HOUSING CONDITION IN INDIA

With special focus on Rural Areas and Socially Disadvantaged Sections

Volume I

**Study sponsored by the SR Sankaran Chair,
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Hyderabad**

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Preface

This study on Housing Condition in India is part of a larger collaborative project between the SR Sankaran Chair on Rural Labour Studies, National Institute of Rural Development, Hyderabad and the Laurie Baker Centre for Habitat Studies, Thiruvananthapuram. The main objective of the collaborative effort is to analyse the condition of housing and related living amenities for the poor in the country with special focus on rural areas as well as the socially disadvantaged sections of the population. As a first step, this study examines the housing condition and related living amenities in the country and presents quantitative estimates based on data from the two Population Censuses viz., 2001 and 2011 as well as the National Sample Survey 65th Round (2008-09). While certain indicators are similar for both sources, the latter allows for a detailed computation of several additional indicators relating to housing and related living amenities.

This study report has taken care to examine the condition of housing in rural areas in the constituent states of India and place it in relation to the situation in urban areas. In addition it has also focused on the Scheduled Tribes and Scheduled Castes separately to examine their position in relation to other sections of the population. The resulted are summarized in the introductory chapter.

The study team consisted of K.P. Kannan (Team leader), G. Raveendran (Statistical Adviser), Neethi P. Menon and Soumya Maria (Research Associates) and S. Dhanya (Research Assistant. The study team would like to place on record the cooperation, support and advice received from Professor D. Narasimha Reddy, the first SR Sankaran Chair Professor at the NIRD as well as his successor Professor Kailas Sarap. The team also would like to thank their colleagues at the LBC especially P.B. Sajan, Member Secretary, V.K. Anilkumar, Chief Administrative and Programme Manager for their administrative support.

K. P. Kannan
On behalf of the LBC Study Team
31 December 2014

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Introduction and Summary of Findings

"Everyone has the right to a standard of living adequate for the health and well-being of himself and his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control."

Universal Declaration of Human Rights (Article 25.1)

1. Introduction

Housing is a basic requirement of human well-being. Along with the requirement of shelter, other facilities in the micro environment of housing such as type of dwelling unit, drinking water, sanitation, drainage, etc., constitute housing condition of the people that forms a vital component of their overall quality of life.

Housing is one of the basic needs of every individual as besides providing shelter and security, it also enables easy access to the credit market by working as collateral comfort / security.

Inadequate and inappropriate housing is a manifestation of deprivation and is important both as a factor in enhancing human development that would not only contribute to enhancing productivity and efficiency but also enhance social dignity.

If housing is to be considered as a basic deprivation, then the state in a democratic polity has a primary obligation to ensure that it is not just alleviated but eradicated altogether. However, studies focusing on this basic deprivation in India is far and few although periodic collection of information relating to housing and related aspects are collected nationally by the Registrar of Census Operations through its decennial population census as well as by the National Sample Survey Organization for selected years. It is also equally important to note that while struggles for other basic entitlements such as food security, employment, social security, basic education and basic health care have a long history and are continuing, such broad-based and prolonged struggle and advocacy for housing are relatively absent. This is not to underestimate the importance of the struggles in specific locations and for specific groups such slum dwellers in many of the cities. As we shall see in this report, the condition of housing in rural areas is quite appalling and requirement exceeds that of urban areas.

Going by several indicators, more than half the households in India i.e. covering more than half the population want and need better housing. Families in poverty seize every available opportunity to own a quality home. Indians take pride in their homes, patching them up after they crumble every monsoon by scavenging bricks and building their homes a wall at a time. The problem, however, is that a quality house is getting further and further out of reach for the common man and woman with bricks, mortar and labor costs up over fifty percent in many areas across India in recent years. A severe lack of financing for the rural poor without land title makes quality housing difficult to attain.

1.1 Rationale for research study on housing for the poor

There are currently no available studies documenting the status of housing for different segments of the population such as those in rural an urban areas in a comparative inter-state perspective. This is important because it is the state-level government which is responsible for implementation of housing schemes and programmes to the designated sections of the people. As mentioned above, there is a need here to differentiate between rural and urban areas. But such a spatial approach is not sufficient to get a more nuanced understanding of the more deprived sections. As in the case of almost all human development and economic well-being indicators, the two social groups who are at the bottom of the social and economic hierarchy are those belonging to the Scheduled Tribes (ST) and Scheduled Castes (SC). It is therefore quite important to focus on their housing condition in rural and urban areas separately. The current study proposes to fill these gaps. It has two components; the first one is a study focusing on the country as a whole including an inter-state comparison and the other is a study focusing on Kerala that perhaps has a reasonably successful experience in eliminating the extreme forms of housing deprivation and securing decent housing and related amenities as part of its socio-economic transformation as well as targeted state policies and schemes.
This first report deals with the housing condition in India.

3. Objectives of the research study

The specific objectives of the study are the following:

- To understand the housing condition in India and prepare a national profile based on selected but important aspects of housing between 2001 and 2011 supplemented by analysis of data from the NSS 2008-09 round on specific aspects;

- To analyze the housing condition across Indian states and provide a comparative profile on selected indicators;

- To analyze the housing condition in rural areas; and

- To analyze the housing condition in terms of social groups by focusing on SCs and STs and comparing their condition with that of 'Others' as a category.

4. Methodology

Given the nature and coverage of the area of enquiry, this report is based on an analysis of dta collected in two population censuses i.e. 2001 and 2011 as well as the NSS 65th Round on Housing Condition in India. While the tables on housing released by the Registrar of Census Operations provide useful information the unit level data are not available to the public. Hence the analysis is based on the census tables. However, the availability of unit level data of NSS rounds has made it possible for researchers to work with such data and process it to suit their questions and requirements. We have therefore used the NSS data as an additional source of information to go beyond the information provided by the census data. Since the latest NSS data relates to 2008-09 this is close to the time period of 2011 census.

4. Summary of main findings

Given the large number of indicators used in both population censuses as well as in the NSS round, we had to make a selection of the indicators that would give us a rounded picture of the housing situation. Additional information collected is given in the Appendix to each chapter in the form of detailed tables. The findings are summarized in the following order.

4.1 Between 2001 and 2011 there has been an impressive growth of nearly 32 per cent in the number of housing units – i.e. building units used as residence - in the country. However the growth in urban areas at 52 per cent is far in excess of the growth in rural areas at 24 per cent.

4.2 In terms of quality of housing based on 'good', 'livable' and 'dilapidated' housing, the inequality between rural and urban areas has widened to the disadvantage of the latter. While 68 per cent of urban housing is classified as 'good' the proportion in rural areas in 2011 was only 46 per cent. In rural areas 6.5 per cent were found to be in a 'dilapidated' condition while that proportion in urban areas was 2.9 per cent.

4.3 For finding out the quality of housing among the SC and ST segments viz-a-viz Others, findings from the NSS 2008-09 survey revealed that the SC segment had the highest share of 'bad' housing at 22 per cent followed by ST at 19 and others at 13 per cent. In rural areas these were 24, 20 and 16 per cent respectively.

4.4 Availability of adequate space within a housing unit is perhaps crucial to judge the housing condition. Going by this standard, the 2011 census revealed that 37 per cent of

all households in the country lived in just one-room housing units. Here it is important to note the definition adopted by the census authorities. The definition was:

> "A dwelling room would include living room, bedroom, dining room, drawing room, study room, servant's room and other habitable rooms provided they satisfy the criterion of their dimensions. Do not include kitchen, bathroom, latrine, store room, passageway and veranda which are not normally usable for living. A room, used for multipurpose such as sleeping, sitting, dining, storing, cooking, etc., should be regarded as a dwelling room."

To this we should add another 32 per cent housing units which had only two-rooms. This worked out to 69 per cent. We may recall here that the proportion of population who did not have more than two PPP$ (in equivalent Indian Rupees for consumption expenditure) was reported as 69 per cent earlier (see Kannan 2014:xx). This does not mean that they all had a separate kitchen. Most of them did not have a separate kitchen (see 4. 6)

According to the NSS, a room was defined as the above but with some minor difference. This definition was:

> A room with floor area (carpet area) of at least 4 square metres, a height of at least 2 metres from the floor to the highest point in the ceiling and used for living purposes was considered as a living room. Thus, rooms used as bedroom, sitting room, prayer room, dining room, servant's room - all were considered as living rooms provided they satisfied the size criterion. Kitchen, bathroom, latrine, store, garage etc. were not living rooms. A room which was used in common for living purpose and as kitchen or store was also considered as living room.

As per the NSS, 38 per cent of the households lived in with one room while another 36 per cent lived with just two rooms thus totalling 74 per cent i.e. 5 percentage points higher than the census findings of 2011.

4.5 From a social group point of view, analysis of NSS data revealed that 49 per cent of SC households lived in one-room housing units in 2008-09 where this proportion was 42 for ST and 35 for Others. Rural-urban difference in this respect was not pronounced except that the proportion with one-room housing was a little higher in urban areas for all groups.

4.6 Very few people would think of a house without a kitchen because it is so central to the existence of the family. But that seems to be a luxury for a significant share of Indian households. Half the households, as per the NSS, reported that they had no separate kitchen. This means that a majority of those with one or two rooms totaling

74 per cent in 2008-09 had no separate kitchen. Contrary to what one would expect rural area seems to be more deprived on this indicator than urban area. 55 per cent of housing units reported no kitchen in rural India while this was 37 per cent in urban India.

4.7 The social profile of not having a separate kitchen has disproportionately been on the SC and ST communities. While 64 per cent of SC households did not have a separate kitchen, the proportion was 60 for the ST and 44 for Others.

4.8 Of all the indicators, the one that impinges on human dignity is perhaps the availability of a toilet. The state of affairs on this count is perhaps one of the most shameful statistics on the condition of living. The 2001 reported that 64 per cent of the households report no toilet facility but that share came down to 54 per cent in 2011, still quite high by any standard. In rural India the share came down from 78 to 69 per cent. The NSS also reported a similar picture but somewhat lower for 2008-09; 49 per cent reporting no latrine facility with 65 and 11 per cent in rural and urban areas respectively.

4.9 The social group profile revealed, as per NSS, that the most deprived in this respect are the ST segment with 69 per cent reporting no latrine facility followed by SC at 65 and Others at 42 per cent. Of course the rural situation was quite bad with an overall deprivation of 65 per cent without any latrine facility as against 11 in urban areas. Here the situation was worst for SC households with 76 per cent reporting no latrine facility and 75 for ST and 60 per cent for Others.

4.10 Electrification of households as a source of lighting is something that had been accorded a high priority in government development programmes. The census of 2011 however reported that only two-thirds of the households – 67 per cent – reported electricity as a source of lighting with only 55 per cent in rural areas and 93 per cent in urban areas. However, the NSS round of 2008-09 reported a higher percentage of 75 per cent overall with 66 per cent for rural and 96 per cent for urban areas.

4.11 As in other indicators, the most deprived in this respect are the SC and ST households. While 61 per cent of ST households reported as having electricity for domestic use, 66 per cent of SC reported the same. It was 79 per cent for Others. Here again rural areas lag behind urban areas with 57 per cent for ST, 60 and 70 per cent for SC and Others.

4.12 An inter-state comparison of the housing situation reveals a scenario that are not surprising going by the overall human development indicators of various states. At the top are five states – Delhi, Kerala, Haryana, Punjab and Himachal Pradesh – that have achieved reasonable levels of housing conditions. At the bottom are the states that are at the lower end of human development indicators as well as overall economic

performance such as Bihar, Uttar Pradesh, Madhya Pradesh, Chhattisgarh, Jharkhand and Odisha. The remaining 19 states occupy a position between these two groups. In general the smaller states have performed reasonably well although not as good as those at the top level.

4.13 According to the NSS Round 2008-09, there were only three states, among the larger states, where a majority of the households lived in housing units with more than two rooms i.e. three rooms and above. These are Kerala (72 per cent), Jammu and Kashmir (64 per cent) and Assam (51 per cent). All the other larger states, the majority lived in housing units with either one or two rooms. At the bottom were Andhra Pradesh (currently Andhra Pradesh and Telangana) (12 per cent), Tamil Nadu (14 per cent), Maharashtra (14 per cent), West Bengal (15 per cent), Odisha (16 per cent), Gujarat (18 per cent) and Delhi (21 per cent). This should come as a surprise as these states, with the exception of Odisha, with very little space within the residence are those with high per capita income, relatively high levels industrialization as well as urbanization. High growth and high industrialization do not seem to have translated into decent housing conditions for the overwhelming majority of the residents going by the amount of space.

4.14 If the above seven states were the bottom seven states in terms of paucity of housing space, a majority of houses (i.e. more than 50 per cent) in the states of Jharkhand, Odisha, Bihar, Chattisgarh, Madhya Pradesh, Rajasthan and Uttar Pradesh did not have a latrine facility.

4.15 Similarly, a majority of households in the states of West Bengal, Jharkhand, Odisha, Assam and Uttar Pradesh did not have electricity connection for lighting.

4.16 In sum, the states of Bihar, Jharkhand, Madhya Pradesh, Chattisgarh, Rajasthan, Uttar Pradesh and Odisha emerges as the worst performers in terms of several indicators of the housing condition.

4.17 By focusing on the rural areas (in Chapter 4), we get an idea of the rural-urban gap. The overall picture is that rural India considerably lags behind urban India in terms of both quality of housing as well as amenities that are basic to a decent and dignified living.

4.18 There is also considerable variation of the housing condition in rural India across states. Those states that lag behind are also the states mentioned in 4.14 with overall poor performance. To this should be added the states of Assam and West Bengal where the rural-urban differences seems to be quite significant with a larger gap for rural areas than many other states.

4.19 Going by the NSS classification of 'good' housing, only two states from the larger states category reported either half or a majority living in 'good' houses. These are Delhi (52.5 per cent) and Kerala (49.8 per cent) closely followed by undivided Andhra Pradesh Punjab (49.4 per cent) and Punjab (49.1 per cent). At the bottom were the two states of Jharkhand (7.2. per cent) and Bihar (18.4 per cent).

4.20 While the definition of 'good' refers to housing units that do not require repairs, there is another classification based on the type of materials. Thus NSS defines 'pucca' houses as those made of durable materials. Going by this definition two larger states – Delhi (98.2 per cent), Uttarakhand (92.7 per cent) and Punjab (90.4 per cent) – reported that 90 per cent or more houses in the rural areas in the pucca category. Undivided Andhra Pradesh, Kerala and Himachal Pradesh reported between 70 and 79 per cent. At the bottom were Assam (20.6 per cent), Chattisgarh (30 per cent), Odisha (32.8 per cent), Jharkhand (34.2 per cent) and West Bengal (36.3 per cent).

4.21 If we go by space considerations by defining it as those who have to live with one living room only, the best performing states in rural India are Kerala (7.4 per cent), Assam (8.0 per cent), Jammu and Kashmir (10.8 per cent) where only less than 11 per cent of the households had to live in such houses closely followed by rural Himachal Pradesh (21.4 per cent). But at the bottom level are those mostly belonging to relatively more industrialised, urbanized and high income states such as undivided Andhra Pradesh (51.1 per cent), Maharashtra, West Bengal and Gujarat (around 47-48 per cent). It would appear that states such as Assam and Jharkhand which come low on pucca housing and other amenities have somewhat more space – two rooms and above – for the overwhelming majority in their rural areas.

4.22 Another critical indicator that we would like to highlight is the availability of a separate kitchen. Rural India presents a sorry picture on this count too. A majority of states that are a mix of both poorer and not so poor/better off states show that a majority of the households in their rural areas do not have a separate kitchen. These range from Uttar Pradesh, Bihar and Assam (exceeding 70 per cent) to Chattisgarh, Bihar, Odisha and Gujarat (ranging from 52 to 59 per cent).

4.23 As we mentioned earlier, availability of latrine facility is something that directly impinges on the dignity of an individual. In this respect too, rural India presents distressing picture with most states reporting 'no latrine facility' for majority of households. Only rural Kerala (5.3 per cent) and rural Delhi (7.5 per cent) report the lowest percentage with no latrine facility. At the bottom are Odisha (88 per cent) Madhya Pradesh 85 per cent), Jharkhand 84 per cent) Chattisgarh and Rajasthan (82 per cent), Bihar and UP (79 per cent) and Karnataka (75 per cent).

4.24 All in all, the basic deprivation in terms of housing condition is well above the deprivation indicated by the poverty line estimates and close to the idea of poor and vulnerable households with less than two PP dollars per capita per day. If we widen

the housing deprivation to a larger set of indicators, then the deprivation is closer to the notion of multidimensional deprivation reported by the Human Development Reports of the UNDP.

In the following chapters we give a detailed analysis of the housing situation. In Chapter 2 the focus is on the all India scenario decomposed into rural and urban areas as well as by the broad three social groups viz., ST, SC and Others. In Chapter 3 we focus on an inter-state comparison of the housing condition. While doing so we have categorized the states into (a) Larger States, and (b) Smaller States. The larger states are those where the population is more than half-a-per cent of the all India total population whereas the smaller states represent those with less than half-a-per cent of the total population. It also includes the Union Territories. Our interpretation of results are mostly based on the results obtained for the larger states which account for xx per cent of the total population of the country in 2011. However, the results for all states and Union Territories are given in the tables given in the Appendix to each chapter given at the end of this report.

Chapter 2

Housing Condition in India
An Overview

Introduction

In this chapter we discuss the various aspects of housing at the national level. Our analysis is based on the data provided by two most credible agencies namely, the Census and the National Sample Survey Organisation (NSSO). The two most recent data sets provided by these two agencies are the Population Census Reports released by the Registrar General of Census and the 65th round of NSSO's comprehensive survey on housing condition and amenities (June 2008-July 2009). The latest census data pertain to 2011 while the NSS data relate to the situation in 2008-09. They can therefore be treated as data for the recent period of 2009-11.

Census provides information based on complete enumeration of all households unlike the sample survey of buildings and housing units by the NSS. But the advantage of NSS is that while the population census provides us with processed data as tables, NSSO provides unit level data which enable us to process and carry out analyses than is possible with census data. NSSO's comprehensive survey also provides us with details on housing condition and amenities some of which are not available in the population census.

In the first section in this chapter, we discuss housing characteristics such as the condition and type of structure of the houses, number of rooms in the house/dwelling unit, ventilation, type of kitchen, type of roof, wall and floor of the dwelling which are indicators of the quality of dwelling.

In the second section we discuss basic amenities within the dwelling such as drinking water, sanitation facilities such as bathing and toilet, type of lighting and cooking fuel.

Finally the third section presents the discussion on households' access to basic facilities outside the dwelling such as drainage and garbage collection arrangements and accessibility to road.

For each aspect of the housing situation, we first examine the all India scenario, followed by rural and urban areas separately. We have also examined the social dimension in relation to the condition of those belonging to the Scheduled Tribe (ST) and Scheduled caste (SC) categories. We define a third group 'Others' as the residual households obtained by deducting ST and SC households from total households. By comparing the housing condition in 2001 and 2011 Censuses, we have also been able to measure the improvements in the selected indicators for rural and urban areas.

Coverage of Houses, and their Various Uses

The 2011 Census covered 330.836 million housing (i.e. building) units which was 31.24 percent (73 million) more housing units than the previous Census of 2001. Of the total, 306.163 million units were occupied for various purposes. These are shown in Table 2.1. We can see that around 80 percent of the census houses were used as residence including 2.8 percent which were used for residence cum other uses.

Table 2.1: Various uses of Occupied Census houses, 2011

	All India	percentage share
Total Number of Occupied Census Houses	30,61,62,799	100
Occupied Census Houses used as Residence	23,60,62,866	77.1
Residence cum Other Use	85,78,716	2.8
Shop/Office	1,76,72,786	5.8
School/College	21,06,530	0.7
Hotel/Lodge/Guest House etc.	7,20,806	0.2
Hospital/Dispensary etc.	6,83,202	0.2
Factory/Workshop/Workshed etc.	24,96,655	0.8
Place of Worship	30,13,140	1
Other Non Residential Use	3,35,47,747	11
Source: Census 2011		

While there was a 52 percent growth in the occupied census houses used as residence in urban areas, it was only 24 percent in rural areas (see Table 2.2). We can also see that the rate of growth in all categories of census houses in urban areas was considerably higher compared to rural areas. The most notable of these were 'other non-residential use' and 'hospital/dispensary/etc.

Table 2.2: Growth in the number of houses and their uses between 2001 and 2011

	Growth (%)		
	Total	Rural	Urban
Total Number of Occupied Census Houses (building units)	31.2	23.2	52.1
Occupied Census Houses used as Residence	31.7	23.9	51.6
Residence cum Other Use	8.8	3.0	27.8
Shop/Office	32.0	25.3	36.7
School/College	40.2	38.5	48.0
Hotel/Lodge/Guest House/etc.	38.2	28.7	48.1
Hospital/Dispensary/etc.	13.1	5.8	22.5
Factory/Workshop/Workshed/etc.	12.9	1.3	22.3
Place of Worship	25.6	22.1	42.6
Other Non Residential Use	31.6	21.6	113.1
Source: Census 2001 and 2011			

What the overall growth of 31 percent suggests is the boom in construction industry that is heavily, if not only, concentrated in urban areas during the first decade of the twenty-first century.

Section 1

Indicators of Housing Condition

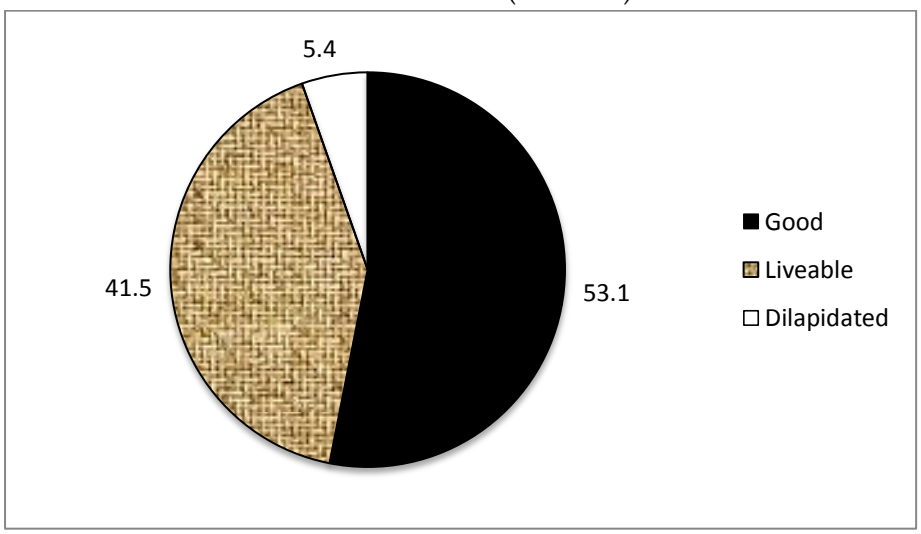
In this section we discuss those aspects of housing which are indicators of the housing condition some of which also measure the quality of the dwellings of households. We first look at the condition of the structure of houses.

Condition of structure of houses

Condition of structure means the physical condition of the structure of the house. Both the Census and NSSO classifies the condition of households by means of a three-fold classification. While it is 'good', 'livable', and 'dilapidated' in the Census, it is 'good', 'satisfactory' and 'bad' in NSSO. But both give similar definition to the categories (See Appendix to this chapter). The condition of the house was considered to be 'good' if the structure did not require any immediate repairs, 'satisfactory' if the structure required immediate repairs but no major repairs and 'bad' if the structure required immediate major repairs. We first present our analysis based on the Census data.

Figure 1 shows that at the all India level majority of households (53%) lived in houses/dwellings which were 'good' in condition. While 42 percent households lived in 'livable' houses, 5 percent of households i.e., around 13 million households lived in 'dilapidated' houses.

Figure 1: Distribution of households by the condition of Census Houses (all India)



Source: Census 2011 Note: All figures are in percentages

Figures 2 and 3 show that the proportion of households living in 'good' condition houses in rural areas (46%) is below the all-India proportion (53%), and far below the proportion in urban areas (64%). Also, in rural areas, more households live in "dilapidated" condition houses (6.5%) compared to the national level (5.4%), and especially the urban level (3.6%). Most rural households appear to live in 'livable' houses, which hopefully, over time, will change towards 'good', just as in the all-India and Urban cases.

