rooms

The availability of living space within the house is also a vital parameter for good health. Slums in Chennai show up adversely as far as this indicator is concerned. 67% of the households in slums live in one-room tenements. Only 2% of the households in slums have more than 3 rooms. The cramped accommodation has its natural impact on health and hygiene. The spread of diseases is facilitated by such living conditions.

Chennai: Number of Dwelling Rooms, 2000

	1 Room	%	2 Rooms	%	3 Rooms	%	>3 Rooms	%
Total	338845	40.93	251,659	30.40	144,149	17.41	93,158	11.25
Non Slum	258728	36.85	221,240	31.51	136,790	19.48	90,435	12.88
Slum	84193	66.96	30419	24.19	7359	5.85	2723	2.17

Ownership Pattern

Contrary to expectations, 40% of the houses in Slums are rented and 3% are neither rented nor owned. This clearly indicates the presence of slumlords, who own more than one house and are in a position to rent out houses to others.

Chennai: Ownership Pattern, 2000

	Owned	%	Rented	%	Others	%
Total	389911	47.10	426053	51.47	11847	1.43
Non-Slum	319222	45.47	375289	53.45	7575	1.07
Slum	70689	56.23	50764	40.38	4272	3.39

Drinking Water

Access to drinking water: The slum population in Chennai city suffers distinctly as far as access to drinking water is concerned, when compared to their non-slum counterparts. Only 26% of the Slum population had access to drinking water within their premises, while of the non-slum population was 71%. On the other hand, only 24% of the non-slum population had access to drinking water within 500m of their premises, while the proportion among the slum population

was 55%. Moreover, 19% of the Slum population had to go more than 500m to access to drinking water, while of the proportion of non-slum population who had to go that far away was only 5%.

Chennai: Access to Drinking Water, 2000

	Within	%	Near	%	Away	%
Total	533055	64.39	236845	28.61	57911.00	7.00
Non-Slum	499632	71.16	167975	23.93	34479.00	4.91
Slum	33423	26.58	68870	54.78	23432.00	18.64

Source of Drinking Water: Slums are considerably disadvantaged as far as sources of drinking water are concerned. Handpumps (42%) are the main source of drinking water in slums. Tap water is available to 31% and a sizeable proportion (20%) is serviced by "other sources". In non-slum areas Tap (48%) and Handpumps (31%) are the primary sources of drinking water.

Chennai: Sources of Drinking Water, 2000

	Tap	%	Handpump	%	Tubewell	%	Well	Any other	%
Total	372807	45.04	273721	33.07	62308	7.53	44526	71712	8.66
Non-Slum	333969	47.57	220165	31.36	59146	8.42	39861	46650	6.64
Slum	38838	30.89	53556	42.60	3162	2.52	4665	25062	19.93

The access as well as source of drinking water has a definite impact on the incidence and spread of diseases. It is a well-documented fact that stored water is the breeding ground for a number of fresh water vectors. The incidence of Malaria in the city has been attributed in a large measure to storage of fresh water in containers within the houses. The incidence of gastro-intestinal diseases can also be traced to inadequate chlorination, contamination due to improper storage and contamination of drinking water sources on account of garbage accumulation, open defecation, inundation and pollution.

Availability of Electricity

Electricity has become a basic need of the population especially in urban areas. The Census however reveals that even in the metropolis, the satisfaction of this need is not universal. While electricity is available to 97% of the non-slum population, only 79% of the slum population has this facility. 1% of the households reported no source of lighting, while 20% depended on Kerosene and other oils for their lighting needs.

Chennai: Availability of Electricity, 2000

	Electricity	%	No lighting	%
Total	778371	94.03	2768	0.33
Non-Slum	678529	96.64	1359	0.19
Slum	99842	79.41	1409	1.12

Availability of Latrines

The availability of latrines is an important indicator of the state of sanitation. This in turn is reflected in the spread of several diseases especially those relating to the gastro-intestinal tract and skin etc. More than a third of the households (34%) in slums had no latrines. A significant proportion of households in non-slum areas (12%) too did not have this facility. This results in open defecation and consequently the spread of a host of diseases. The provision of latrines would have to figure very high on the agenda of health planners.

Chennai: Availability of Latrines, 2000

	Available	**%**	*Not Available*	**%**
Total	743175	89.78	84,636	10.22
Non Slum	617450	87.95	84,636	12.05
Slum	82605	65.70	43120	34.30

Availability of Drainage Facilities

The availability of disposal arrangements for liquid as well as solid wastes has a great impact on the environment and consequently on health of the people. 30% of the households in slums did not have any drainage facility. Of the rest, 14% had open drainage facilities. Thus, 44% of the slum population was exposed to grave risk of several diseases. Provision of safe disposal facilities for wastes is thus an item that should figure very high on the list of priorities.

Chennai: Availability of Drainage facilities, 2000

	Closed drainage	**%**	**Open drainage**	**%**	**No drainage**	**%**
Total	686581	82.94	47401	5.73	93829	11.33
Non-Slum	616170	87.76	29947	4.27	55969	7.97
Slum	70411	56.00	17454	13.88	37860	30.11

Availability of Separate Kitchen and type of Fuel used for Cooking

The availability of a separate kitchen within the house and the type of fuel used for cooking have a direct bearing on the incidence of respiratory diseases especially among women, who are directly exposed to smoke emitted by fuels, besides others. Some studies also indicate an impact on fertility. 24% of the households in slums do not have a separate kitchen. 81% of the households in slums use Kerosene and LPG while the rest use polluting fuels. This has an adverse impact on the respiratory and reproductive health of the population.

Chennai: Availability of Separate Kitchen and Fuels used for Cooking, 2000

	Kitchen NA	**%**	**Kerosene**	**%**	**LPG**	**%**	**Fire wood**	**%**	**Others**	**%**
Total	70618	8.53	280,426	33.88	492,082	59.44	39686	4.79	15,617	1.89
Non-Slum	40360	5.75	206,569	29.42	463,869	66.07	19288	2.75	12,360	1.76
Slum	30258	24.07	73857	58.74	28213	22.44	20398	16.22	3,257	2.59

Availability of Radio and Television

Radio and Television are potent media to spread awareness about the incidence, spread and prevention of diseases and also the status of the environment. It is also effective in bringing about life-style changes in the society. It is fortunate that almost 44% of the households in slums

have Radios and 60% of them have Television sets. The media should be effectively harnessed to disseminate knowledge.

Chennai: Availability of Radio and Television Sets, 2000

	Radio	%	Television	%
Total	550,152	66.46	676,588	81.73
Non Slum	494,998	70.50	601,066	85.61
Slum	55154	43.87	75522	60.07

Conclusion

A little more than one fourth of the Chennai population lives in Slums. Slums in Chennai are greatly disadvantaged as far as quality of housing and availability of basic amenities like drinking water, electricity, latrines, drainage, non-polluting fuels and the like. Any improvement in the standards of public health will have to start in the Slums. Some of the areas of focus have been listed in this paper. The agenda is long but will have to be addressed in all sincerity.