Figure 2: Distribution of households in Rural India (2011)

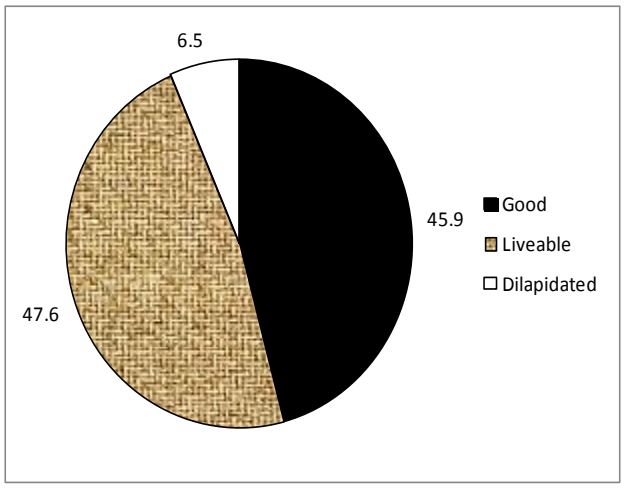
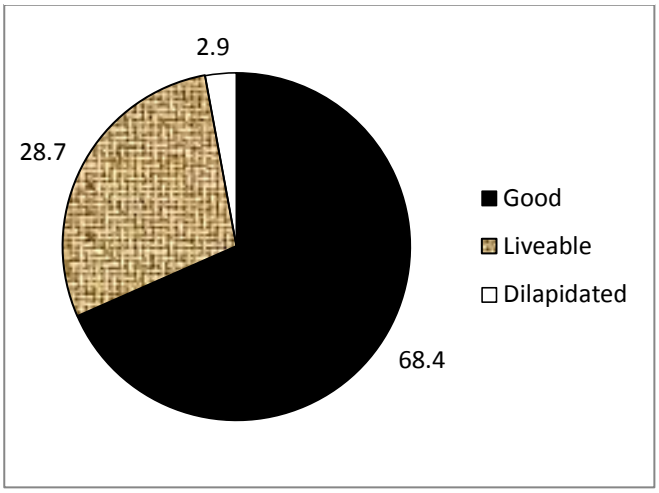


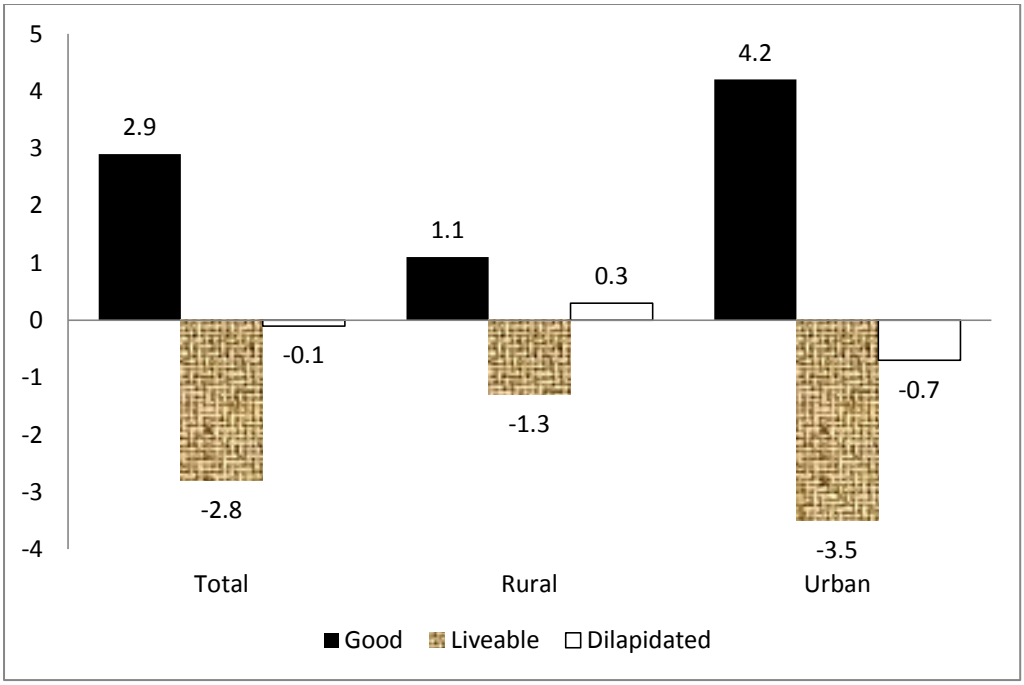
Figure 3: Distribution of households in Urban India (2011)



Source: Census 2011 Note: All figures are in percentages

Let us note some changes over 2001 and 2011. During 2011, 53 percent of the total households lived in "good" condition houses, which shows a 3 percentage point increase than that of 2001. The proportion of households living in "livable" houses was 42 percent which is a nearly 3 percentage point lower than 2001 Census. As far as "dilapidated" houses go, it is to be noted that while the proportion of households living in this was small (around 5%) during both 2011 and 2001, an alarming trend is that there was a 25 percent *growth* in the absolute number of these houses in 2011 compared to 2001. The growth in the absolute number of households living in "dilapidated" houses is less than that of "good" houses (36%), but outstrips that of "livable" houses. Figure 4 illustrates the percentage point change in proportion of good, livable, and dilapidated houses between 2001 and 2011.

Figure 4 Percentage Point Change in proportion of good, livable, and dilapidated houses between 2001 and 2011



Source: Census 2001 and 2011

As for changes over time i.e., between 2001 and 2011 we can see from Table 2.3 that the picture was rather gloomy with a nearly 27 percent growth in "dilapidated" houses in rural areas, as against only a 25 percent growth in "good" and 18 percent growth in "livable". The urban scene was brighter, with a high growth of 57 percent in households living in "good" houses, and a 31 and 18 percent growth in "livable" and "dilapidated" houses respectively.

Table 2.3: Growth in the absolute number of houses, by condition

	Growth (%)		
	Total	**Rural**	**Urban**
Good	35.85	24.26	56.70
Liveable	20.60	18.04	30.63
Dilapidated	25.11	26.79	17.59
Source: Census 2001 and 2011			

NSSO data that are only two years behind the 2011 Census gives a rather conservative picture when it comes to the condition of the housing structure.

Table 2.4 shows that 38 percent households in the country lived in 'good' houses. Major proportion of households (46.9%) lived in houses which

were "satisfactory" in condition while 15 percent of households lived in houses which were 'bad' in condition.

When we compare households in rural and urban areas, majority of households in rural India (50.8%) lived in houses which were "satisfactory" in condition whereas majority of the urban households (54.2%) lived in "good" houses. Proportion of rural households living in "good" houses (31%) was considerably lower than urban households (54.2%). Also, rural area had higher proportion of households living in bad houses (18.2%) than urban areas (8.4%).

Table 2.4: Classification of households by the condition of structure (in percentages), 2008-09

Social Group	Good			Satisfactory			Bad		
	R+U	Rural	Urban	R+U	Rural	Urban	R+U	Rural	Urban
ST	26.6	23.4	52.8	54.1	56.4	35.3	19.2	20.2	11.9
SC	26.5	23.3	38.3	51.3	52.4	47.5	22.2	24.3	14.2
Others	42.6	35.0	57.0	44.7	49.3	35.8	12.8	15.7	7.2
Total	37.9	31.0	54.2	46.9	50.8	37.5	15.3	18.2	8.4

Source: NSSO 65th Round (July 2008-June2009)

Among the different social groups, SC had the highest proportion (22.2%) of households living in bad condition, at the all India level. For each social group, the proportion of households living in "good" houses was considerably higher in urban areas than in rural areas. Similarly the proportion of households living in bad condition was higher in rural areas. While the proportion of households belonging to SC and ST had lower proportion of households living in good and satisfactory houses than the all India level, 'Others' had higher proportion of households living in 'good' and 'satisfactory' houses than the all India level in both rural and urban areas.

The picture emerging from Table 2.4 shows that as a social group the condition of the structure of dwelling of SC and ST households is worse in comparison to 'Other' social groups. On the whole it looks like STs are marginally better than SCs, since the former live in isolated areas, have access to traditional land, whereas the latter, being an asset-less or asset-poor category, has very little access to land as well as housing.

Type of Structure of the Houses

Since the classification of households on the basis of the condition of structure is subjective, a more appropriate and objective indicator is the type of structure of the houses. NSSO classifies structure of houses as *'pucca'*, *'semi-pucca'* and *'katcha'* (see Appendix to the chapter for definition). By their constructional characteristics *'pucca'* houses were considered better than *'semi- pucca'* houses, which are again better than *'katcha'* houses.

Table 2.5 shows that major proportion of households at the all India level (66.1%) lived in '*pucca'* houses, followed by 21 per cent in '*semi- pucca'* houses and 13 per cent in *katcha* houses. However there was a stark difference between rural and urban areas. While 91.6 percent of urban households lived in '*pucca*' houses only 55.4 percent of rural households lived in '*pucca*' houses.

In the case of social groups there existed wide disparities not only between social groups but also within social groups in urban and rural areas. While 'Others' had the highest proportion of households (71.8%) living in '*pucca*' houses the ST group had the lowest proportion of households (39.4%) living in '*pucca*' houses.SC had highest proportion of houses (18.7%) living in '*katcha*' houses closely followed by ST households (16.4%). Urban areas had higher proportion of '*pucca*' houses than rural areas across social groups.

Table 2.5: Classification of households by the type of structure of houses (in percentages), 2008-09

Social group	Pucca			Semi –pucca			Katcha		
	R+U	Rural	Urban	R+U	Rural	Urban	R+U	Rural	Urban
ST	39.4	34	83.5	44.2	48.3	11.5	16.4	17.8	5
SC	58	50.8	85.1	23.2	26.5	10.5	18.7	22.5	4.4
others	71.8	60.5	93.1	17.9	24.5	5.2	10.4	14.9	1.6
total	66.1	55.4	91.6	21.3	27.6	6.2	12.6	17	2.1

Source: NSSO 65th Round (July 2008-June2009)

Number of Dwelling Rooms

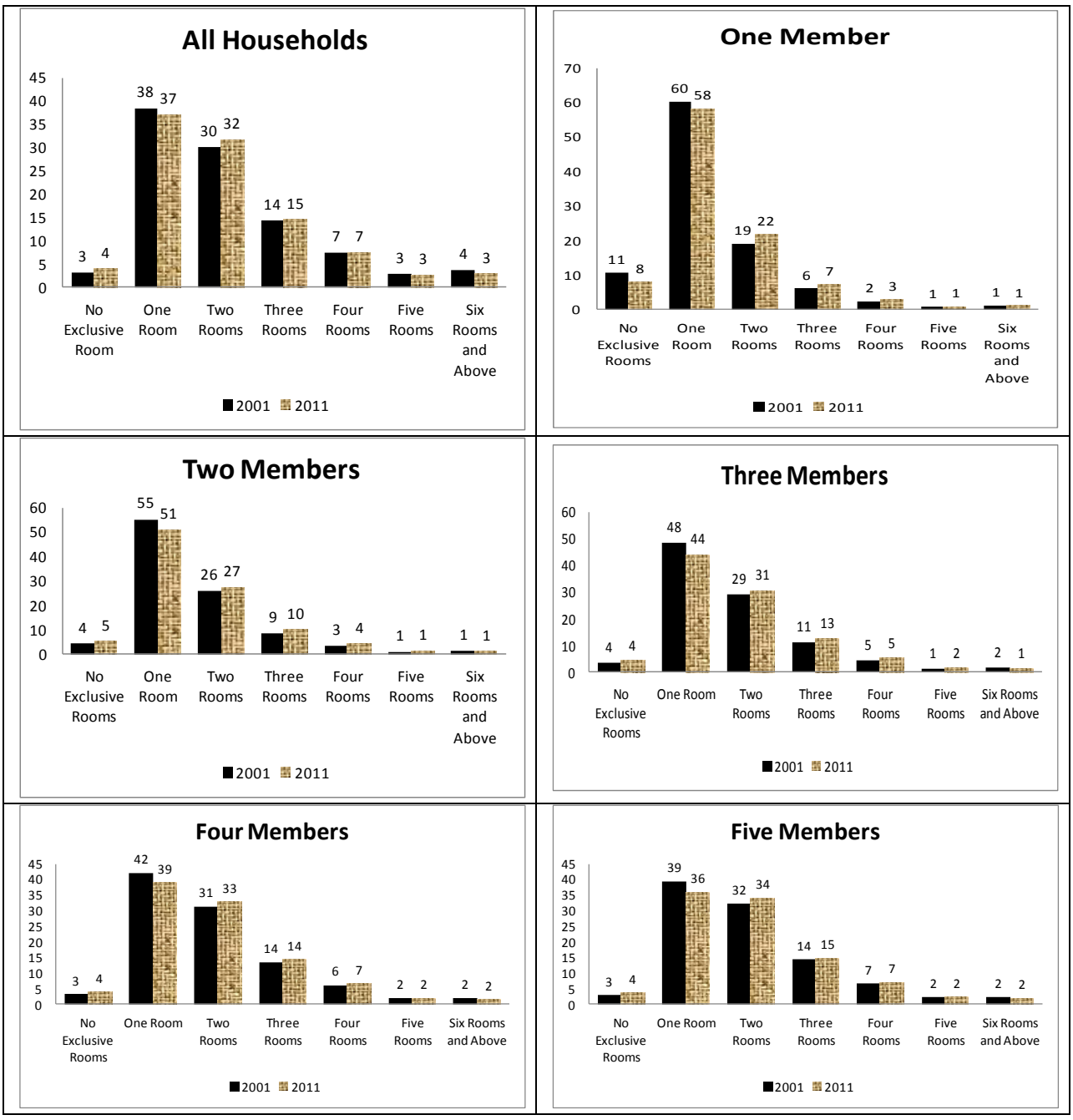
In order to understand the quality of housing, the number of rooms in the dwelling is very important as an indicator of the level of congestion in the house. First let us look into the data provided by the Census. It can be seen from Figure 4 that both one-room and two-room housing units formed the majority during the census years, for all categories of household size.

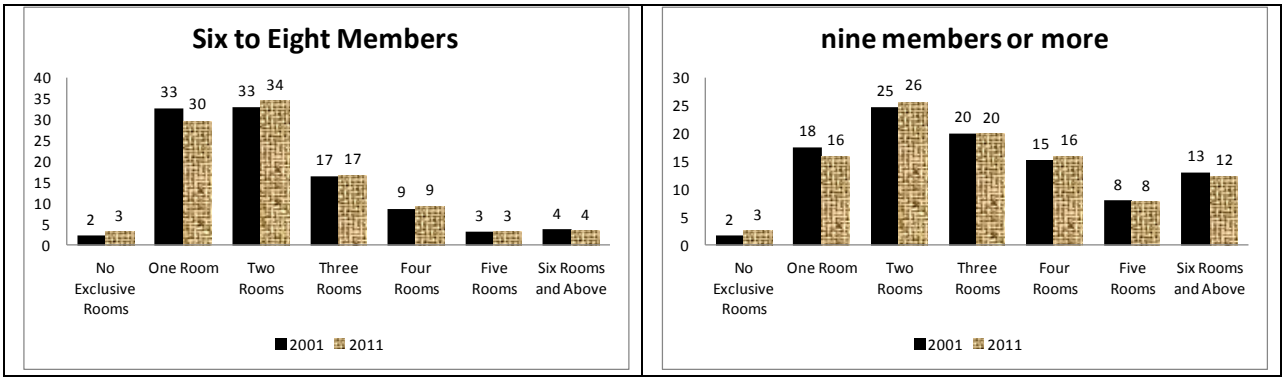
While there is a 2 percentage point increase in two-room dwellings over 2001-11, there is a 1 percentage point decrease in the more than six room dwellings during the same period.

Classifying the households by number of dwelling rooms and household size, it can be seen that while around 60 percent of the households with one member families live in one room dwellings in 2001, there is a 2 percentage point fall in this category during 2011. But one important aspect to be noted is that around 33 percent of both five and six-eight member

households also live in two room dwellings, and there is a 1 percent point *increase* in the six-eight member households living in just *two-room* dwellings, even in 2011. Strangely, 25 percent of the households with >9 members live in houses with just *two* rooms, with a 1 percent point *increase* in this category over 2001-11.

Figure 5 Households classified by Number of Dwelling Rooms and Household Size (Total, incl: Rural + Urban)





NSSO uses the term 'living room' instead of 'dwelling room' used by Census. There is close correspondence between the definitions of two terms. NSSO defines 'living room' as a room with a floor area of at least 4 square metres, a height of at least 2 metres from the floor to the highest point in the ceiling and used for living purposes. A room which was used in common for living purposes and as kitchen or store was also considered as living room.

Comparison of Figure 5 and Table 2.6 shows a close correspondence between the data provided by Census and NSSO. From Table 2.6 we can see that highest proportion of households (38.3%) in the country had only one living room. Only 28 percent of households have three or more rooms while 35.6per cent households had two living rooms.

Compared to rural areas where 37.6 percent of households lived in houses with single living room, urban India has a higher proportion of households (40.4%) with only one living room. The proportion of households with dwellings which did not satisfy the specification for living room was also higher in urban area (2.2%).

Among the social groups, SC households had the highest proportion of households with single living room (48.6%), followed by ST households (42%). This was true in the case of both rural and urban areas.

Table 2.6: Classification of households by the number of living rooms (in percentages)

No. of living rooms	Rural+Urban				Rural				Urban			
	ST	SC	Others	Total	ST	SC	Others	Total	ST	SC	Others	Total
No exclusive room	1.5	1.4	1.2	1.2	1.5	1.1	0.6	0.8	2.0	2.4	2.2	2.2
One room	42.0	48.6	35.1	38.3	41.3	47.9	33.2	37.6	45.5	51.7	38.2	40.4
Two rooms	36.6	35.4	35.6	35.6	36.8	36.5	37.3	37.2	33.5	31.1	32.0	31.9
Three rooms and above	20.1	14.7	28.2	24.7	20.1	14.7	28.4	24.4	18.9	14.9	27.6	25.6
Source: NSSO 65th Round (July 2008-June2009)												

It is a matter of concern that 1.2 percent of households in the country live in dwelling with no exclusive room which seems to suggest that their living space does not meet the definition of a floor area of at least 4 square metres and a height of at least 2 metres from the floor to the highest point in the ceiling. In this respect urban areas were worse than rural areas. While only 0.8 percent of rural households lived in houses with no exclusive room it was 2.25 in urban India. This suggests absolute lack of housing and dependent on living in small make-shift places or in public spaces, verandas of buildings and often sleeping in streets.

Ventilation of houses

Let us now examine ventilation of housing units that is an important indicator of the quality of housing and living.

From Table 2.7 we can see that only 29.7 percent of households in India had good ventilation. Nearly half the households in the country lived in houses with satisfactory ventilation while 23.4 percent of households lived in houses with bad ventilation.

The difference in the proportion of households with good ventilation in rural and urban areas was starker. In rural India only 23.3 percent households lived in houses with good ventilation whereas in urban area it is 44.7 percent. While 26.8 percent of rural households lived in houses with bad ventilation, it was only 15.1 percent in urban areas.

Among the social groups, SC households had the worst ventilation in both rural and urban India. Within the social groups also there existed rural-urban disparities. In urban areas, the difference in the proportion of houses having good ventilation between ST and SC households was more pronounced. While 42.6 percent ST households in urban India have good ventilation, only 30.9 percent of SC households have good ventilation. Similarly SC households have a higher proportion (25.4%) of households living in houses with bad ventilation while it is 17.6 percent for ST households.

Cooking in houses with bad ventilation is a health hazard. The fact that 23 percent households had bad ventilation is matter of great concern as it has direct relation with health condition of the dwellers.

Table 2.7: Distribution of households by ventilation (in percentages), 2008-09

All India

Ventilation	Rural+Urban				Rural				Urban			
	ST	SC	Others	Total	ST	SC	Others	Total	ST	SC	Others	Total
Good	20.5	19.2	33.8	29.7	17.8	16.1	26.8	23.3	42.6	30.9	47.4	44.7
Satisfactory	48.6	49.0	46.4	47.3	49.7	50.4	50.1	49.9	39.9	43.7	39.6	40.1
Bad	31.0	31.9	20.0	23.4	32.7	33.7	23.7	26.8	17.6	25.4	13.2	15.1

Source: NSSO 65th Round (July 2008-June2009)

Kitchen type

NSSO provides information on the type of kitchen in the households which is also an important indicator of the quality of housing.

Table 2.8 shows that only 12.4 percent of households in the country had a separate kitchen with water tap. While 38.2 percent households had a separate kitchen without water tap, almost half the households (49.6%) in the country did not have a separate kitchen.

The proportion of households in rural areas without a separate kitchen was above the all India level (54.7%) while for urban India it was 37.3 percent. Rural-urban disparity was more pronounced in the case of separate kitchen with water tap. While only 4 percent of rural households had separate kitchen with water tap, 32 percent of urban households had separate kitchen with water tap.

Table 2.8: Classification of households by the type of kitchen, 2008-09

Social Group	Separate kitchen						No separate kitchen		
	with water tap			without water tap					
	R+U	Rural	Urban	R+U	Rural	Urban	R+U	Rural	Urban
ST	3.5	1.2	22.5	37.0	38.0	29.7	59.6	60.8	47.8
SC	4.5	1.5	15.9	31.9	32.3	30.3	63.5	66.3	53.8
Others	15.7	5.4	35.4	39.9	44.9	30.6	44.3	49.7	34.2
Total	12.4	4.0	32.1	38.2	41.3	30.4	49.6	54.7	37.3

Source: NSSO 65th Round (July 2008-June2009)

Across the social groups, 'Others' (16%) had higher proportion of households with separate kitchen and with water taps. For ST and SC it was just 4 percent and 5 percent of households respectively. In rural India 66 percent of SC households did not have separate kitchen while 60.8 percent of rural ST households had no separate kitchen.

Predominant Material for Roofing

Distribution of households by predominant roof material based on Census data reveals that while tiles remained as the predominant material in 2001 (32.5%), this has moved to concrete (29 %) during 2011. Also, the proportion of houses with grass/thatch/bamboo wall has declined (see Table 2.9).

Table 2.9: Distribution of households by roof type (in percentages)						
	2001			2011		
Roof Material	**Total**	**Rural**	**Urban**	**Total**	**Rural**	**Urban**
Grass/Thatch/Bamboo/Wood/Mud etc.	21.9	27.7	7.0	15	20	4.6
Plastic/Polythene	0.5	0.4	0.8	0.6	0.6	0.6
All Tiles	32.6	37.6	19.7	23.6	28.7	13.2
Burnt Brick	5.6	5.6	5.6	6.6	7.2	5.4
Slate and Stone**	7.5	7.3	7.8	8.6	8.9	7.9
G.I./Metal/Asbestos	11.6	9.8	16.1	15.9	15.9	15.9
Concrete	19.8	11.0	42.5	29.0	18.3	51.9
Any Other Material	0.6	0.6	0.6	0.4	0.4	0.4
Source: Census 2001 and 2011						

There has been an 89 percent growth in households reporting concrete and 76 percent growth in G.I/Metal/Asbestos category. In rural areas, while tiles remained as the major category of roof (29%) in 2011, a sweeping shift can be seen by a more-than-double growth in concrete and plastic/polythene, seconded by a 20 percent fall in the use of tiles over the years. In urban areas however, concrete remained as the predominant material of roof, with a huge 80 percent increase over the years.

Table 2.10: Growth in the number of houses by material of roof, and percentage point difference in proportion of total

Material of Roof	**Growth (%)**			**% Point Difference**		
	Total	**Rural**	**Urban**	**Total**	**Rural**	**Urban**
Grass/Thatch/Bamboo/Wood/Mud etc.	-11.79	-12.67	-2.77	-6.92	-7.73	-2.37
Plastic/Polythene	69.87	108.56	22.26	0.12	0.23	-0.17
All Tiles	-42.92	-40.73	-53.68	-18.06	-19.26	-13.49
Burnt Brick	53.16	57.61	41.79	1.03	1.64	-0.21
Slate and Stone**	47.49	46.77	49.20	1.14	1.58	0.08
G.I./Metal/Asbestos	76.38	96.43	44.86	4.30	6.06	-0.22
Concrete	88.65	102.38	79.50	9.21	7.31	9.45
Any Other Material	-21.65	-30.00	2.31	-0.22	-0.23	-0.17

Our analysis of NSSO data of 2008-09 on the type of materials used for roof corresponds to that of Census data.

Classification of households by the type of material used for the construction of roofs of their houses shows that highest proportion of households (35.1%) lived in houses with cement/RBC/RCC roof. Tiles or slate was the predominant material of roof for 20.9 percent of households while 14.2 percent households lived in houses with iron or other metal sheet as the predominant material of roof.

In rural India only 24.7 percent of households lived in houses with cement/RBC/RCC roof whereas in urban areas it is was high as 60 percent of the households. In rural India timber was the second most predominant (24.5%) material of roof (see Table 2.11).

Analysis across broad social groups reveal the predominance of concrete as the roofing material among 'Others' in urban areas (close to 69 per cent) followed by ST (49%) and then SC (45%). In rural India tile and concrete constitute half of all housing roofs in which the share of concrete among 'Others' was about 28 per cent.

Table 2.11: Distribution of households by the type of roof (in percentages), 2008-09

All India

Roof type	Rural+Urban				Rural				Urban			
	ST	SC	Others	Total	ST	SC	Others	Total	ST	SC	Others	Total
Grass/straw/ leaves/reeds/ bamboo,etc	15.3	18.4	10.4	12.4	16.7	21.9	14.9	16.6	4.0	5.4	0.9	2.4
Mud/unburnt brick	1.7	3.4	2.0	2.3	1.8	4.1	2.9	3.1	1.0	0.6	0.3	0.4
Canvas/cloth	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.6	0.5	0.1	0.3
Other katcha	1.4	1.5	1.1	1.2	1.6	1.8	1.5	1.6	0.2	0.6	0.3	0.3
Tiles/slate	39.7	20.4	18.7	20.9	43.0	22.2	23.5	25.4	13.4	13.4	6.3	10.4
Burnt brick/stone/ lime stone	7.6	13.9	12.4	12.3	7.8	14.0	13.6	13.0	5.6	13.8	9.5	10.5
Iron or other metal sheet	19.5	14.0	13.6	14.2	18.9	12.4	13.6	13.9	25.1	19.8	13.6	14.9
Cement/RBC/RCC	13.7	26.4	40.3	35.1	9.3	21.7	28.3	24.7	49.4	44.5	68.5	60.1
Other pucca	1.0	1.7	1.3	1.3	1.0	1.7	1.5	1.5	0.6	1.4	0.7	0.8

Source: NSSO 65th Round (July 2008-June2009)

Predominant Wall Material

The distribution of households living in census houses by predominant material of wall in 2011 shows burnt brick as the predominant material, followed by mud/unburnt brick (see Table 2.12).

While in rural areas in 2001, mud/unburnt brick formed the major category of wall, by 2011 burnt brick category has become prominent. In urban areas, again, burnt brick remains as the predominant material of wall in both periods.

In the case of predominant material of walls also our finding based on NSSO data closely corresponds to Census data. From Table 13 we can see that predominant material of wall in the country is burnt brick/stone/lime stone (59% of households had their walls made of burnt brick or stone or lime stone). Next in line is mud or unburnt brick (23% households) followed by cement/RBC/RCC (10%).

Table 2.12: Distribution of households by wall type

	2001			2011		
Wall Material	**Total**	**Rural**	**Urban**	**Total**	**Rural**	**Urban**
Total Number of Households	100	100	100	100	100	100
Grass/Thatch/Bamboo/Wood etc.	10.21	12.65	3.92	9	11.9	2.7
Plastic/Polythene	0.29	0.26	0.35	0.3	0.3	0.3
Mud/Unburnt Brick	32.19	39.72	12.78	23.7	30.5	9.3
Wood	0.92	0.93	0.88	0.7	0.8	0.5
Stone	9.41	10.46	6.73	3.4	3.6	2.7
Stone packed with Mortar	n.a.	n.a.	n.a.	10.8	10	12.3
G.I./Metal/Asbestos	0.65	0.37	1.35	0.6	0.5	0.9
Burnt Brick	43.67	34.21	68.02	47.5	40	63.5
Concrete	2.44	1.16	5.72	3.5	1.7	7.2
Any Other Material	0.23	0.23	0.23	0.6	0.6	0.6

Source: Census 2001 and 2011

Table 2.13: Distribution of households by the type of wall (in percentages)												
All India												
Wall type	Rural+Urban				Rural				Urban			
	ST	SC	OTH	Total	ST	SC	OTH	Total	ST	SC	OTH	Total
Grass /straw/ leaves/reeds/ bamboo, etc.	9.6	7.3	5.4	6.2	10.2	8.7	7.7	8.2	4.5	2.3	1.1	1.3
Mud/unburnt brick	46.8	28.6	18.8	23.2	51.3	33.7	26.2	30.8	10.7	9.3	4.4	5.3
Canvas/cloth	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.1
Other katcha	1.8	1.1	0.6	0.8	1.9	1.3	0.8	1.0	0.3	0.4	0.3	0.3
Timber	1.2	0.2	0.4	0.4	1.1	0.2	0.3	0.4	2.1	0.3	0.5	0.5
Burnt brick/ stone/lime stone	33.9	54.3	63.5	59.1	31.7	50.1	57.7	53.3	51.4	69.8	74.4	73.0
Iron or other metal sheet	0.4	0.6	0.4	0.4	0.3	0.4	0.3	0.3	1.9	1.0	0.6	0.7
Cement/RBC/ RCC	5.7	7.9	10.4	9.5	3.1	5.5	6.2	5.7	27.0	16.5	18.5	18.5
Other pucca	0.6	0.2	0.3	0.3	0.4	0.2	0.3	0.3	2.0	0.2	0.1	0.2
Source: NSSO 65th Round (July 2008-June2009). Note: OTH- Other than SC and ST												

In rural areas 53.3 percent households had their walls made of burnt brick/stone/lime stone while in urban areas 73 percent of households lived in houses with walls made of burnt brick/stone/lime stone.

Among the different social groups major proportion of ST households in rural India (51.3%) lived in houses with walls made of mud/unburnt brick. For SC and other households burnt brick or stone or lime stone was the predominant material of wall.

It is difficult to provide a value judgment as to what type of wall is to be considered a better material from the point of view of health and environmental compatibility. In a tropical country like India mud/unburnt brick is much favourable to climate compared to cement which absorbs more heat. But since cement is used by rich and for institutional building it has acquired a superior status in popular

perception. Often mud or unburnt brick is used by the poor as they cannot afford the more costly burnt brick or granite.

Predominant Floor Material

From Census data we can see that while mud remains the predominant material of floor during both census periods, there is a greater than 10 percentage point fall in this category during 2011. In rural areas, while mud and cement form the major material of floor, in urban areas it is cement and mosaic/floor-tiles that form the majority (see Table 2.14).

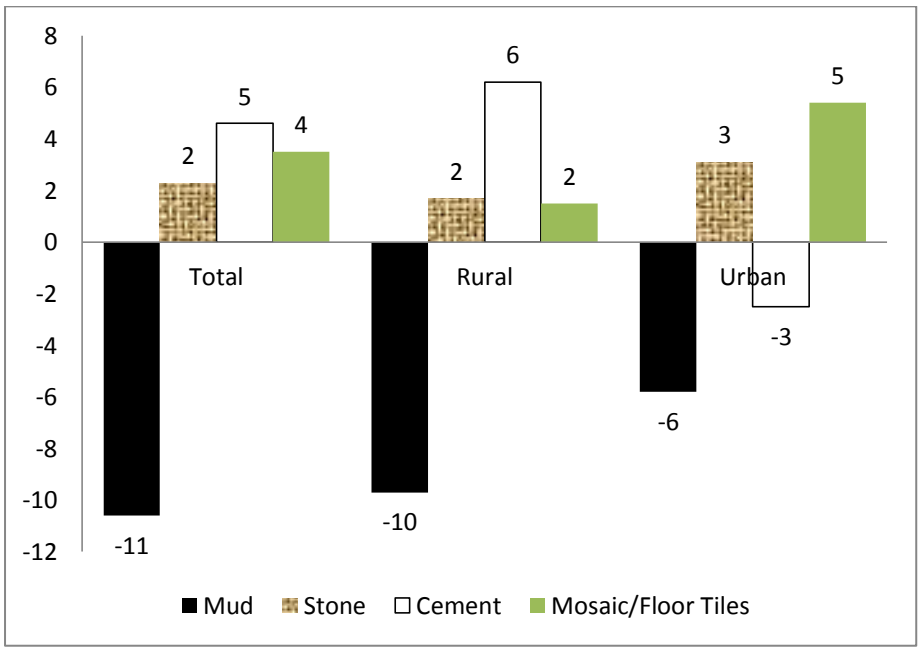
Table 2.14: Distribution of households by floor type (in percentages)

	2001			2011		
	Total	**Rural**	**Urban**	**Total**	**Rural**	**Urban**
Floor material						
Mud	57.1	72.3	18	46.5	62.6	12.2
Wood/Bamboo	0.7	0.8	0.4	0.6	0.7	0.4
Burnt Bricks	2.3	2	3	2.3	2.3	2.4
Stone	5.8	4.5	9.1	8.1	6.2	12.2
Cement	26.5	18	48.3	31.1	24.2	45.8
Mosaic/Floor Tiles	7.3	2.2	20.5	10.8	3.7	25.9
Any Other Material	0.4	0.2	0.7	0.5	0.2	1

Source: Census 2001 and 2011

And just as in the all-India case, in rural areas we see that the proportion of mud as a prominent material of wall has dropped around 10 percentage points in 2011, and cement and mosaic/floor tiles have increased as a category (Figure 6).

Figure 6: Percentage point change between 2001 and 2011



Note: All figures are in percentage

In the case of the predominant material used by households for floor also our findings based on NSSO data corresponds to Census data. Table 2.15 shows that major proportion of households in the country (40.4%) lived in houses with mud floors. While 37 percent households had cement floors, 11percent households had brick/lime stone/stone floors and 10 percent of households had mosaic/tiles as the material of floor.

Comparison of rural and urban areas shows that while 54 percent of households lived in houses with mud floors in rural areas only 8 percent of households in urban India had mud floors. While majority of households in urban India (53%) had cement floors, only 31 percent households in rural India had cement floor.

Table 2.15: Distribution of households by floor type (in percentages)

All India

Floor Type	Rural+Urban				Rural				Urban			
	ST	SC	Others	Total	ST	SC	Others	Total	ST	SC	Others	Total
Mud	65.7	53.4	33.7	40.4	71.6	63.2	48.3	54.1	16.3	16.4	6.2	8.0
Bamboo/log	1.7	0.3	0.2	0.4	1.8	0.4	0.3	0.5	0.5	0.1	0.0	0.1
Wood/plank	1.9	0.3	0.3	0.4	1.8	0.3	0.4	0.5	3.2	0.2	0.1	0.2
Brick/lime stone/stone	6.5	9.5	12.1	11.1	5.9	8.7	11.5	10.3	11.2	12.3	13.2	13.0
Cement	21.0	32.7	40.9	37.4	17.4	26.0	35.0	30.9	50.5	58.4	52.3	53.2
Mosaic/tiles	3.2	3.6	12.7	10.0	1.4	1.4	4.8	3.6	18.2	12.1	27.8	25.3
Others	0.0	0.2	0.2	0.2	0.0	0.1	0.1	0.1	0.1	0.5	0.3	0.4

Source: NSSO 65th Round (July 2008-June2009)

Among the social groups, ST had the highest proportion of households (65.7%) with mud floors while 33.7 percent of other households lived in houses with mud floors. Only 21 percent of ST households in the country had mud floors while 40.9 percent of other households lived in houses with cement floor. In the rural areas while 71.6 percent of ST households and 63.2 percent of SC households had mud floors, 48.3 percent of other households had mud floors.

Section 2

Basic Amenities within Dwelling

The different characteristics of the structure of the dwelling, examined in earlier paragraphs, though important are only one element of the housing condition. Without amenities like drinking water facility, sanitation, electricity and other basic amenities in a household cannot function as a useful one. In this section we discuss basic amenities within the dwelling.

Drinking Water

This is one of the most important aspects of housing. We can see from our analysis of Census data that tap water, hand pump and well are generally the three major sources among households. While nearly 37 percent of households depended on tap-water in 2001, this proportion increased to nearly 44 percent in 2011. Second was hand pump, with nearly 34 percent of households depending on this during 2011, almost the same as in 2001. But dependence on wells has fallen from 18 percent in 2001 to 11 percent in 2011 at an all-India level (see Appendix Table). The fall in the dependence on hand pump and well can be attributed to tap water; conversely, it can be proposed that dependence on tap water has increased as more traditional sources such as a well have decreased.

NSSO also provides data on these as well as few other sources of drinking water the results of which are presented in Table 2.16.

Classification of households on the basis of their first major source of drinking water i.e., the source of drinking water which was used most by the household shows that households in the country depend on two major sources namely tap water and tube well/hand pump. While 43.6 percent households had tube well/hand pump as the first major source of drinking water 43 percent of households had tap water as their major source of drinking water. The third major source of drinking water was well- both protected and unprotected.

Table 2.16 Major source of drinking water												
All India												
Drinking Water Source	Rural+Urban				Rural				Urban			
	ST	SC	Others	Total	ST	SC	Others	Total	ST	SC	Others	Total
Bottled water	0.5	0.6	1.4	1.2	0.2	0.5	0.6	0.5	3.0	1.1	2.9	2.7
Tap	24.1	38.5	46.9	43.1	18.6	30.1	31.9	30.1	68.5	70	75.5	74.2
Tube well/hand pump	52.3	51.4	40.5	43.6	56.2	59.1	53.1	54.7	20.4	23	16.4	17.5
Protected well	6.9	3.0	4.6	4.4	7.5	3.4	5.8	5.5	2.5	1.4	2.2	2.1
Unprotected well	11.0	4.1	4.2	4.8	12.0	4.9	5.8	6.3	2.8	1.4	1.2	1.2
Tank/pond	0.7	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.5	0.1	0.2	0.2
Other tank/pond	0.4	0.2	0.3	0.3	0.4	0.2	0.4	0.3	0.2	0.0	0.1	0.1
River/canal/lake	1.6	0.4	0.4	0.5	1.7	0.5	0.6	0.7	0.2	0.1	0.0	0.0
Spring	2.6	0.3	0.4	0.5	2.8	0.3	0.5	0.7	0.9	0.0	0.0	0.1
Harvested rainwater	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.4	0.0	0.0	0.0
Others	0.1	0.9	0.9	0.8	0.1	0.4	0.4	0.3	0.6	2.9	1.8	1.9
Source: NSSO 65th Round (July 2008-June 2009)												

In the rural areas 54.7 percent of households depended on tube well/ hand pump while 30 percent of households had tap water as their first major source. Almost 12 percent of rural households depended on well as their major source of drinking water. In urban areas 74 percent households had tap water as their major source of drinking water and 17.5 percent households depended on tube well/hand pump.

Among the social groups, ST and SC households depended on tube well/ hand pump as the main source of drinking water (52% and 51% respectively) while for 'Others' tap was the major source of drinking water with 47 percent of households depending on tap water as their first major source. In the rural areas across social groups' tube well/hand pump is the major source of drinking water. In rural India ST had the lowest proportion of households (18.6%) with tap water as the major source while SC and others had almost same proportion (30%) of households depending on tap water.

Nature of access to source of drinking water

An examination of the access to drinking water shows that a major proportion of households in the country (46.7%) depended on community use i.e. for use of households in the locality. 35.7 percent of households in the country had their source

of drinking water for the exclusive use of households. The details are given in Table 2.17.

In urban area 47 percent of households had their drinking water source for exclusive use of the households while in rural India 57 percent reported community use of water source was more common.

Among the social groups majority of ST (72.7%) and SC (61.5%) households depended on drinking water facility common for the use of households in the locality/community. In the case of others 42 percent of households had drinking water facility for exclusive use of the households. Only 15.7 percent ST and 23.3 percent of SC households had drinking water facility for exclusive use of the households.

Table 2.17classification of households by drinking water facility (in percentages), 2008-09

All India

Drinking Water Facility	Rural+Urban				Rural				Urban			
	ST	SC	OTH	Total	ST	SC	OTH	Total	ST	SC	OTH	Total
Hhs' exclusive use	15.7	23.3	42.0	35.7	13.5	21.0	37.6	31.1	33.5	31.9	50.2	47.0
Common use of Hhs in the building	8.4	11.1	14.3	13.1	5.7	7.7	8.9	8.3	30.3	23.8	24.7	24.7
Community use	72.2	61.5	39.4	46.7	77.3	68.0	49.6	56.8	31.3	37.9	20.0	22.9
Others	3.8	4.1	4.4	4.3	3.6	3.5	3.9	3.8	4.8	6.4	5.2	5.4

Source: NSSO 65th Round (July 2008-June2009). Note: OTH means Others.

In rural areas though community drinking water facility was predominant across all social groups, ST (77.3%) and SC (68%) households had higher proportion of households compared to other households (49.6%) depending on community drinking water facility. Other households had the highest proportion of households with drinking water facility for exclusive use of households (37.6%) and ST households had the lowest proportion (13.5%).

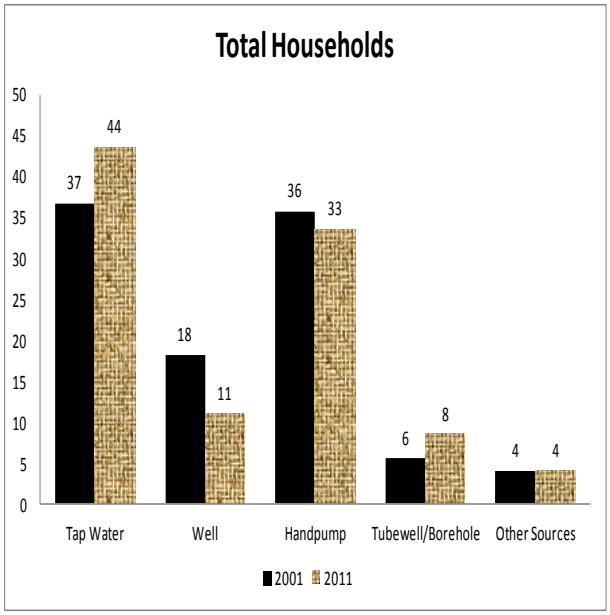
While in urban areas major proportion of households belonging to 'Others' (50.2%) and ST (33.5%) had drinking water facility for exclusive use of the household, majority of SC households (37.9%) depended on community facility.

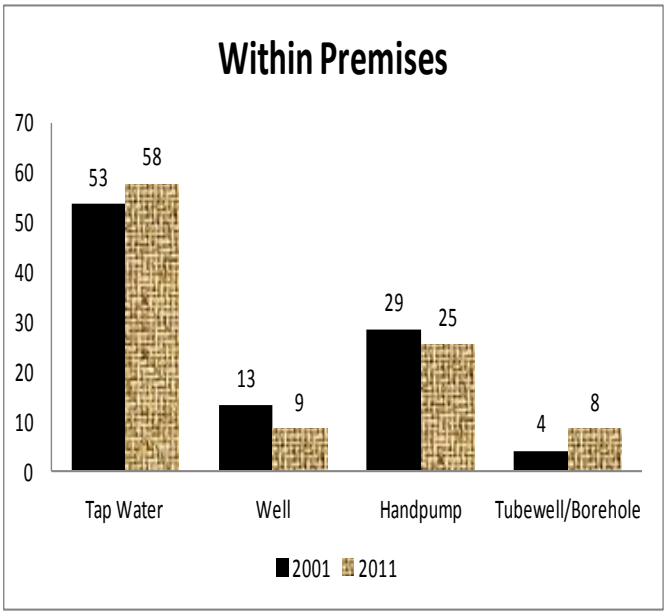
Distance to the source of drinking water

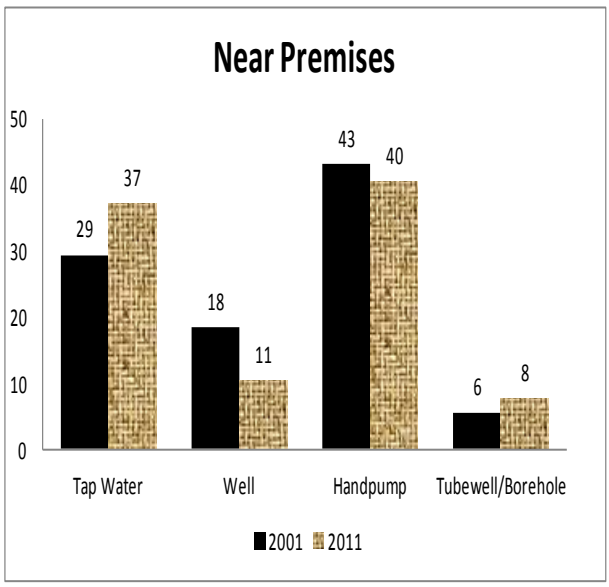
The Census data on drinking water provide not only the major sources but also the distance at which it is available. And the distance is assessing at three levels – within the premises, near the premises and away from the premises. A close look at these distance indicators gives certain interesting insights. While tap water remains the

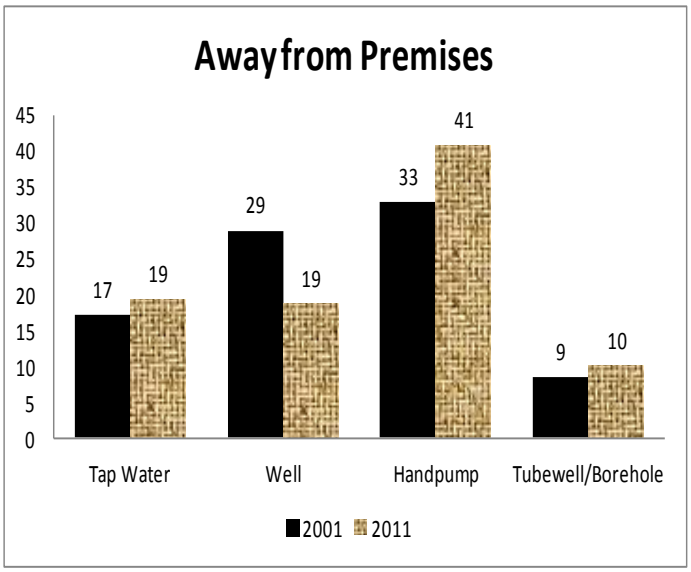
major source of drinking water within the premises, hand pumps remain the predominant source both near the premises and away.

Figure 7a: Households by Main Source of Drinking Water (Total, incl: Rural + Urban)



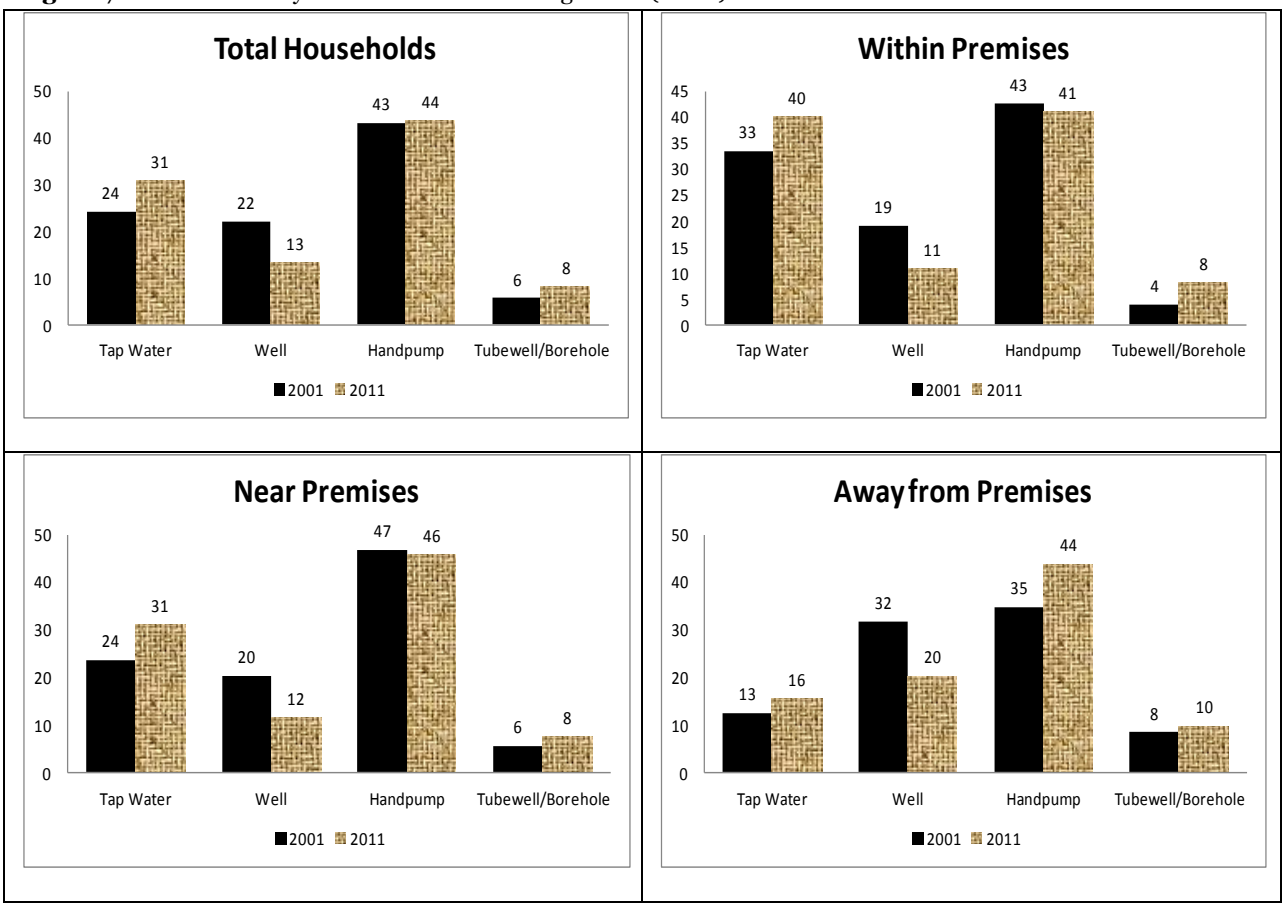






The rural-urban divide is rather extreme. In rural areas while the hand pump is the major source of drinking water, while tap water and wells are secondary sources, in urban areas the major source at all locations is the tap, i.e. public piped water supply.

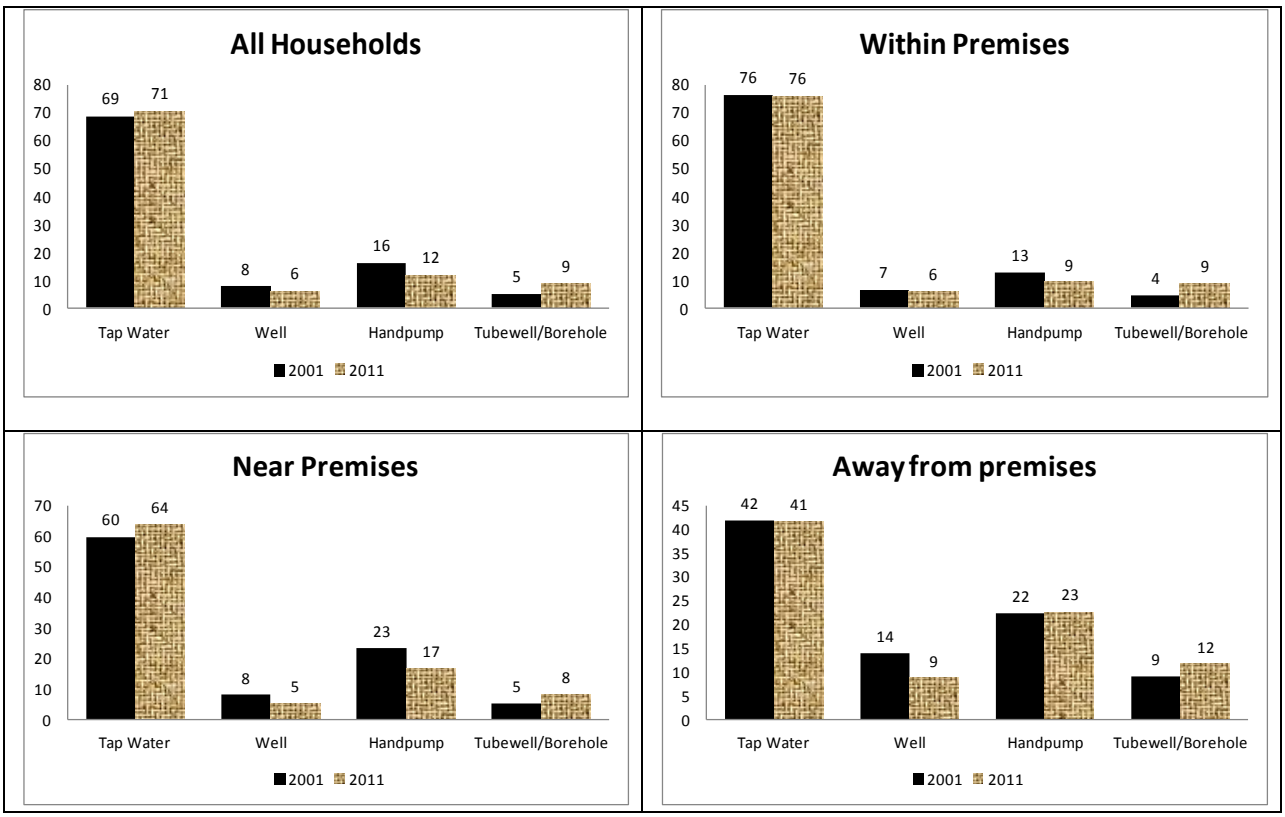
Figure 7b: Households by Main Source of Drinking Water (Rural)



In rural areas, the proportions of households having a hand pump facility away from the premises have *increased* from 35 percent to 44 percent, from 2001 to 2011. Another notable change is the fall in the proportion of households depending on the well as a source of drinking water from 22 percent to 13 percent over this period.

During the 2011 census, an extra classification under tap water, i.e., tap water from treated and untreated sources has been added to measure the quality of drinking water. While the proportion of households using tap water from treated sources is nearly 32 percent, it is 61 percent in urban areas and only 18 percent in rural areas (see Appendix Table).

Figure 7c: Households by Main Source of Drinking Water (Urban)



NSSO also provides data for the distance to households' major source of drinking water but not in as much detail as the Census. The findings are given in Table 2.18.

Classification of households by their distance to the source of drinking water shows that major proportion of households in the country had their source of drinking water within a distance of 200 metres from their dwelling. While 24.7 percent of households in the country had their source of drinking water within dwelling, 26 percent households had drinking water source within the premises and 7 percent households had their drinking water source at a distance of 0.2-05 km.

When we compare rural and urban areas majority of urban households (46.2%) had drinking water source within dwellings while in rural areas it was only 15.6 percent of households. Major proportion of rural households (48.1%) had drinking water source within a distance of 200m from their dwellings.

Majority of households across social groups had their drinking water facility within 200m of dwelling. 'Others' had highest proportion of households (29.6%) with drinking water facility within dwelling while ST had the lowest proportion (6.9%), followed by SC households (15%).

Both in rural and urban areas social group 'others' had the highest proportion of households with drinking water source within dwelling.

Table 2.18: Classification of households by the distance to drinking water source (in percentages)												
All India												
	Rural+Urban				Rural				Urban			
	ST	SC	Others	Total	ST	SC	Others	Total	ST	SC	Others	Total
Within dwelling	6.9	15.0	29.6	24.7	3.6	10.5	19.4	15.6	33.7	31.9	49.3	46.2
Outside dwelling but within premises	17.2	21.3	28.3	26.0	15.2	20.1	28.2	24.9	33.9	25.5	28.6	28.3
Less than 0.2km	57.6	53.2	34.9	40.7	61.4	57.1	42.8	48.1	28.4	38.3	19.9	22.7
0.2 - 0.5km	14.8	8.9	5.6	7.1	16.2	10.4	7.6	9.2	3.2	3.4	1.7	2.0
0.5- 1km	2.6	1.3	1.0	1.2	2.9	1.5	1.3	1.5	0.6	0.6	0.4	0.4
1.0- 1.5 km	0.4	0.3	0.3	0.3	0.5	0.3	0.3	0.3	0.2	0.3	0.1	0.2
1.5km or more	0.3	0.2	0.3	0.2	0.3	0.2	0.3	0.3	0.0	0.1	0.1	0.1
Source: NSSO 65th Round (July 2008-June 2009)												

Adequacy of drinking water

Information was collected on whether availability of drinking water was sufficient throughout the year from the first major source of drinking water. Table 2.19 shows that 87.6% of households in the country had sufficient drinking water from their first major source.

Adequacy of drinking water in urban areas at 91 percent was higher than the all India level while in the rural areas it was lower than the national level at 86 percent.

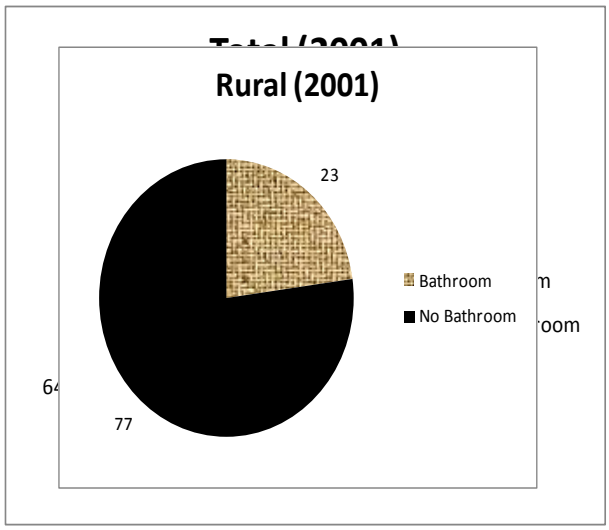
Table 2.19: Classification of households by the availability of adequate drinking water from 1st major source (in percentages), 2008-09						
All India						
	Yes			No		
Social group	R+U	Rural	Urban	R+U	Rural	Urban
ST	77.2	76.3	84.3	22.8	23.7	15.7
SC	87.4	86.9	89.3	12.6	13.1	10.7
Others	89.0	87.6	91.7	11.0	12.4	8.3
Total	87.6	86.2	91.1	12.4	13.8	8.9
Source: NSSO 65th Round (July 2008-June2009)						

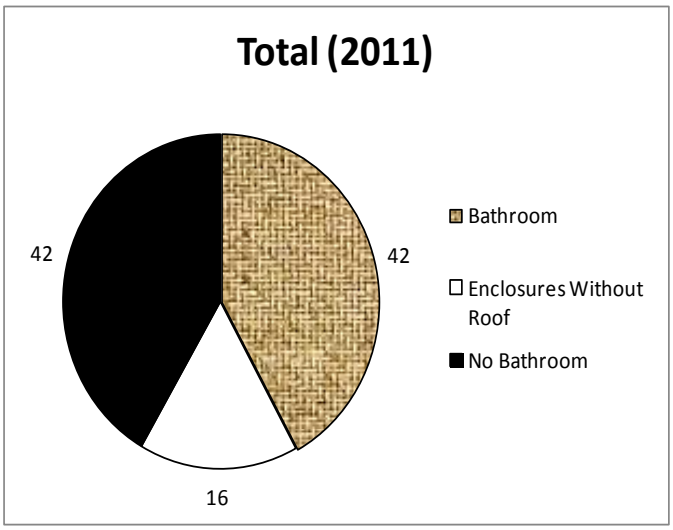
Among the social groups, ST households experienced the worst in terms of sufficiency of drinking water from first source. At the all India level close to 23 percent did not get sufficient drinking water from first source while in rural areas 24 percent households did not have sufficient drinking water throughout the year.

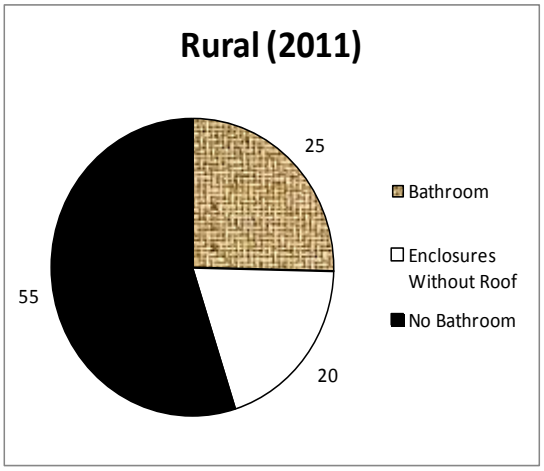
Availability of Bathing Facility

Our analysis of Census data shows that the proportion of households having a bathing facility has increased considerably during the decade 2001 to 2011. It can be seen that at an all-India level while the proportion of households having no bathrooms were a huge 64 percent in 2001, this has been greatly reduced to 41 percent in 2011. The fall has been the greatest in rural areas where households having no bathroom facilities stand at 55 percent in 2011, when they were around 77 percent in 2001. In urban areas also, this fall has been significant, from nearly 30 percent to around 13 percent.

Figure 8: Households by Availability of Bathing Facility, and percentage point change 2001-11







Note: All figures are in percentage.

However, it must be noted that the proportion of households having bathing facility alone is more compared to households having a latrine facility.

NSSO in addition to providing information on the availability of bathroom also gives information on whether bathroom is attached or detached. The details are given in Table 20.

From the Table 2.18 we can see that at the all India level nearly 52 percent of households had no facility of bathroom. Only 23% of households had attached bathrooms. In rural areas while 65 percent of households had no bathroom facility only 22 percent of households in urban areas were without bathroom facility.

Among the social groups ST households had the highest proportion of households (69.2%) without bathroom facility closely followed by SC households (68.6%). Only 'Other' households had lower proportion of households(44.7%) without bathroom facility than that for all India.

Table 2.20: Classification of households by bathroom facility (in percentages)

All India

Bathroom facility	Rural+Urban				Rural				Urban			
	ST	SC	Others	Total	ST	SC	Others	Total	ST	SC	Others	Total
Attached	9.3	11.6	28.0	22.9	5.7	6.6	15.7	12.5	38.9	30.3	51.5	48.0
Detached	21.7	20.0	27.3	25.2	20.3	16.6	25.8	23.2	33.5	32.6	30.1	30.6
no bathroom	69.2	68.6	44.7	51.6	74.4	76.9	58.5	64.6	27.6	37.1	18.5	21.5

Source: NSSO 65th Round (July 2008-June2009)

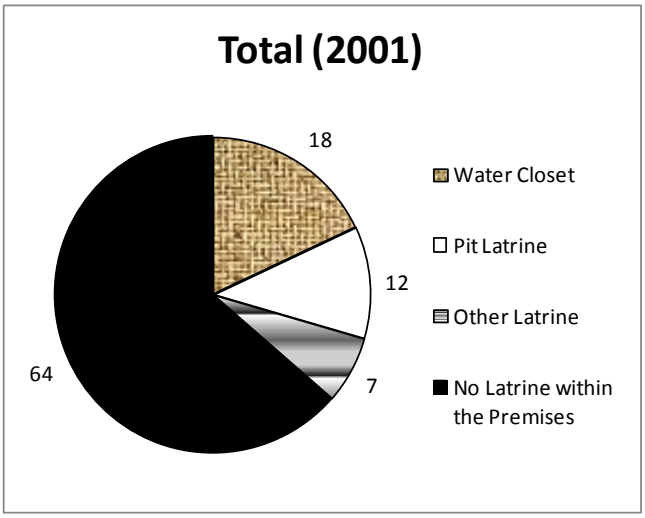
Both in rural and urban areas SC households had the highest proportion of households (77% in rural areas and 37% in urban areas) without bathroom facility.

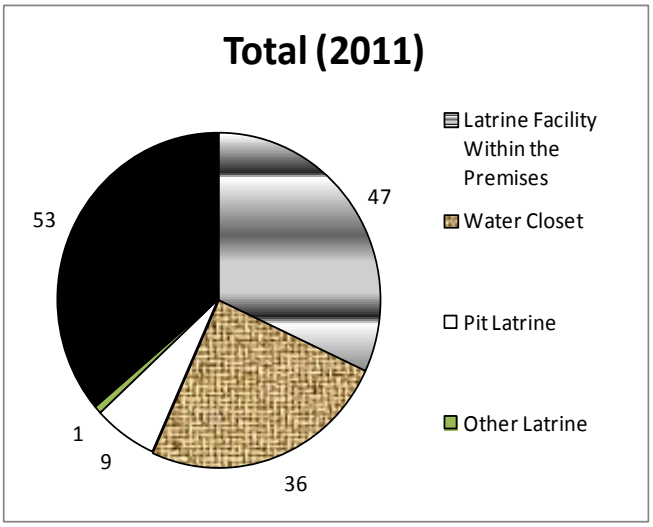
Availability of Latrine Facility

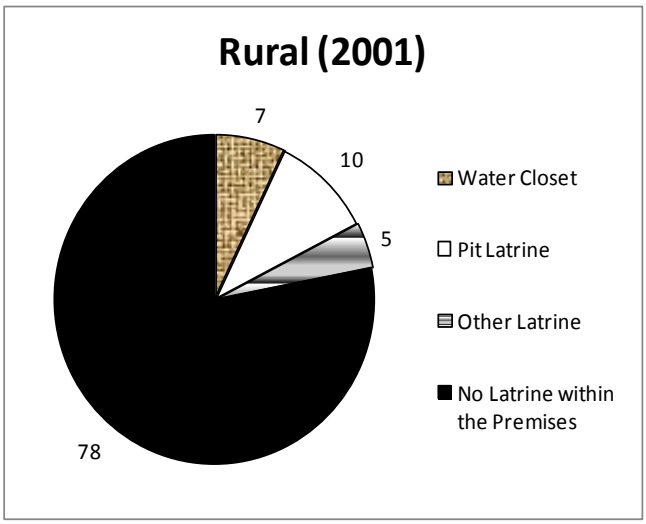
According to Census 2001, nearly 64 percent of households did not have access to latrine facility within their premises, but this proportion has reduced by nearly 10 percentage point, to 53 percent, by 2011. There has been data collected separately for households having a "latrine facility within the premises", which is around 47 percent. The proportion of households having a water closet has nearly doubled.

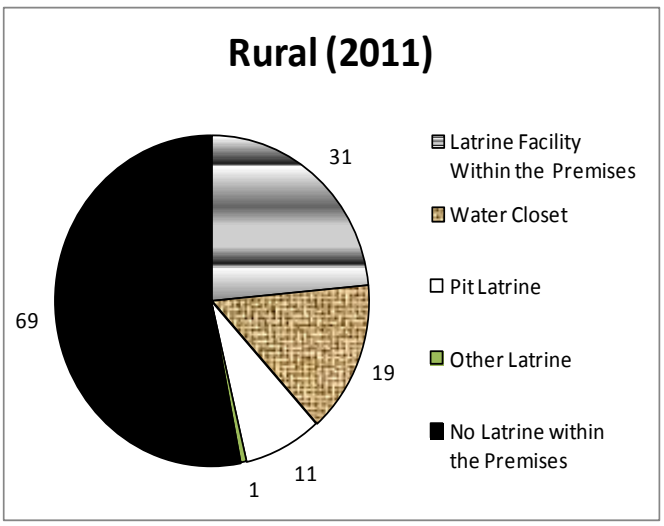
As for rural-urban difference it can be seen that in rural areas while 78 percent of households did not have a latrine facility in 2001, this figure is now 69 percent. The corresponding decrease in urban areas is from 28 percent to 18 percent.

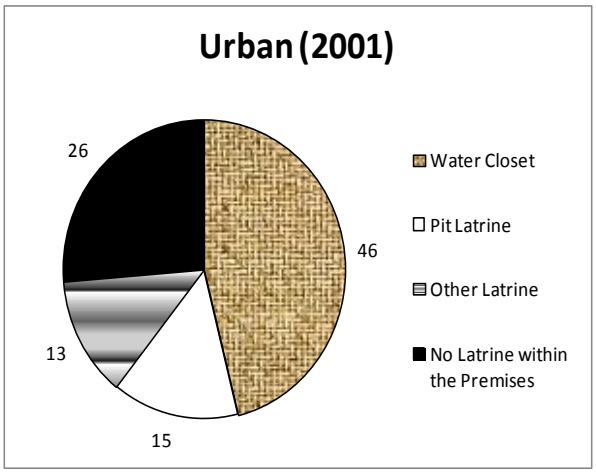
Figure 9: Households by Type of Latrine Facility, and percentage point change between 2001-11


Total (2001)
18
12
7
64
Water Closet
Pit Latrine
Other Latrine
No Latrine within the Premises


Total (2011)
47
53
1
9
36
Latrine Facility Within the Premises
Water Closet
Pit Latrine
Other Latrine


Rural (2001)
7
10
5
78
Water Closet
Pit Latrine
Other Latrine
No Latrine within the Premises


Rural (2011)
31
69
19
1
11
Latrine Facility Within the Premises
Water Closet
Pit Latrine
Other Latrine
No Latrine within the Premises


Urban (2001)
26
46
13
15
Water Closet
Pit Latrine
Other Latrine
No Latrine within the Premises

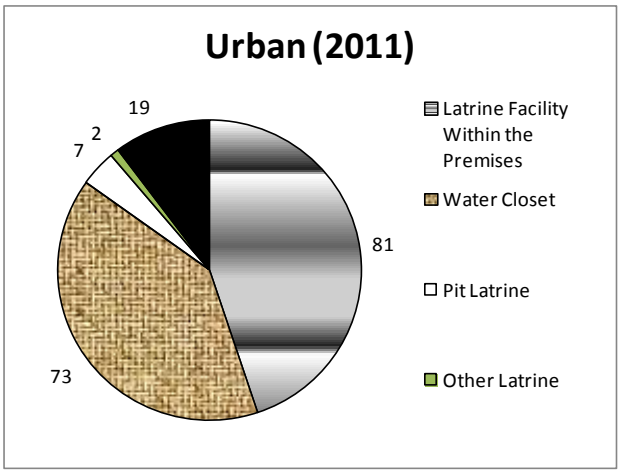
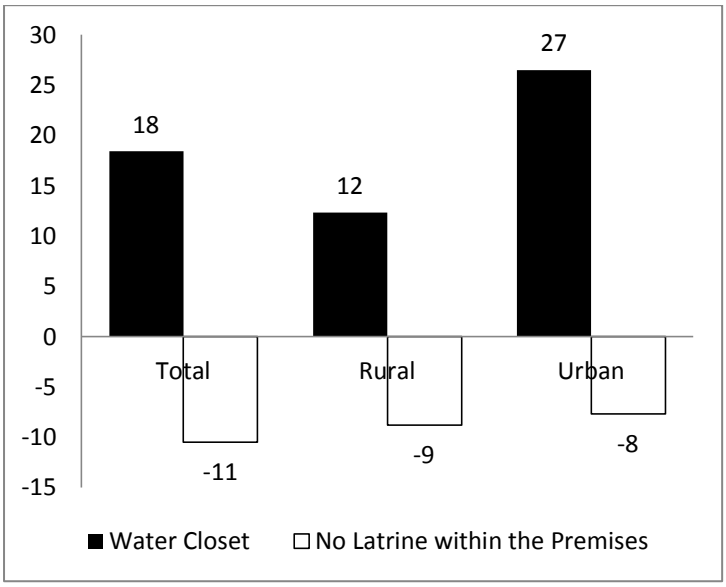

Urban (2011)
19
2
7
81
73
Latrine Facility Within the Premises
Water Closet
Pit Latrine
Other Latrine

Figure 10: Percentage point change in bathroom facility, 2001-2011



Note: All figures are in percentage

The situation with regard to the type of latrine shows that the proportion of water closet, compared to pit latrine or other latrine, was much higher. Interestingly, in rural areas pit latrines were the prominent type during 2001 (with 10.3% of households using one), but this has now been taken over by the water closet, the proportion of which has more than doubled in rural areas. In urban areas, where the proportion of the water closets is nearly 73%, this has been a doubling since 2001.

Thus one thing which is to be noted in this context is that, though the proportion of households that do not have access to latrine facility is still *very* high in both rural and urban areas, for those who do have latrine facilities, the quality of facility has improved during the decade 2001 to 2011.

To understand the access to latrine facility across social groups we have used the data provided by NSSO.

Classification of households by their access to latrine facility shows that nearly half the households in the country (49.3%) had no latrine facility in 2008-09. Only 36.8 percent of households in the country had latrine for exclusive use of households. While only 11.3 percent of households in urban area had no latrine facility 65.2% of rural households had no latrine facility (see Table 2.21).

Table 2.21: Classification of households by latrine facility (in percentages), 2008-09												
All India												
latrine facility	Rural+Urban				Rural				Urban			
	ST	SC	OTH	Total	ST	SC	OTH	Total	ST	SC	OTH	Total
Exclusive use of Hhs	20.8	22.9	42.9	36.8	17.7	17.7	33.1	28.0	44.9	41.9	61.5	58.1
Shared with other Hhs	8.4	9.0	12.1	11.1	5.7	4.9	5.9	5.7	29.5	24.6	23.9	24.1
Public/community latrine	1.9	3.2	2.8	2.8	1.5	1.1	1.2	1.2	4.5	10.8	5.8	6.5
No latrine	69.2	65.1	42.3	49.3	74.6	76.3	59.8	65.2	21.1	22.7	8.9	11.3
Source: NSSO 65th Round (July 2008-June 2009). Note: OTH means Others.												

Among social groups ST households had the highest proportion of households (69.2%) with no latrine facility, followed by ST households (65.1%). Comparison of rural and urban areas shows that there is huge disparity within and between social groups. While 59.8% 'other' households in rural area had no latrine facility, in urban areas only 8.9% of 'other' households had no access to latrine facility.

Lighting

Our analysis of Census data shows that electricity remains the major source of lighting, with a proportion of 67 percent of total census households in India in 2011, which is a 11.4 percentage point increase from 2001. After electricity, kerosene is the most important source of lighting. While the proportion of kerosene as a source of lighting has decreased from 43 percent in 2001 to 31 percent in 2011 at an all-India level, the growth in the number of households reporting electricity as the major source of lighting has increased nearly by 55 percent. The use of kerosene has been nearly replaced by the use of electricity (see Table 2.22).

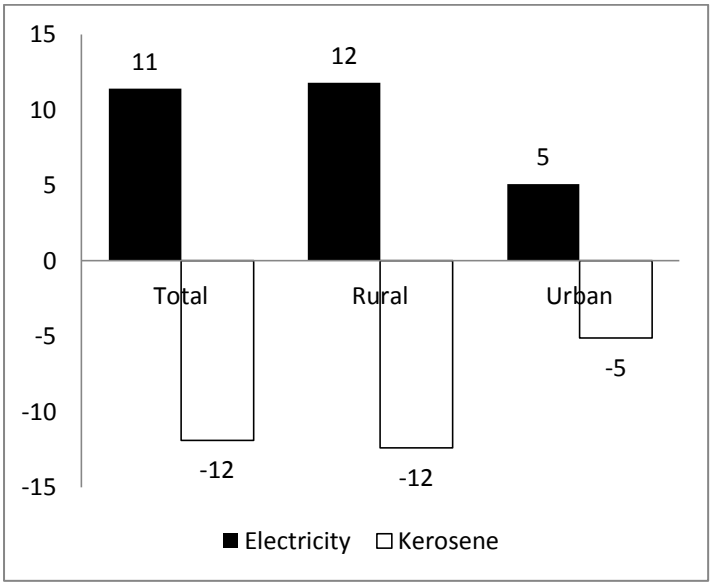
Table 2.22: Distribution of households by source of lighting						
Source of lighting	**2001**			**2011**		
	Total	**Rural**	**Urban**	**Total**	**Rural**	**Urban**
Electricity	55.8	43.5	87.6	67.2	55.3	92.7
Kerosene	43.3	55.6	11.6	31.4	43.2	6.5
Solar Energy	0.3	0.3	0.2	0.4	0.5	0.2
Other Oil	0.1	0.1	0.1	0.2	0.2	0.1
Any Other	0.2	0.2	0.14	0.2	0.2	0.2
No Lighting	0.3	0.3	0.4	0.5	0.5	0.3
Source: Census 2001 and Census 2011						

If we look at the rural-urban divide it can be seen that in rural areas kerosene was the major source of lighting in 2001 with nearly 55 percent of the household depending on it and electricity only second. During 2011 this trend has swapped. In urban areas nearly 93 percent of the households depend on electricity as the major source of lighting, an improvement from 87 percent in 2001. The rural-urban divide, however, is still stark.

Though the proportion of solar energy as a source of lighting among households is very small, the growth in the use of this has doubled over the years, which is, very interestingly, greater among rural than in urban households.

But it is startling to note that the proportion of households not having any source of lighting at all, though meagre, has actually *increased* over the years, even doubling in rural areas (from 0.3% to 0.5%) during 2011 compared to 2001. This fact is unpleasant especially when we understand that the number of houses with no lighting at all has very drastically increased in both rural and urban areas (from 4.26 lakhs to nearly 9 lakhs in rural areas; from 1.88 lakhs to 2.66 lakhs in urban areas)!

Figure 11: Percentage point change in source of lighting, 2001-2011



Note: All figures are in percentage

NSSO, unlike Census, provides information only on the availability of electricity for domestic use of the households.

The situation as presented in Table 2.23 shows huge disparity between rural and urban areas. While 96.2 percent of households in urban areas had electricity for domestic use, only 65.8 percent of households in rural areas had electricity for domestic use.

Table 2.23: Distribution of households by the availability of electricity for domestic use (in percentages)						
All India						
	Yes			No		
Social group	R+U	Rural	Urban	R+U	Rural	Urban
ST	61.1	57.1	91.5	39.0	42.5	8.5
SC	66.4	59.6	92.5	33.6	40.7	7.5
Others	79.1	69.8	97.1	20.9	30.2	3.0
Total	74.7	65.8	96.2	25.0	34.0	3.9
Source: NSSO 65th Round (July 2008-June 2009)						

Among the social groups ST households had the highest proportion of households (39%) without electricity, followed by SC households (33.6%) and the proportion was lowest for 'other' households (20.9%). Data also shows disparity between social groups in rural and urban areas. While 91.5 percent of ST households in urban areas had electricity for domestic use only 61 percent of ST households in rural area had electricity for domestic use. This is reflected in the case of 'Other' social groups as well. While 97 percent of 'Other' households in urban areas had electricity only 79 percent households in rural areas had electricity.

Cooking Fuel

The findings on the distribution of households by fuel used for cooking shown in Table 2.24 indicate firewood as still the predominant source of fuel, with nearly 50 percent of households depending on this even in 2011 (despite a 4 percentage point fall). Second is LPG/PNG (28.5%), though dependence on this source of fuel has doubled over the years in India.

The rural-urban divide is very large. In rural areas, the major sources of fuel are firewood, crop residue and the cow dung cake. Though the use of LPG/PNG has increased dramatically in rural areas, the three above sources still remain predominant.

In urban areas on the other hand, LPG/PNG remained as the major source of fuel in 2011, nearly a 20 percent point increase than 2001. Here, kerosene is the second most used source of fuel; but the interesting fact is that over the years, while LPG/PNG has shown a nearly 20 percentage point increase, kerosene shows a more than 10 percentage point decrease.

Table 2.24: Distribution of Households by Source of Cooking Fuel						
Source of cooking fuel	2001			2011		
	Total	Rural	Urban	Total	Rural	Urban
Firewood	52.5	64.1	22.7	49.0	62.5	20.1
Crop Residue	10.0	13.1	2.1	8.9	12.3	1.4
Cow Dung Cake	9.8	12.8	2.0	7.9	10.9	1.7
Coal/Lignite/Charcoal	2.1	1.1	4.6	1.4	0.8	2.9
Kerosene	6.5	1.6	19.2	2.9	0.7	7.5
LPG/PNG	17.5	5.7	48.0	28.5	11.4	65.0
Electricity	0.2	0.1	0.3	0.1	0.1	0.1
Biogas	0.4	0.5	0.4	0.4	0.4	0.4
Any Other	0.6	0.8	0.2	0.5	0.6	0.2
No Cooking	0.3	0.2	0.6	0.3	0.2	0.5
Source: Census 2001 and 2011						

Note: All figures are in percentage

Section 3
Access to Basic Facilities outside the Dwelling

Access to basic facilities outside the dwelling like distance to the place of work, garbage and drainage facilities, access to road, etc is also an important indicator of the quality of life.

Access to road

The results from the NSS data (Table 2.25) show that for the country as a whole, only 27.6 percent of the households had direct opening to motorable road with street light. Highest proportion of households in the country (32.7%) had access only to roads or constructed path other than motorable road without street light. 14.1 percent of households had no direct opening to roads or lanes or constructed path.

The difference in the accessibility to roads between urban and rural India is more striking. While in rural India only 15.7 percent of the households had direct opening to motorable road with street light, 56 percent of the urban households had direct opening to motorable road with street light. Only 5.5 percent of the urban households were without direct opening to road or constructed path compared to 17.7 percent households in rural India.

Table 2.25: Classification of households by their access to road (in percentages), 2008-09												
	Rural+Urban				Rural				Urban			
Access to road	ST	SC	OTH	Total	ST	SC	OTH	Total	ST	SC	OTH	Total
direct opening to motorable road with street light	12.7	21.1	31.4	27.6	8.5	14.9	17.2	15.7	47.0	44.6	58.3	56.0
direct opening to motorable road without street light	16.8	15.7	16.2	16.2	17.4	16.5	19.5	18.6	11.9	12.9	9.8	10.3
other road/lane with street light	7.8	9.0	9.7	9.4	6.6	7.4	7.8	7.6	17.6	15.1	13.3	13.7
other road/lane without street light	39.4	38.2	30.4	32.7	42.3	42.7	39.2	40.4	16.1	21.2	13.3	14.6
no direct opening to road/lane/constructed path	23.3	16.0	12.4	14.1	25.2	18.5	16.2	17.7	7.5	6.3	5.2	5.5
Source: NSSO 65th Round (July 2008-June2009). Note: OTH means Others												

Among the different social groups also there existed disparities in their access to roads. ST households were the worst in their road accessibility followed by the SC households. Only 12.7 percent of ST households in the country had direct access to motorable roads with street light while 23.3 percent of ST households did not have direct opening to roads or constructed path. 'Other' households had the highest proportion of households (31.4%) with direct opening to motorable road with street light.

Within the social groups also there exists significant rural-urban disparity. While 44.6 percent of SC households in urban areas had direct opening to motorable road with street light, it was only 14.9 percent of households in rural India. Though 'Other' households enjoy better accessibility to roads compared to ST and SC households, only 17.2 percent of 'Other' households in rural areas had access to motorable road with street light compared to 58.3 percent in urban areas.

Garbage collection arrangement

Garbage collection arrangement is also an important indicator of the quality of life of households. The information collected on this item relates to the agency that currently collects the garbage. If there is no arrangement for garbage collection, that has also been recorded. Table 26 gives the details.

Majority of the households i.e., three-fifth of households in the country (59.6%) did not have any formal mechanism for collection of garbage. In urban areas public bodies- municipality/corporation collected garbage from majority of households (62.0%). Participation of residents in the collection and disposal of garbage was lower in urban areas (13.1%) compared to rural area (17.2%).

Among the social groups 'Others' had better access to formal garbage collection facilities (24.4%) than SC (13.9%) and ST (6.4%) households. Urban areas had better access to garbage collection arrangements than rural area With 64 percent of households in 'Others' enjoying public collection while it was 554 and 47 per cent for SC and ST respectively.

Table 2.26: Classification of households by garbage collection arrangement (in percentages), 2008-09

garbage collection	Rural+Urban				Rural				Urban			
	ST	SC	OTH	Total	ST	SC	OTH	Total	ST	SC	OTH	Total
panchayat/municipality/corporation	6.4	13.9	24.4	20.7	1.4	3.2	3.7	3.3	47.4	54.1	64.0	62.0
by residents	18.1	17.7	17.0	17.2	18.2	19.1	19.1	19.0	16.8	12.7	13.0	13.1
No arrangement	74.0	66.2	55.9	59.6	79.4	75.8	74.9	75.7	30.3	29.9	19.5	21.4
By others	1.5	2.2	2.7	2.5	1.0	1.8	2.3	2.0	5.6	3.4	3.5	3.6

Source: NSSO 65th Round (July 2008-June 2009). Note: OTH means Others.

Availability of Drainage Facilities

This facility is also an important one from the point of sanitation and its link with the health status of the people living in a locality. Table 27 shows that nearly 49 percent of total households in India did not have any drainage facility in 2011, a figure that was 54 percent during 2001. Thus, the improvement has been very marginal. This has been the case in both urban as well as rural areas with 63 percent and 18 percent respectively during 2011, which is again only a marginal increase as compared to 2001.

Table 2.27: Distribution of households by type of drainage (in percentages)

Type of drainage	**2001**			**2011**		
	T	**R**	**U**	**T**	**R**	**U**
Closed Drainage	12.5	3.9	34.5	18.1	5.7	44.5
Open Drainage	33.9	30.3	43.4	33	31	37
No Drainage	53.6	65.8	22.1	48.9	63.2	18.2

Source: Census 2001 and 2011. **Note:**All figures are in percentage

As for drainage connectivity, we can see the prevalence of open-drainage compared to closed. The proportion of open-drainage is more or less the same (33%) during 2001 and 2011, with a slight reduction only in urban areas. However, comparing rural to urban, we see a very significant gap in the presence of closed drainage facility – while in urban areas this was 45 percent in 2011, in rural areas this remains a very meagre 6 percent. The large gap is seen even in the presence of no drainage facility.

Animal shed

Table 2.21 shows that 63.8 percent of households had no animal shed within 100 feet of the house. But close to one-tenth percent of households had animal shed attached to the house while 26.6 percent of households had animal shed detached from the building. In rural areas 30.8 percentof households had animal shed detached to the houses while 12.8 percent households had animal shed attached to the building. Among social groups ST had the highest proportion of households with attached animal shed (14.8%). In rural area 16.5 percent of ST households had attached animal shed while 11.3 percent of SC households had attached animal shed.

Table 2.28: Classification of households by the proximity of house to animal shed (in percentages)

animal shed	Rural+Urban				Rural				Urban			
	ST	SC	OTH	Total	ST	SC	OTH	Total	ST	SC	OTH	Total
attached to the building	14.8	9.4	9.0	9.6	16.5	11.3	12.8	12.9	1.5	1.9	1.7	1.7
detached from the building	31.5	25.5	26.3	26.6	34.6	30.8	37.2	35.4	6.9	5.7	5.6	5.7
no animal shed	53.6	65.1	64.6	63.8	48.9	57.9	50.0	51.7	91.6	92.4	92.7	92.6

Source: NSSO 65th Round (July 2008-June 2009). Note: OTH mean Others

Experience of flood

Majority of households in the country (85.3%) had no experience of flood during the five years prior to the survey. Rural India had a greater experience of flood than urban India. The major cause of flood in the country was excessive rains. ST households had the highest proportion of households with no experience of flood in both the urban and rural sectors. SC and others had almost same proportion of houses with experience of flood.

Table 2.29: Distribution of households by their experience of flood (in percentages), 2008-09												
Experience of Flood	Rural+Urban				Rural				Urban			
	ST	SC	Others	Total	ST	SC	Others	Total	ST	SC	Others	Total
From excessive rain	4.8	10.2	9.4	9.2	4.5	10.3	9.1	8.9	7.4	9.9	10.0	9.9
From river,sea,etc	4.6	6.2	5.9	5.8	4.6	7.3	8.0	7.4	4.9	2.0	2.0	2.1
No experience	90.9	83.7	84.9	85.3	90.9	82.5	83.4	83.5	87.6	88.1	87.9	88.0
Source: NSSO 65th Round (July 2008-June 2009)												

Chapter 3

Housing Condition: A State level Analysis

Introduction

An analysis of the housing condition and amenities at the national level is of limited help to understand the inter-state disparities in a large country like India. Policies and schemes at the national level are no doubt important; but they have to be sensitive to the huge inter-state disparities in order to make an impact. As such, this chapter is devoted to an analysis of the regional disparities based on an inter-state comparison.

For our analysis we have classified the states/UTs into 'larger' and 'smaller' states based on their share in the total population of the country. States with a share of population greater than 0.5 percent of the all-India total are defined as larger states and the remaining as smaller states. Table 1 presents the population distribution and average household size across states. Of the 35 states and Union Territories (UTs) 21 including the national capital territory Delhi falls under larger states.

Since it is difficult to make comparisons between states with huge disparities in population (it varies between UP which has a population share of 20.1 percent and Lakshadweep whose share in the total population is just 0.01 percent) in our discussion we present tables and graphs for the larger states only. Detailed tables for all states and UTs are given in the appendix.

This chapter is divided into four sections. In the first section we discuss the physical characteristics of houses which are indicators of the quality of housing. In the second section we focus on basic amenities within the dwelling and the third section presents a discussion on access to basic facilities outside the dwelling followed by conclusion. Our analysis is based on the data provided by the population of census of 2011 and the 65th round of NSSO on housing condition and amenities (June 2008-July 2009).

Table 3.1: Population Distribution Across States (All figures in lakhs)					
Sl.No	States	Population	Census houses (building units)	Occupied census houses (residences)	Household size
Larger States					
1	Uttar Pradesh (UP)	1995.81	451.72	326.67	6.1
2	Maharashtra (MH)	1123.73	335.70	237.19	4.7
3	Bihar (BH)	1038.05	234.15	184.61	5.6
4	West Bengal (WB)	913.48	253.44	199.32	4.6
5	Andhra Pradesh (AP)	846.66	255.95	208.12	4.1
6	Madhya Pradesh (MP)	725.98	184.99	148.54	4.9
7	Tamil Nadu (TN)	721.39	231.67	184.68	3.9
8	Rajasthan (RAJ)	686.21	180.71	125.02	5.5
9	Karnataka (KAR)	611.31	179.99	131.13	4.7
10	Gujarat (GUJ)	603.84	175.24	121.46	5.0
11	Odisha (ODS)	419.47	127.59	94.45	4.4
12	Kerala (KER)	333.88	112.18	77.04	4.3
13	Jharkhand (JHK)	329.66	77.96	61.39	5.4
14	Assam (ASM)	311.69	90.75	63.52	4.9
15	Punjab (PNJB)	277.04	78.47	53.97	5.1
16	Chattisgarh (CHT)	255.40	68.00	55.52	4.6
17	Haryana (HRYN)	253.53	70.88	47.07	5.4
18	Delhi (DEL)	167.53	46.06	33.14	5.1
18	Jammu&Kashmir (J&K)	125.49	36.04	19.21	6.5
20	Uttaranchal (UTKHD)	101.17	33.83	19.91	5.1
21	Himachal Pradesh (HP)	68.57	29.34	14.74	4.7
Smaller States and Union Territories (UTs)					
1	Tripura	36.71	10.67	8.40	4.4
2	Meghalaya	29.64	7.21	5.36	5.5
3	Manipur	27.22	6.10	5.01	5.4
4	Nagaland	19.81	5.34	3.99	5.0
5	Goa	14.58	5.77	3.20	4.6
6	Arunachal Pradesh	13.83	3.76	2.60	5.3
7	Pondicherry	12.44	3.88	2.96	4.2
8	Mizoram	10.91	2.69	2.21	4.9
9	Chandigarh	10.55	2.98	2.35	4.5
10	Sikkim	6.08	1.69	1.28	4.7
11	A&N Island	3.80	1.42	0.93	4.1
12	D&N Haveli	3.43	1.09	0.73	4.7
13	Daman&Diu	2.43	0.90	0.60	4.0
14	Lakshadweep	0.64	0.21	0.11	6.0
	All INDIA	12101.93	3308.36	2446.42	4.9
Source: Census of India 2011					

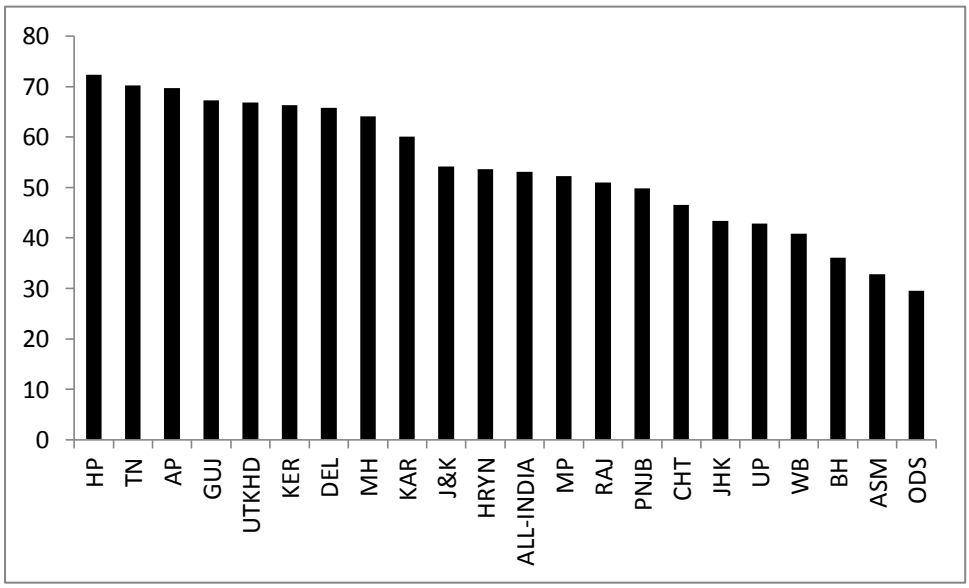
Section 1
Quality of Housing

In this section we discuss the quality of dwelling units with respect to condition and type of the structure of houses in which households live, number of living rooms in the dwelling, predominant material used for construction of roof, wall and floorand, kitchen facility.

Condition of the structure of houses

Our analysis based on the census data shows that the highest proportion of households living in houses which were 'good' in condition was in Himachal Pradesh (72 percent) followed by Tamil Nadu (70 percent), Andhra Pradesh (70 percent), Gujarat (67 percent) and Kerala (66 percent). The bottom level was occupied first by Odisha (30 percent) followed by Assam (33 percent), Bihar(36 percent), West Bengal (41 percent) and UP (43 percent). We may recall here that the definition of 'good condition' refers to those houding units which do not require any repair and is in good condition at the time of the investigation.

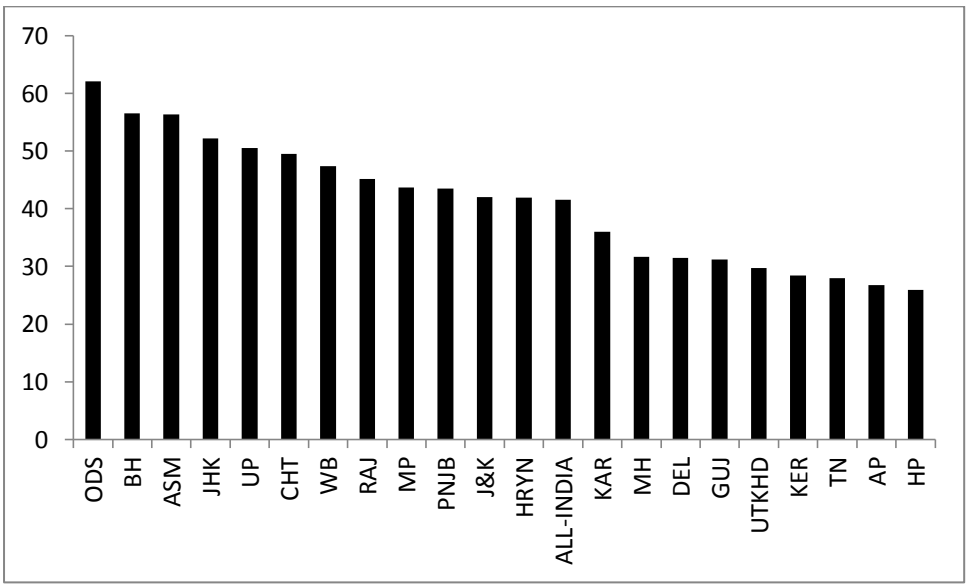
Figure 3.1: Proportion of households living in 'good' condition houses



Source: Census 2011. Note: Names of states are given in abbreviated form. Full names indicating abbreviations are given in Table 3.1.

Under the next category of 'livable houses' defined as those houses which requires minor repairs Odisha comes first with 62 percent followed by Bihar (57 percent), Assam (56 percent), Jharkhand (52 percent) and UP (51 percent).

Figure 3.2: Proportion of households living in 'livable' houses

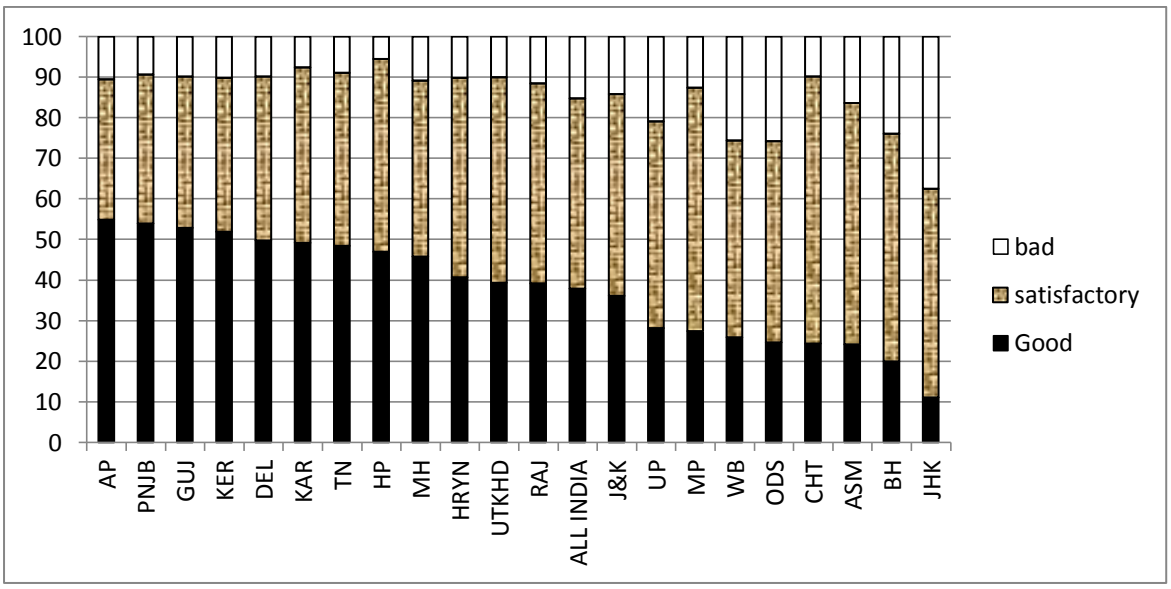


Source: Census 2011

The share of dilapidated houses was very less in most states, but two states - Assam and West Bengal - showed a proportion of around 10 percent to 11 percent.

Analysis of the condition of houses based on NSSO data shows a slightly different picture both in terms of the ranking of states as well as the percentage share of households in the different categories.

Figure 3.3: Distribution of households by the condition of structure



Source: NSSO 65th round (July 2008-June 2009)

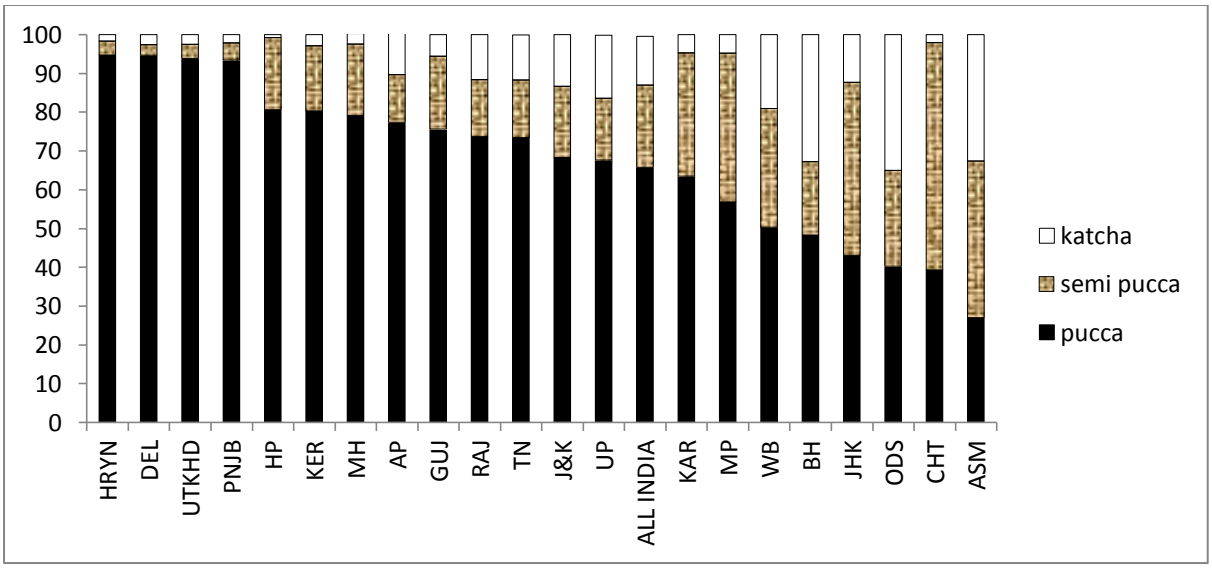
NSSO gives a more conservative figure in terms of the proportion of households living in 'good' houses. Among the larger states only five states had more

than 50 percent of households living in houses which were 'good' in condition. Andhra Pradesh (55percent) had the highest proportion of households living in 'good' houses followed by Punjab (54percent), Gujarat (53percent), Kerala (52percent) and Delhi (50percent). In Jharkhand only 11 percent of households lived in 'good' houses. Bihar (20percent), Assam (24percent), Chattisgarh (24percent), Odisha (25percent) and West Bengal (26percent) also had very low proportion of its households living in 'good' houses. For most of the states in the country, major proportion of households lived in houses which were satisfactory in condition. Chattisgarh (66percent) had the highest proportion of households living in houses which were 'satisfactory' in condition followed by Assam (59percent), Bihar (56percent) and UP (51percent).Jharkhand had the highest proportion of households living in bad condition (38percent) followed by Odisha (25.7 percent), West Bengal (25.6percent), Bihar (24percent) and UP (21percent).

Type of structure of houses

Classification of households by the type of structure of the houses shows that in majority of states more than 50 percent of the households lived in houses which were pucca, the exception being Assam (27percent), Chattisgarh (39percent), Odisha (40percent), Jharkhand (43percent) and Bihar (48percent). A comparison between Figures 3.3 and 3.4 show that though a higher proportion of households in the country lived in pucca structures, they were not necessarily in 'good' condition. However we can also see that those states which had a higher proportion of houses in 'good' condition had higher proportion of pucca houses as well. While Chattisgarh had the highest proportion of households living in semi pucca houses (around 60percent), Odisha (35percent) and Bihar (33percent) had the highest proportion of households living in katcha houses.

Figure 3.4: Distribution of households on the basis of the type of structure of houses

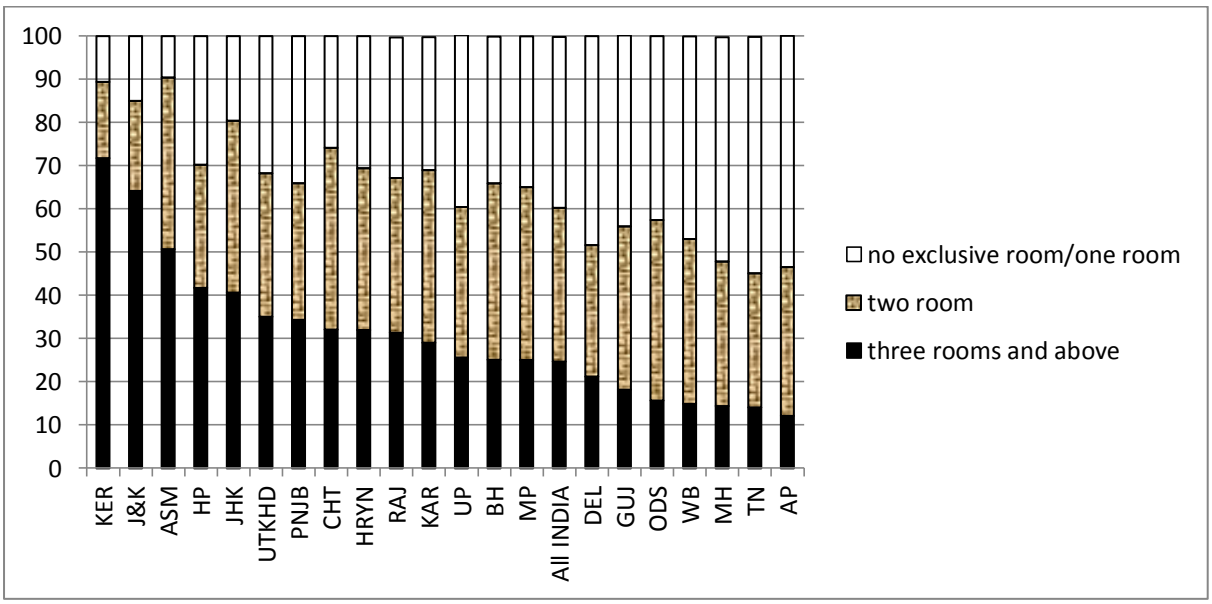


Source: NSSO 65th round (July 2008-June 2009)

Number of living rooms in the dwelling

Both the subjective indicator (condition of structure) and objective indicator (type of structure of house) need to be viewed critically as they take into consideration only the urgency of repair and the materials used in the construction of the house respectively and not the comfort. Hence to get a better picture of housing condition we look in to the number of living rooms in the dwelling which should be deemed as an indicator of the level of congestion in the house.

Figure3.5: Distribution of households by the number of living rooms in the dwelling



Source: NSSO 65th round (July 2008-June 2009)

Classification of households on the basis of number of living rooms reveals considerable interstate disparities. While in Kerala (72percent), Jammu& Kashmir, (64percent) and Assam (51percent) majority of households lived in houses with three or more living rooms, in West Bengal and Odisha only around 15percent of households had three or more rooms. In Tamil Nadu 55percent of households lived in houses with one living room followed by Andhra Pradesh (54percent) and Maharashtra (52percent). Himachal Pradesh had the highest proportion of households with no exclusive rooms (6percent), followed by Andhra Pradesh (4percent), Maharahtra (3percent) and Kerala (2percent). It is a matter of concern that most of the

states in the country had major proportion of its households living in houses with just one room or two rooms (including kitchen) showing a high degree of congestion/overcrowding in the houses.

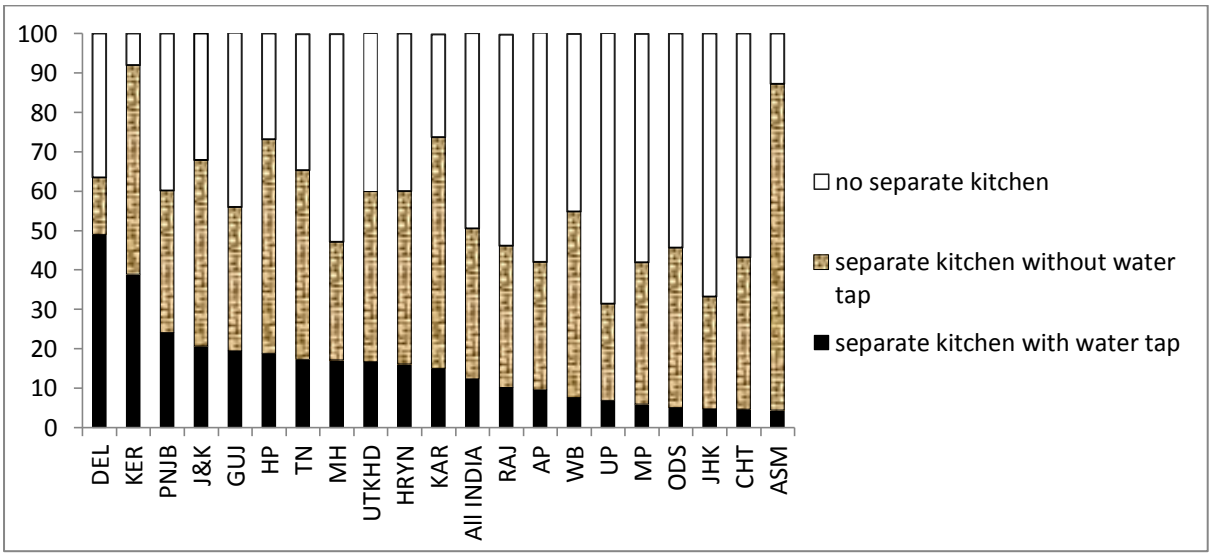
Ventilation

Classification of households on the basis of the ventilation of dwellings, which is an important indicator of healthy/comfortable housing shows that major proportion of households across states had only 'satisfactory' ventilation (see Appendix Table).

Type of Kitchen

Figure3.6 shows that Kerala had the highest proportion of households with separate kitchen and water tap (39percent). In Bihar only 3 percent of households had separate kitchen with water tap. States of Assam, Chattisgarh, Jharkhand, Odisha, Madhya Pradesh, UP and West Bengal had less than 10 percent of their households with separate kitchen and water tap. Bihar (71percent) had the highest proportion of households with no separate kitchen followed by UP (69percent) and Jharkhand (67percent). States of Andhra Pradesh (58percent), Rajasthan (54percent), Gujarat (44percent), Madhya Pradesh (58percent) and Maharashtra (53percent) also had high proportion of households with no separate kitchen.

Figure 3.6: Distribution of households by the type of kitchen



Source: NSSO 65th round (July 2008-June 2009)

In the case of households living in houses with no separate kitchen if cooking is done inside the house, smoke fills the entire house during cooking which in the

absence of good ventilation can cause serious health problems. Hence the huge gap in many states of households without a separate kitchen is a matter of concern.

Type of roof

Table 3.2 shows wide disparity among the states in the materials used for roof. In Chandigarh, Delhi, Uttarakhand, Andhra Pradesh and Punjab cement/RBC/RCC was the most predominant material of roof while in Chattisgarh, Jharkhand, Madhya Pradesh and Kerala tile (or slate) was also a predominant material of roof. In Rajasthan, Madhya Pradesh, UP, Haryana and Punjab burnt brick/stone/lime stone was also a prominent material used as roofing material along with cement/RBC/RCC. Iron, zinc or other metal sheets or asbestos sheet was the predominant material of roof in the north eastern states as well as in the states of Assam (61.6percent), Maharashtra (41percent) and Jammu & Kashmir (52percent). In Odisha and Bihar 35percent households lived in houses which had grass/straw/leaves/ reeds/bamboo, etc as

Table 3.2: Distribution of households by the type of roof (in percentages)

States	Cement/RBC /RCC	Tile/ slate	Asbestos or other metal sheet	Grass/straw/ leaves/ reeds/ bamboo, etc.
Delhi	81.8	0.7	2.8	1.9
Uttarakhand	64.0	3.2	6.5	2.9
Andhra Pradesh	52.4	15.6	10.3	13.4
Punjab	51.7	3.3	0.2	3.5
Tamil Nadu	47.4	29.7	4.9	13.5
Kerala	46.8	40.8	8.1	2.3
Gujarat	45.3	25.9	15.0	4.1
Himachal Pradesh	43.7	33.9	13.6	0.4
Uttar Pradesh	39.2	8.8	1.8	13.8
Haryana	37.3	6.2	0.9	2.4
Bihar	33.8	16.4	7.1	35.0
Maharashtra	32.8	16.4	41.3	2.5
Karnataka	31.1	34.9	15.6	4.0
Jammu & Kashmir	29.0	0.1	51.7	7.8
West Bengal	26.6	24.2	26.7	17.9
Odisha	24.9	24.1	10.8	34.6
Jharkhand	22.7	50.0	4.8	11.3
Madhya Pradesh	17.3	39.9	7.8	4.3
Chattisgarh	16.9	65.2	2.9	1.0
Rajasthan	13.3	12.3	2.7	11.0
Assam	5.0	0.0	61.6	32.6
All INDIA	35.1	20.9	14.2	12.4

Source: NSSO 65th Round (July 2008-June 2009)

material of roof. In West Bengal (18percent), Andhra Pradesh (13percent) and Tamil Nadu (14percent) also a significant proportion of households lived in houses with roof made of grass/straw/leaves/ reeds/bamboo, etc.

Asbestos and other metal roof sheets, though classified as permanent material may not protect the dwellers from weather related and other health hazards. Safety and sustainability of houses with grass, straw, reeds, bamboo, leaves, etc is also a matter of concern.

Type of wall

As per NSS (Table 3.3) we can see that in a majority of the states major proportion of households had their dwellings made of burnt brick or stone or lime stone, followed by mud or unburnt brick. While Haryana (85percent) had the highest proportion of houses with walls made of brick or stone or lime stone Chattisgarh (55percent) had the highest proportion of house with walls made of mud or unburnt brick. Among other materials use of grass, straw, leaves, bamboo, etc was most common in Assam (44percent), followed by Bihar (27percent) and West Bengal (16percent).

Table 3.3: Distribution of households by the type wall (in percentages)

States	Burnt brick/ stone/lime stone	Mud/unburnt brick	Cement/RBC/RCC	Other materials
Haryana	85.4	1.7	11.6	1.3
Uttarakhand	80.4	3.1	14.6	1.8
Punjab	80.1	2.2	16.9	0.8
Rajasthan	73.7	19.9	2.3	3.8
Himachal Pradesh	71.9	17.1	8.2	2.7
Maharashtra	71.6	14.5	6.7	7.1
Kerala	71.0	17.1	7.8	4.0
Andhra Pradesh	70.2	14.4	10.8	4.7
Uttar Pradesh	67.7	20.5	7.9	3.9
Jammu &Kashmir	67.3	25.4	3.8	3.6
Tamil Nadu	65.3	21.0	10.6	2.9
Gujarat	64.4	19.1	11.3	5.4
Madhya pradesh	55.4	35.9	4.2	4.3
Karnataka	55.2	26.3	14.8	3.4
Bihar	45.3	19.8	7.7	26.9
Delhi	42.2	3.3	53.1	1.4
Jharkhand	37.9	51.9	6.2	4.0
Chattisgarh	37.7	55.3	1.5	5.5
West Bengal	37.0	35.5	11.2	16.2
Odisha	36.7	52.1	6.3	4.9
Assam	14.3	30.7	11.3	43.7
All INDIA	59.1	23.2	9.5	8.2

Source: NSSO 65th Round (July 2008-June2009)

Type of floor

There was considerable variation across the states in the material used for floor as is evident from Table 3.4. While cement was the predominant material of floor in Delhi, Tamil Nadu, Kerala with around 70 percent of households living in houses with cement floor, mud was the prominent material of floor in Madhya Pradesh (70percent), Bihar (69percent), West Bengal (55percent), Chattisgarh (71percent), Assam (72percent), Jharkhand (68percent), UP (63percent) and Orissa (57percent). In Gujarat 34 percent and Maharashtra 29 percent of households lived in houses with mosaic/tile as the material of floor. Wood/plank and bamboo/log was the prominent material used for floor in north eastern states.

Table 3.4: Distribution of households by type of floor (in percentages), 2008-09

States	Mud	Cement	Brick/limestone/stone	Others
Uttar Pradesh	63.3	26.4	6.9	3.3
Maharashtra	29.6	25.1	15.8	29.3
Bihar	68.8	20.9	8.3	1.8
West Bengal	55.2	37.6	3.8	3.2
Andhra Pradesh	17.9	40.0	33.6	8.7
Madhya Pradesh	61.9	22.4	9.8	5.7
Tamil Nadu	12.5	69.9	2.2	15.3
Rajasthan	34.6	41.4	17.2	6.5
Karnataka	17.4	44.2	20.2	18.0
Gujarat	28.7	30.6	6.2	34.6
Odisha	56.4	40.5	1.6	1.5
Kerala	7.5	69.5	2.0	21.0
Jharkhand	67.6	26.8	4.4	1.3
Assam	71.6	22.0	2.8	3.6
Punjab	22.0	56.8	16.4	4.8
Chattisgarh	70.6	18.5	6.9	4.0
Haryana	22.3	57.2	16.7	3.8
Delhi	1.0	72.4	12.4	14.2
Jammu &Kashmir	40.0	52.6	4.8	2.6
Uttarakhand	26.4	44.6	13.6	15.4
Himachal Pradesh	25.8	51.0	3.3	19.8
All INDIA	40.4	37.4	11.1	11.0

Source: NSSO 65th Round (July 2008-June2009)

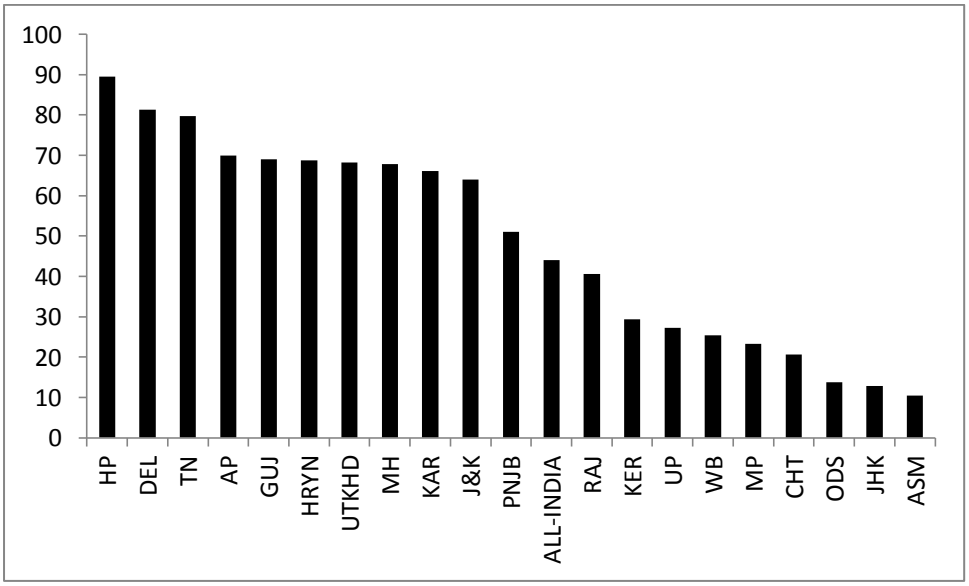
Section 2
Basic Amenities within Dwelling

Characteristics of the structure of the dwelling, though important is only one element of housing. Without amenities like drinking water facility, sanitation, electricity, etc a household cannot function as a useful one. In this section we discuss basic amenities within the dwelling across states.

Major Source of drinking water

Census 2011 records data on four major categories of drinking water sources – tap water, handpump, well, and other sources. NSSO gives data on all these as well as bottled water, tank/pond, river/canal, spring and harvested rainwater. First we look into the data provided by the census. At an all-India level, tap water was the major source of drinking water with nearly 44 percent of the households depending on this source.

Figure 3.7: Distribution of households with tap water as the major source of drinking water, 2011



Source: Census 2011

Among the states we see that Himachal Pradesh had the maximum proportion of households dependent on tap water, at nearly 89 percent, and Bihar the lowest at 4.4 percent, followed by Assam with 10.5 percent. Conversely, the use of a handpump is the highest among households in Bihar, with 90 percent of the households depending upon this source, and Sikkim the lowest with just 0.1 percent of the households dependence on this source (see Appendix table).

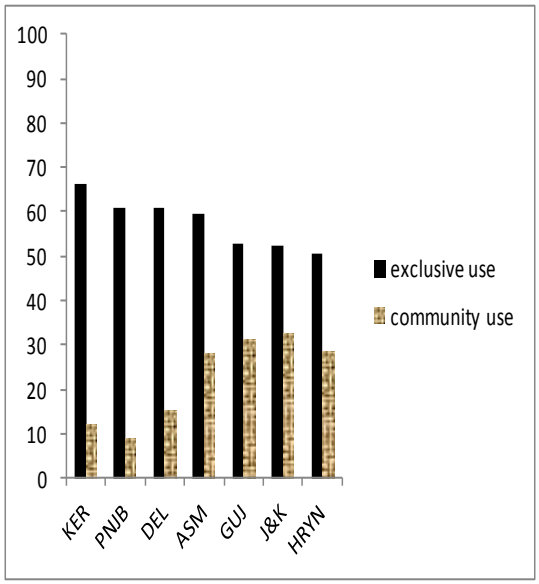
Compared to the other two sources, the proportion of households using well as a source of drinking water is very low, with a general decline from 2001 in all states in India. Interestingly, Kerala remains an exception in this regard with 62 percent of households depending upon a well.

Data on the major source of drinking water provided by the NSSO gives a similar picture as that of the population census. Tap water was the predominant source of drinking water in majority of the states, closely followed by tube well/hand pump. It is interesting to note that in Tamil Nadu 4 percent of households depended on bottled water as a major source of drinking water.

Nature of Access to Drinking water

NSS data reveals disparities among households across states in the nature of their access to drinking water source. While in states of Kerala (66 percent), Punjab (61 percent) and Delhi (61percent) major proportion of households had drinking water facility for the exclusive use of households, majority of households in the states of Odisha (77percent), Jharkhand (76percent), MP (73percent), Chattisgarh (70percent), West Bengal (64percent), TN (58percent) and Andhra Pradesh (53percent) depended on community provision of drinking water.

States where more than 50 percent of Hhs had exclusive access to drinking water source



States where more than 50 percent of Hhs depended on a community source of drinking water

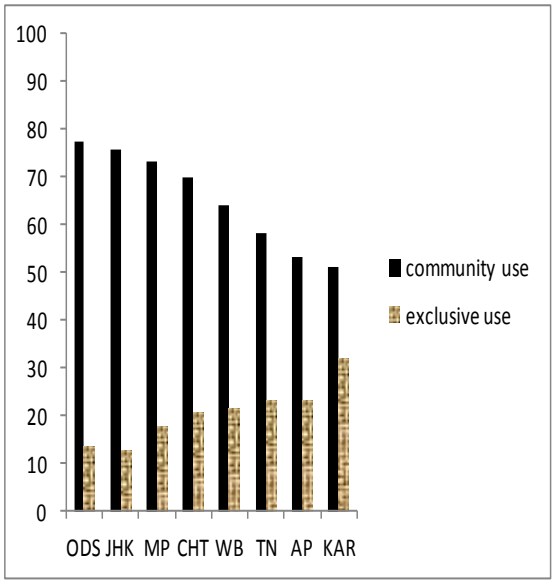


Figure 3.8: Distribution of households by their nature of access to drinking water source, 2008-09

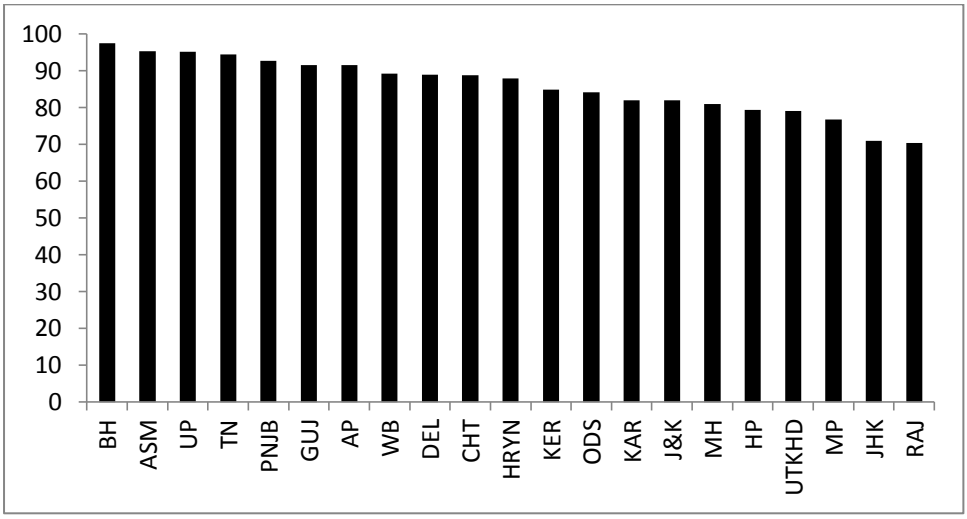
Distance to the source of drinking water

From Table 3.5 we can see that Odisha (20percent), Jharkhand (22percent), Chattisgarh (25percent) and MP (26percent), had the lowest proportion of households with drinking water facility within premises. Across the states major proportion of households had their drinking water source outside premises but within a distance of 200 metres. Manipur (22percent) had the highest proportion of households which had to travel a distance of 0.2-0.5km to their source of drinking water followed by Odisha (20percent), Rajasthan (18percent) and Jharkhand (17percent). In Himachal Pradesh and Mizoram 3 percent and 2 percent respectively of the households had to travel a distance of 1.5km or more to reach their source of drinking water(see Table in Appendix to this chapter).

Table 3.5: Distribution of households by their distance to the source of drinking water			
States	Within premises	0.2 to 1km	1 km or more
Punjab	86.5	13.3	0.3
Delhi	85.1	14.8	0.0
Kerala	76.5	23.3	0.2
Haryana	68.3	31.0	0.7
Assam	67.1	32.9	0.1
Jammu&Kashmir	64.8	34.5	0.7
Gujarat	64.7	34.9	0.6
Bihar	62.5	37.4	0.0
Uttar Pradesh	62.0	37.9	0.3
Maharashtra	56.4	42.9	0.5
Uttarakhand	56.2	42.9	1.0
Himachal Pradesh	55.3	41.6	3.1
All INDIA	50.7	48.9	0.5
Karnataka	45.7	53.5	0.6
Andhra Pradesh	44.9	54.8	0.5
Rajasthan	42.8	53.9	3.0
Tamil Nadu	40.9	58.6	0.3
West Bengal	34.6	65.0	0.3
Madhya Pradesh	25.7	73.3	0.9
Chattisgarh	24.7	75.0	0.3
Jharkhand	21.8	78.2	0.0
Odisha	20.5	79.3	0.2
Source: NSSO 65th Round (July 2008-June2009)			

Sufficiency of drinking water

Figure3.9: Distribution of households by their sufficiency of drinking water throughout the year, 2008-09



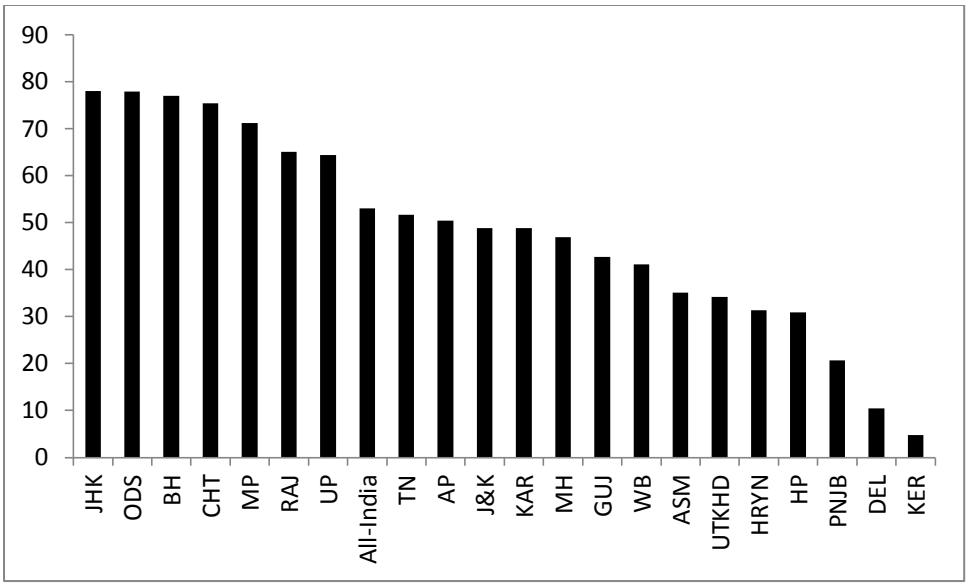
Source: NSSO 65th round (July 2008-June 2009)

Bihar had the highest proportion of households with sufficient drinking water throughout the year followed by Assam and UP. Mizoram had the lowest proportion of households with sufficient drinking water (25percent), followed by Nagaland (44percent). In Rajasthan drinking water was not sufficient for 30 percent of households. It is interesting to note that in Kerala where the housing condition and amenities are one of the top among states, 15 percent of households reported that drinking water availability was not sufficient for their use.

Latrine Facility

Our analysis of latrine facility on the basis of census data shows that at the state level Jharkhand and Odisha had the highest proportion of households (78percent) *without* latrine facility and Kerala had the lowest proportion of households (<5percent). In fact, the all-India figure for households without a latrine facility was also on the higher side, which is a worrisome statistic. The findings are given in Figure 3.10.

Figure 3.10: Distribution of households without latrine facility across states

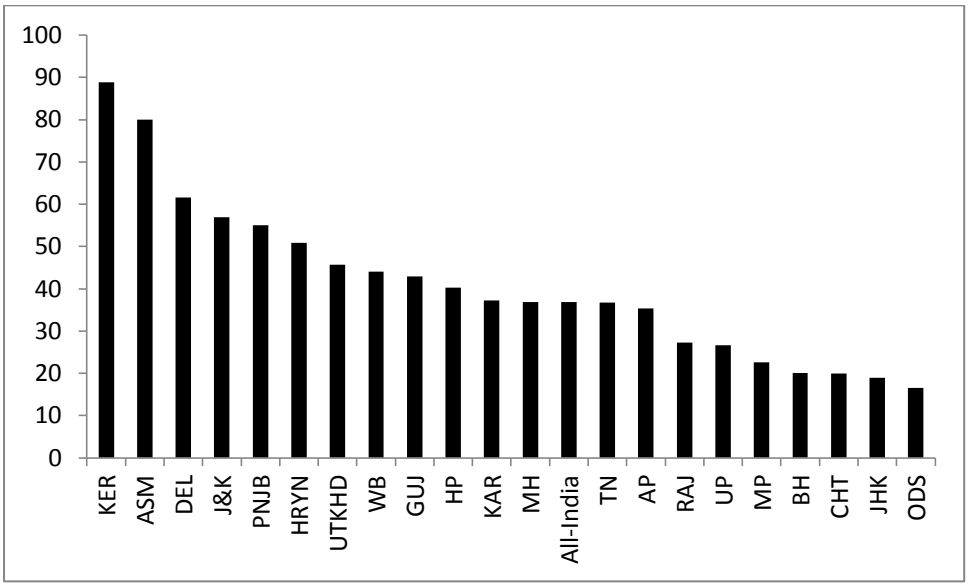


Source: Census 2011

Data provided by NSSO on the availability of latrine also shows a similar pattern. Odisha had the highest proportion of households without latrine facility followed by Jharkhand, Chattisgarh, Bihar, UP and MP (see Table in Appendix to this chapter).

In addition to information on the availability of latrine, NSSO also provides information on the facility of latrine. Figure 3.11 shows that Kerala along with north eastern states had the highest proportion of households with latrine facility for the exclusive of households. Odisha had the lowest proportion of households with latrine facility for the exclusive use of the households followed by Jharkhand, Chattisgarh, Bihar, MP, UP and Rajasthan. We can also see that in the states of Tripura (30percent), Chandigarh (29percent), Delhi (26percent), West Bengal (21percent) and Punjab (20percent) the practise of sharing latrines with other households was quite common.

Figure 3.11: Distribution of households with latrine facility for their exclusive use, 2008-09

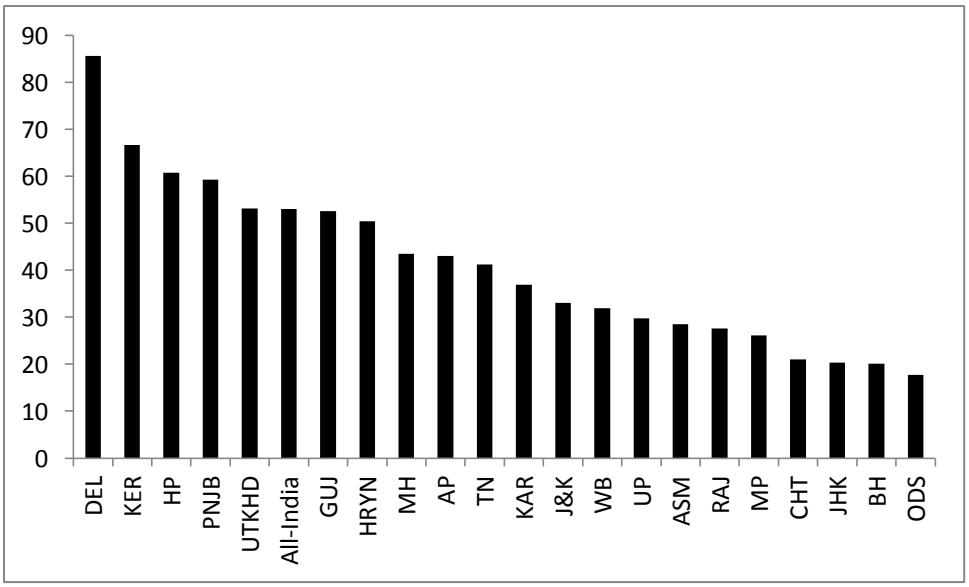


Source: NSSO 65th round (July 2008-June 2009)

Type of Latrine

Census provides data on three types of latrine namely water closet, pit latrine, and other latrine type. The all-India data shows a welcoming trend of a shift from pit latrine to water closet over the last ten years. This was mirrored also at the state level, with the exception of a few north-eastern states such as Manipur, Mizoram, Tripura and Meghalaya where pit latrines still dominate with over 60 percent of households having one(see Table in Appendix to this chapter).

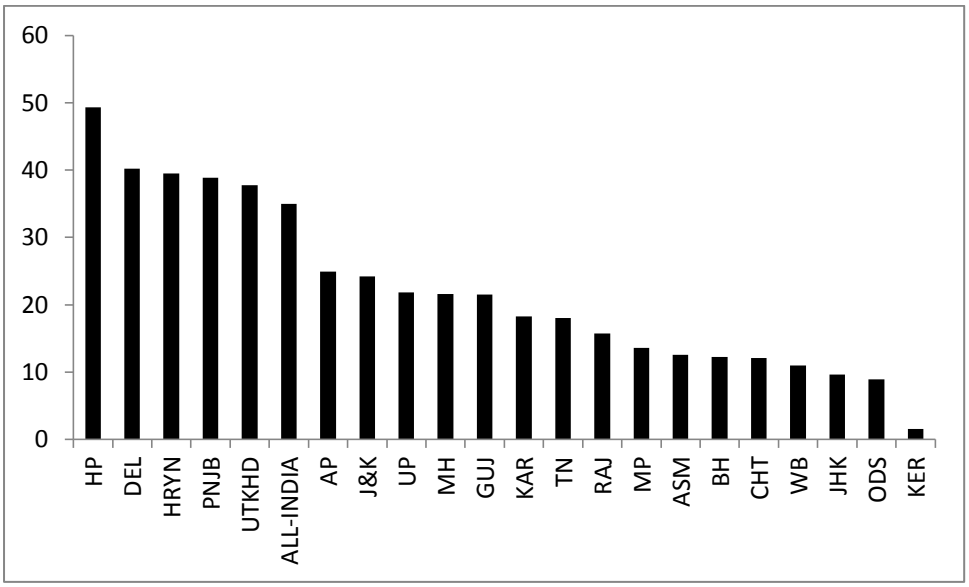
Figure 3.12: Proportion of households with water closet



Source: Census 2011

The proportion of households with a water closet was highest in Chandigarh (87percent) and Delhi (86percent). However, the all-India average is on the lower end of the spectrum, which is brought down mainly by states such as Bihar and Odisha where only a mere 15-20 percent of households had water closets. Figure 3.13 shows that these two states also recorded the lowest change in proportion of households with water closet over the decade.

Figure 3.13: Percentage point change over 2001-11 in proportion of households with water closet

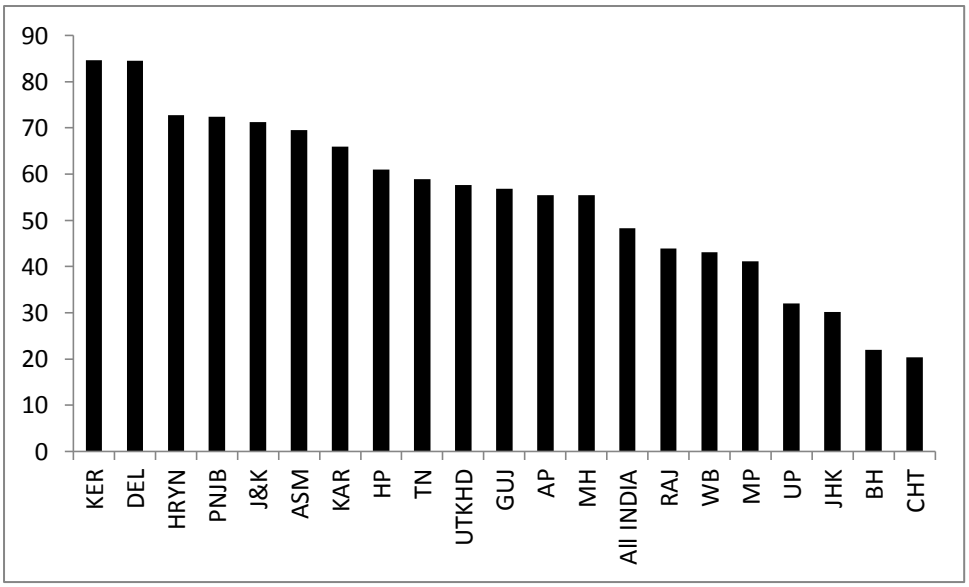


Source: Census 2011

Bathroom facility

NSSO provides information on both availability and type of bathroom (whether attached or detached). We can understand from Figure 3.15 that Kerala (85percent) had the highest proportion of households with bathroom followed by, Delhi (84percent), Haryana (73percent) and Punjab (72percent). Odisha (16percent) had the lowest proportion of households with bathroom facility.

Figure: 3.14: Distribution of households across states with bathroom facility, 2008-09



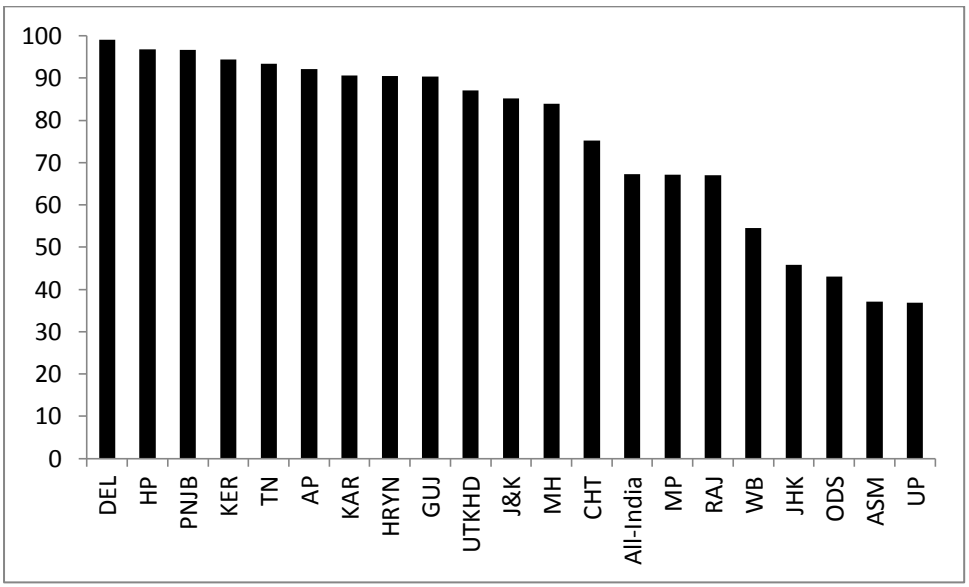
Source: NSSO 65th round (July 2008-June 2009)

Source of Lighting

The Census records data on three basic sources of lighting: kerosene, electricity and other sources, besides recording information on households that have no lighting facilities. A look at the proportion of households having *no source of lighting* shows that among larger states, in Jammu and Kashmir 2 percent of households had no source of lighting.For smaller states, Arunachal Pradesh reports 10.5 percent, with no source of lighting. The all-India figure for this is extremely low, which is a good sign overall.

Electricity remains as the major source of lighting in households in India, with the proportion of households using electricity exceeding 90 percent in twelve states. The highest in this category is Delhi with 99 percent households, whereas Bihar stands at a stark low with only 16.4 percent of households reporting electricity as their major source of lighting.

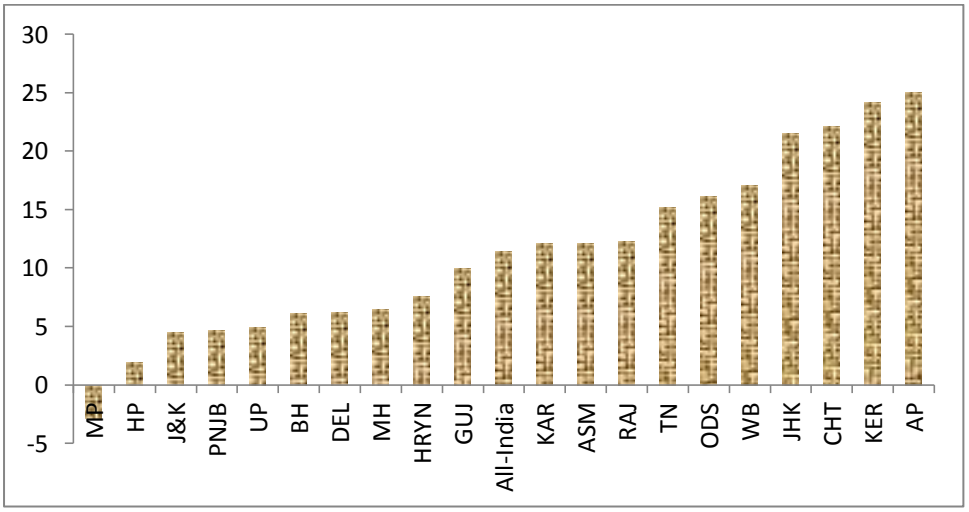
Figure 3.15: Distribution of households by their major source of lighting, 2011



Source: Census 2011

As for changes in the percentage of households reporting electricity as their major source of lighting between 2001 and 2011, among the larger states all except Madhya Pradesh showed an increase in the proportion of households with electricity over the decade.

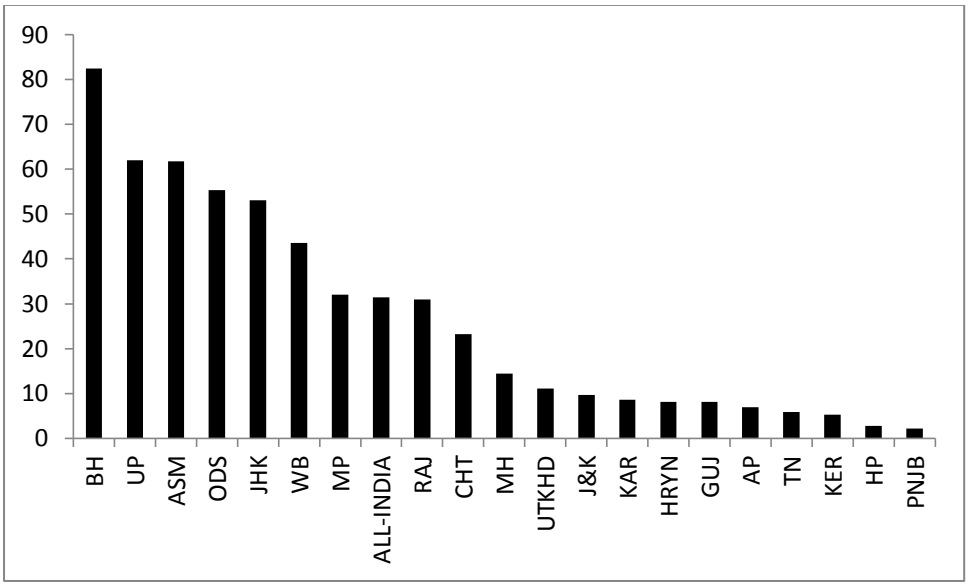
Figure 3.16: Percentage point change over 2001-11 in the proportion of households with electricity as major source of lighting



Source: Census 2011

As for to sources of lighting other than electricity, Census data show that though there is a welcome reduction in the use of kerosene as a major source of lighting across India, Bihar is again an exception with more than 82 percent of households still depended on kerosene, followed by UP and Assam with nearly 62 percent. Figures 3.16 and 3.17 show these extreme differences in electricity and kerosene use across states.

Figure 3.17: Proportion of households with kerosene as the major of lighting

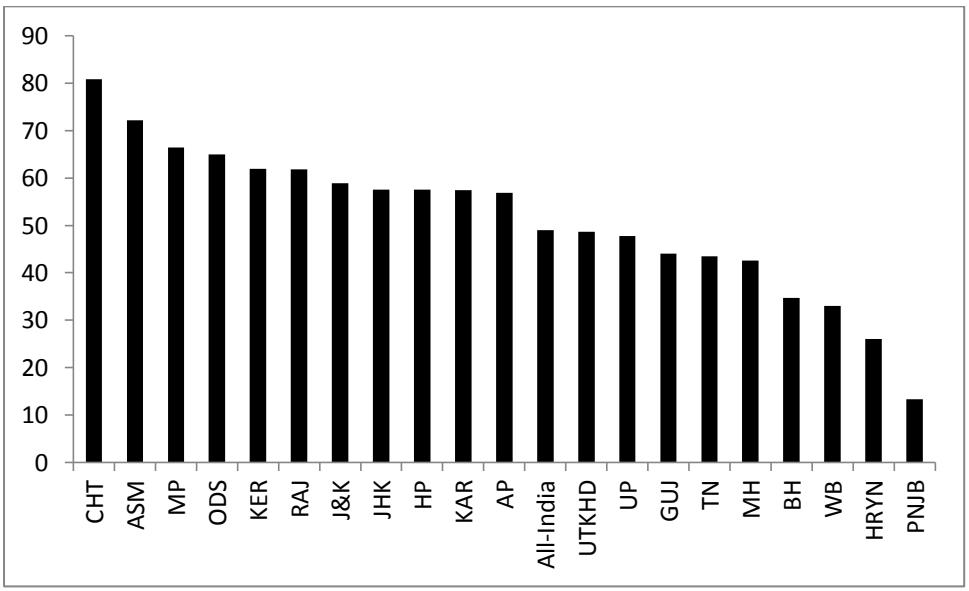


Source: Census 2011

Cooking Fuel

Census provides information on four sources of cooking fuel: firewood, crop-residue, kerosene and LPG/PNG. Taking firewood, it can be seen that the proportion of households using firewood as the major source of fuel was highest in Chhattisgarh with a proportion more than 80 percent, while in Delhi this proportion was less than 5 percent. This contrast can be seen in Figure 3.18.

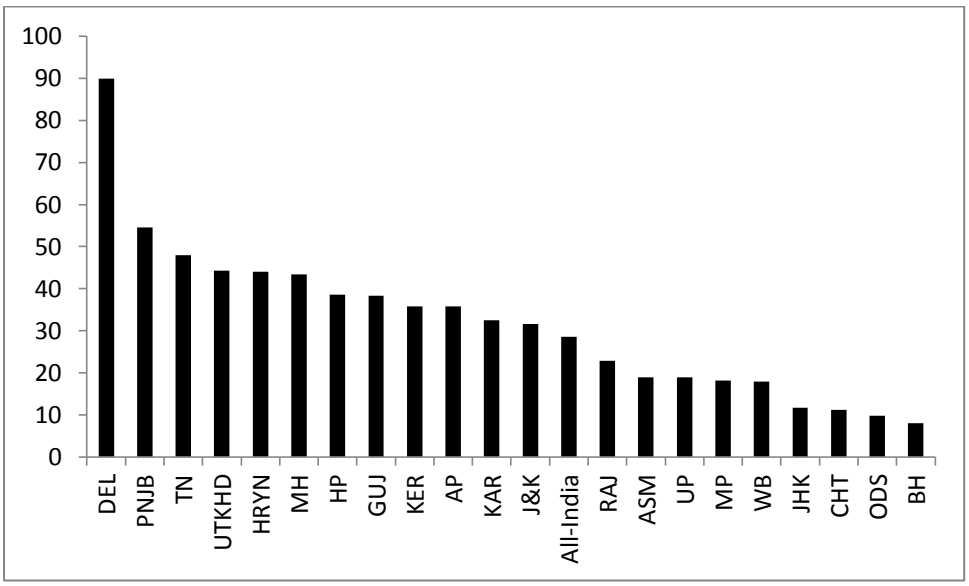
Figure 3.18: Proportion of households with firewood as the major source of fuel, 2011



Source: Census 2011

The all India picture shows that LPG/PNG was next in line after firewood, with the state having highest proportion of households depending on this source being Delhi with nearly 90 percent , which was then followed by Punjab (54 per cent) among the larger states.

Figure 3.19: Proportion of households with LPG/PNG as the major source of fuel, 2011



Source: Census 2011

While dependence on crop-residue as a source of fuel was low, we see that only Bihar with nearly 33 percent and West Bengal with nearly 26 percent depended on this source. Also, the share of kerosene as a source of fuel was very meagre at the all India level.

Section 3
Access to Basic Facilities outside the Dwelling

Access to basic facilities outside the dwelling such as distance to the place of work, garbage and drainage facilities and access to road are also an important indicators of the quality of life.

Distance to the place of work

Table 3.6 shows that for majority of households across the states, the earning member of the family had to travel a distance less than 5km to reach their place of work. Among the larger states Himachal Pradesh reported the highest percentage (53percent) of households where the earning member(s) did not have to travel more than one kilometres for work while Odishawith26 percent reported the least.

Table 3.6: Distribution of households by the distance to the place of work of the earning member (in percentages)

States	less than 1 km	1 -5km	5-10km	10-15km	15-30	30km or more
Uttar Pradesh	44.0	36.7	10.8	4.2	2.3	2.1
Maharashtra	31.6	39.6	13.1	6.6	4.7	4.5
Bihar	36.1	44.4	12.0	5.2	1.5	0.6
West Bengal	35.7	37.4	13.3	5.8	3.6	4.3
Andhra Pradesh	31.9	45.4	13.5	3.7	3.0	2.7
Madhya Pradesh	35.1	46.8	12.3	3.6	1.1	1.3
Tamil Nadu	35.1	37.3	15.6	6.0	3.7	2.2
Rajusthan	31.2	40.6	14.9	5.7	3.2	4.1
Karnataka	28.5	49.0	12.2	6.0	2.9	1.2
Gujarat	34.4	38.5	13.3	6.6	3.8	3.6
Odisha	26.3	48.7	16.8	4.7	1.3	2.4
Kerala	38.6	29.1	14.5	6.8	6.4	4.7
Jharkhand	31.6	41.6	17.0	6.2	2.2	1.3
Assam	46.5	35.3	13.2	3.0	1.2	0.8
Punjab	38.4	32.9	14.3	5.6	4.8	4.0
Chattisgarh	26.5	52.0	14.2	4.8	1.5	1.1
Haryana	41.0	32.1	13.7	5.9	3.9	3.4
Delhi	27.0	27.8	26.1	12.7	5.2	1.2
Jammu &Kashmir	42.0	24.3	15.3	7.4	7.0	4.0
Uttarakhand	30.5	42.8	15.8	6.9	2.2	1.7
Himachal Pradesh	53.3	25.8	11.5	4.7	2.5	2.1

Source: NSSO 65th Round (July 2008-June2009)

Garbage collection

We can understand from Table 3.7 that across the states only a small proportion of households had access to any form of garbage collection whether by the local government bodies or by other arrangements. A major proportion of households in all states except Delhi did not have any arrangement for garbage collection. Bihar (87percent) had the highest proportion of households with no garbage collection arrangement followed by Kerala (86percent) and West Bengal (79percent). Kerala's disappointing performance despite being a high achiever in many other respects is a pointer to the government's failure in providing this basic public function. Among the larger states Delhi (12 percent) and Tamil Nadu (33percent) had the lowest proportion of households without any arrangement for garbage collection followed by Maharashtra (35 percent)

Table 3.7: Distribution of households by garbage collection facility (in percentages)

States	Panchayat/Municipality/ corporation	By residents	By others	No arrangement
Bihar	4.0	8.2	1.3	86.5
Kerala	6.0	5.9	2.4	85.7
West Bengal	16.4	4.0	0.9	78.7
Jammu &Kashmir	16.5	3.9	1.3	78.3
Himachal Pradesh	5.3	7.0	9.9	77.8
Odisha	7.6	15.6	1.1	75.7
Jharkhand	3.5	19.4	1.5	75.7
Uttarakhand	13.5	14.6	2.2	69.8
Rajasthan	17.0	17.1	1.5	64.4
Andhra Pradesh	28.0	6.9	1.0	64.0
Assam	3.9	27.3	5.1	63.8
Madhya Pradesh	14.1	21.5	1.3	63.1
All INDIA	20.7	17.2	2.5	59.6
Karnataka	27.5	12.2	1.1	59.2
Uttar Pradesh	14.4	22.0	6.7	56.9
Chattisgarh	14.0	25.1	5.5	55.3
Gujarat	25.9	22.2	0.6	51.3
Punjab	20.8	28.4	0.7	50.0
Haryana	12.3	40.4	1.4	45.8
Maharashtra	39.8	24.7	1.0	34.5
Tamil Nadu	42.3	21.5	2.8	33.4
Delhi	53.2	24.6	10.3	11.9

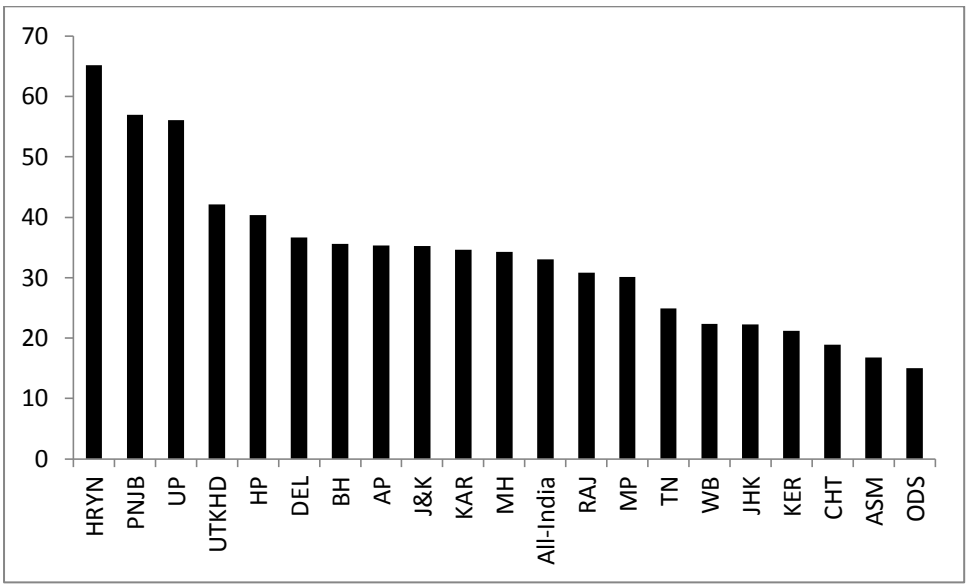
Source: NSSO 65th Round (July 2008-June2009)

Drainage Facility

Our analysis based on census data on the proportion of households with drainage and the types of drainage indicate that Odisha had the highest proportion of households having no drainage facility at 81percent, with Assam second in line, with nearly 80 percent.

As for the types of drainage, there are mainly two categories, closed and open. A worrisome state of affairs is that most states in India show a high proportion of households having open drainage, while this is not the case with the proportion having closed drainage. This can clearly be seen in Figure 3.20. The proportion of households having closed drainage was the highest in Delhi with 59 percent. However the nearby state of Haryana was on top with the highest share of open drainage at 65 percent.

Figure 3.20: Proportion of households with open drainage



Source: Census 2011

NSSO also provides data on the facility and type of drainage. Comparison of NSSO and census data shows that while Kerala has shown a reduction in the proportion of households without drainage, there has not been any significant improvement in the case of Odisha, Jharkhand and West Bengal.

NSSO classifies type of drainage in terms of four types namely,(a) underground, (b) covered pucca, (c) open pucca and (d) open katcha. Delhi, followed by Gujarat, Punjab and Maharashtra have the highest proportion of households with underground drainage. But in these states also with the exception of Delhi open pucca and open katcha drainage was more predominant.

Access to Road

The Table 3.8 shows that among the larger states Tamil Nadu (61percent) and Andhra Pradesh (60percent) had the highest proportion of households with direct opening to motorable road with street light. In Maharashtra only 43 percent of households had direct opening to motorable road with street light while in Kerala it was only 38 percent of households. Jammu & Kashmir (4 percent) had the lowest proportion of households with direct opening followed by Bihar (5 percent) and Assam (5 percent).

Sikkim (38 percent), Himachal Pradesh (37 percent) and Jammu & Kashmir (35 percent) had the highest proportion of households with no direct opening to road. In Assam (57 percent), Bihar (55 percent), UP (51 percent), West Bengal (50 percent), Jharkhand (43 percent), Odisha (42 percent) and north eastern states major proportion of households had direct opening to other roads/lane with no street light.

Table 3.8: Distribution of households by their access to road (in percentages) , 2008-09

States	direct opening to				No direct opening
	Motorable road		Other road/lane		
	With street light	Without street light	With street light	Without street light	
Himachal Pradesh	7.5	10.2	5.1	40.7	36.5
Jammu and Kashmir	4.1	20.8	2.2	37.6	35.3
Uttarakhand	14.8	14.7	4.5	35.1	30.9
Jharkhand	5.8	20.4	2.5	42.8	28.6
Bihar	4.5	16.1	1.4	54.6	23.3
Rajasthan	16.4	20.9	4.5	36.0	22.2
Madhya Pradesh	14.5	22.1	6.2	37.2	20.1
West Bengal	13.2	12.0	8.0	49.8	16.9
Uttar Pradesh	9.9	17.7	5.0	50.6	16.9
Assam	4.5	20.6	1.9	56.9	16.0
Kerala	38.2	17.2	5.0	23.9	15.7
Gujarat	27.0	20.4	14.6	24.6	13.4
Chattisgarh	14.5	14.3	12.1	47.0	12.1
Maharashtra	43.3	11.9	17.2	16.6	11.0
Odisha	10.3	33.3	3.0	42.4	11.0
Haryana	9.8	41.3	4.6	34.6	9.7
Andhra Pradesh	59.5	8.9	14.7	10.6	6.3
Tamil Nadu	61.2	5.6	20.1	7.1	5.9
Karnataka	55.6	9.6	16.2	13.8	4.8
Punjab	24.0	30.2	4.1	37.3	4.3
Delhi	64.0	8.6	8.9	16.2	2.3
Source: NSSO 65th Round (July 2008-June2009)					

Chapter 4

Housing Condition in Rural Areas

Introduction

A study on housing condition and amenities in India is incomplete without an analysis of the rural sector, as majority of the population (69 percent) live in rural areas. This also necessitates a comparison between rural and urban areas on their relative performance in various aspects of housing. Hence in this chapter we analyse housing condition across the states with particular reference to rural areas, followed by an analysis of rural-urban gap.

Table 4.1 presents the population distribution and average household size across states in rural and urban India. Uttar Pradesh has the largest rural population while Maharashtra has the largest urban population. However this does not indicate the level of urbanization for which we need to examine the share of urban population in total population as given in Table 4.2. This shows that the states of Delhi, Tamil Nadu and Kerala have the three most urbanised population in the country in 2011.

This chapter is divided into two sections. In the first section we discuss the physical characteristics of houses, basic amenities within the dwelling and households' access to basic facilities outside the dwelling. In the second section we present our analysis on rural-urban gap. Our analysis is based on the data provided by Census of 2011 and the 65th round of NSSO on housing condition and amenities (June 2008-July 2009).

Sl No	Table 4.1: Population distribution across states							
		Rural				Urban		
	States	Population (in lakhs)	Total no. Of hhs	Average hh size	States	Population (in lakhs)	Total no. Of hhs	Average hh size
1	UP	1551.1	254.8	6.1	MH	508.3	108.1	4.7
2	BH	920.8	169.3	5.4	UP	444.7	74.5	6.0
3	WB	622.1	137.2	4.5	TN	349.5	89.3	3.9
4	MH	615.5	130.2	4.7	WB	291.3	63.5	4.6
5	AP	563.1	142.5	4.0	AP	283.5	67.8	4.2
6	MP	525.4	111.2	4.7	GUJ	257.1	54.2	4.7
7	RAJ	515.4	94.9	5.4	KAR	235.8	53.2	4.4
8	KAR	375.5	78.6	4.8	MP	200.6	38.5	5.2
9	TN	371.9	95.6	3.9	RAJ	170.8	30.9	5.5
10	ODS	349.5	81.4	4.3	DEL	163.3	32.6	5.0
11	GUJ	346.7	67.7	5.1	KER	159.3	36.2	4.4
12	ASM	267.8	53.7	5.0	BH	117.3	20.1	5.8
13	JHK	250.4	46.9	5.3	PNJB	103.9	20.9	5.0
14	CHT	196.0	43.8	4.5	HRYN	88.2	17.5	5.0
15	KER	174.6	41.0	4.3	JHK	79.3	15.0	5.3
16	PNJB	173.2	33.2	5.2	ODS	70.0	15.2	4.6
17	HRYN	165.3	29.7	5.6	CHT	59.4	12.4	4.8
18	J&K	91.3	15.0	6.1	ASM	43.9	9.9	4.4
19	UTKHD	70.3	14.0	5.0	J&K	34.1	5.2	6.6
20	HP	61.7	13.1	4.7	UTKHD	30.9	5.9	5.2
21	TRP	27.1	6.1	4.5	CHND	10.3	2.3	4.5
22	MGH	23.7	4.2	5.6	TRP	9.6	2.4	4.1
23	MAN	19.0	3.4	5.7	GOA	9.1	2.0	4.6
24	NAG	14.1	2.8	4.9	PONDY	8.5	2.1	4.1
25	ARNP	10.7	2.0	5.5	MAN	8.2	1.7	4.8
26	GOA	5.5	1.2	4.4	HP	6.9	1.7	4.1
27	MIZ	5.3	1.0	5.0	MGH	6.0	1.2	5.1
28	SIKM	4.6	0.9	4.9	NAG	5.7	1.2	5.0
29	DEL	4.2	0.8	5.3	MIZ	5.6	1.2	4.8
30	PONDY	3.9	1.0	4.1	ARNP	3.1	0.7	4.8
31	A&N	2.4	0.6	4.1	D&D	1.8	0.5	3.8
32	D&NH	1.8	0.4	5.2	D&NH	1.6	0.4	4.2
33	D&D	0.6	0.1	4.7	SIKM	1.5	0.4	4.2
34	CHND	0.3	0.1	4.3	A&N	1.4	0.3	3.9
35	LKSH	0.1	0.0	5.6	LKSH	0.5	0.1	6.2
	All INDIA	8330.9	1678.3	5.0	**All INDIA**	3771.1	788.7	4.8

Table 4.2: Share of rural and urban population in Indian states

Sl.No	States	Total Population (lakhs)	Rural	Urban	Share of Rural Popn	Share of Urban Popn
	Larger States					
1	Uttar Pradesh (UP)	1995.81	1551.1	444.7	77.72	22.28
2	Maharashtra (MH)	1123.73	615.5	508.3	54.77	45.23
3	Bihar (BH)	1038.05	920.8	117.3	88.70	11.30
4	West Bengal (WB)	913.48	622.1	291.3	68.10	31.89
5	Andhra Pradesh (AP)	846.66	563.1	283.5	66.51	33.48
6	Madhya Pradesh (MP)	725.98	525.4	200.6	72.37	27.63
7	Tamil Nadu (TN)	721.39	371.9	349.5	51.55	48.45
8	Rajasthan (RAJ)	686.21	515.4	170.8	75.11	24.89
9	Karnataka (KAR)	611.31	375.5	235.8	61.43	38.57
10	Gujarat (GUJ)	603.84	346.7	257.1	57.42	42.58
11	Odisha (ODS)	419.47	349.5	70	83.32	16.69
12	Kerala (KER)	333.88	174.6	159.3	52.29	47.71
13	Jharkhand (JHK)	329.66	250.4	79.3	75.96	24.06
14	Assam (ASM)	311.69	267.8	43.9	85.92	14.08
15	Punjab (PNJB)	277.04	173.2	103.9	62.52	37.50
16	Chattisgarh (CHT)	255.4	196	59.4	76.74	23.26
17	Haryana (HRYN)	253.53	165.3	88.2	65.20	34.79
18	Delhi (DEL)	167.53	4.2	163.3	2.51	97.48
18	Jammu&Kashmir (J&K)	125.49	91.3	34.1	72.75	27.17
20	Uttaranchal (UTKHD)	101.17	70.3	30.9	69.49	30.54
21	Himachal Pradesh (HP)	68.57	61.7	6.9	89.98	10.06
	Smaller States and Union Territories (UTs)					
1	Tripura	36.71	27.1	9.6	73.82	26.15
2	Meghalaya	29.64	23.7	6	79.96	20.24
3	Manipur	27.22	19	8.2	69.80	30.12
4	Nagaland	19.81	14.1	5.7	71.18	28.77
5	Goa	14.58	5.5	9.1	37.72	62.41
6	Arunachal Pradesh	13.83	10.7	3.1	77.37	22.42
7	Pondicherry	12.44	3.9	8.5	31.35	68.33
8	Mizoram	10.91	5.3	5.6	48.58	51.33
9	Chandigarh	10.55	0.3	10.3	2.84	97.63
10	Sikkim	6.08	4.6	1.5	75.66	24.67
11	A&N Island	3.8	2.4	1.4	63.16	36.84
12	D&N Haveli	3.43	1.8	1.6	52.48	46.65
13	Daman&Diu	2.43	0.6	1.8	24.69	74.07
14	Lakshadweep	0.64	0.1	0.5	15.63	78.13
	All INDIA	12101.93	8330.9	3771.1	68.84	31.16

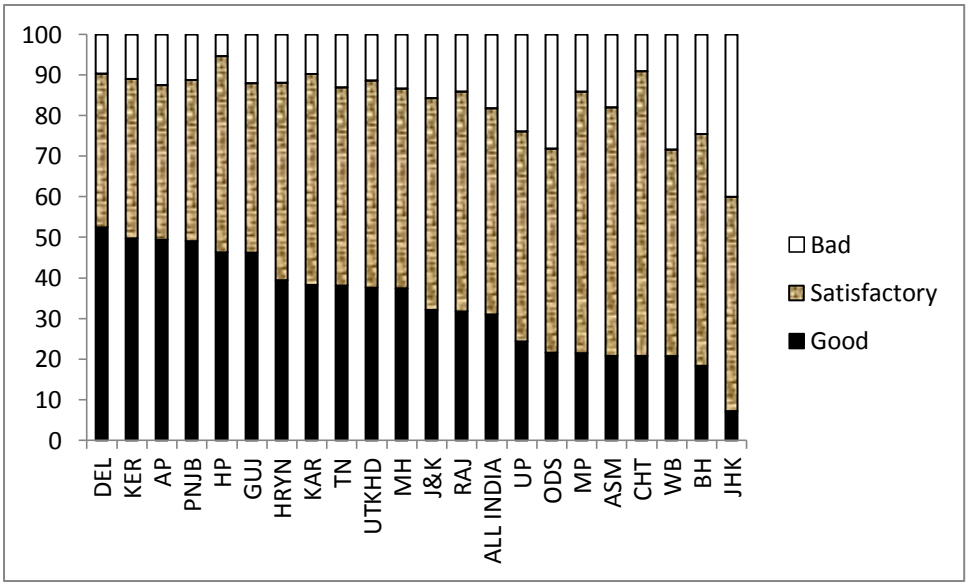
Source: Census of India 2011

Section 1
Housing Condition and Amenities at Rural Level

In this section we discuss the physical characteristics of houses, basic amenities within the dwelling and households' access to basic facilities outside the dwelling.

Condition of the structure of Houses

Figure: 4.1 Distribution of households by the condition of structure of houses

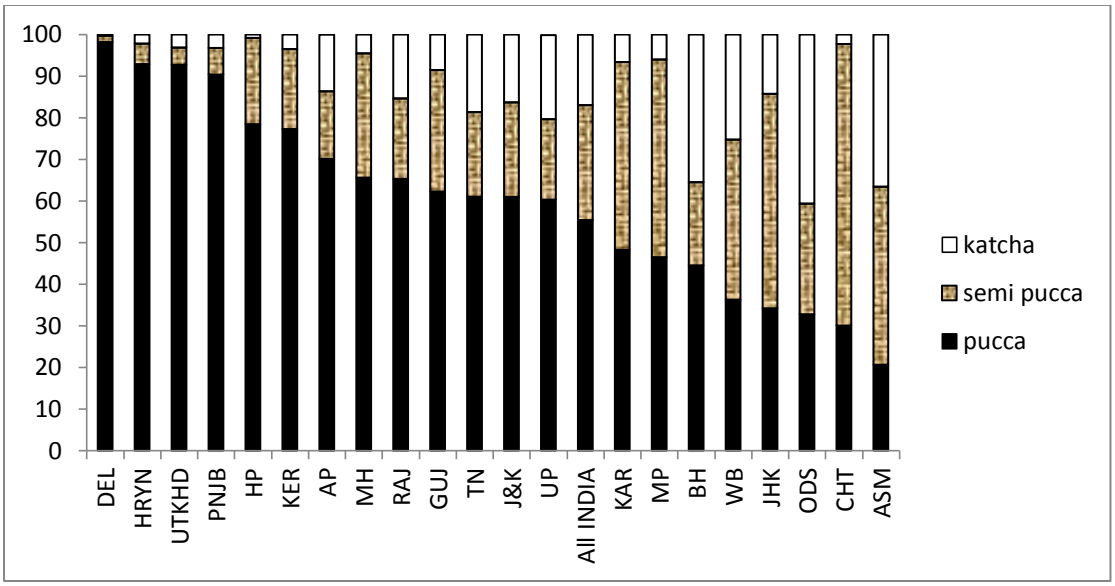


Source: NSSO 65th round (July 2008-June 2009)

In rural India, among the larger states only Delhi (53 percent) and Kerala (50 percent) had a major proportion of their households living in houses which were 'good' in condition. For the rest of the states majority of households lived in houses which were 'satisfactory' in condition. A ranking of states on the basis of the proportion of 'good' houses shows that the pattern in rural area reflects the pattern at the state level. The states of Jharkhand (7 percent), Bihar (18 percent), West Bengal (21 percent) and Chattisgarh (21 percent) had the lowest proportion of households living in 'good' houses and these states also had the highest proportion of households living in houses which were 'bad' in condition.

Type of structure of houses

Figure 4.2: Distribution of households by the type of structure of houses

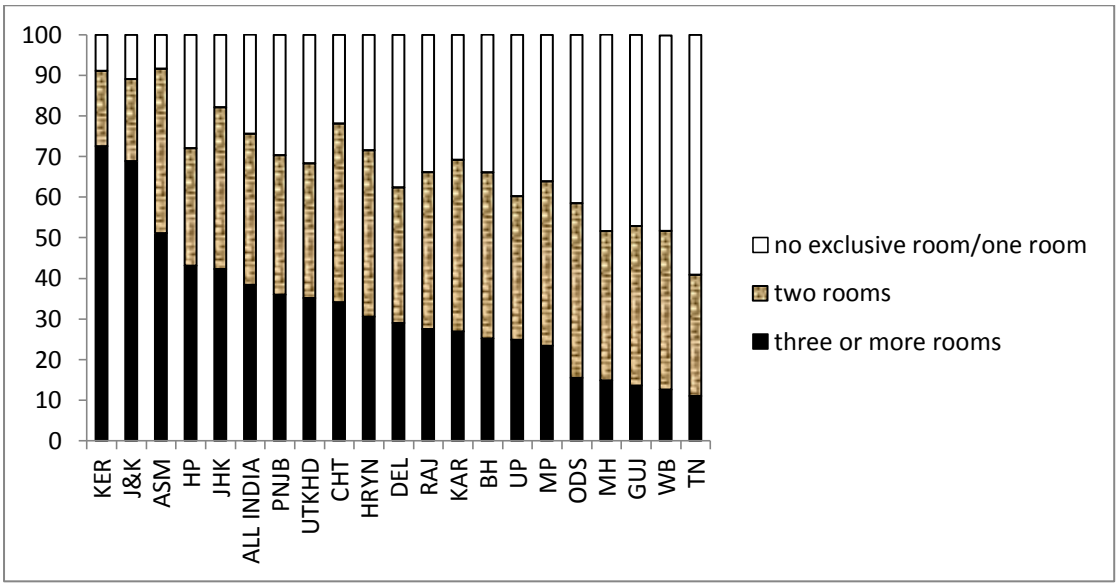


Source: NSSO 65th round (July 2008-June 2009)

Classification of households by the condition of the structure of houses shows that the states of Haryana (93 percent), Uttarakhand (93 percent) and Punjab (91 percent) had the highest proportion of rural households living in *pucca* houses. In rural Assam, Chattisgarh, Odisha, Jharkhand and West Bengal less than 35 percent of households lived *in pucca* houses, with Assam having the lowest proportion (21 percent). While Chattisgarh (68 percent) had the highest proportion of rural households living in *semi-pucca* houses, Odisha (41 percent) had the highest proportion of rural households living in *katcha* houses.

No of living rooms

Figure 4.3: Distribution of households by the number of dwelling rooms in the house



Source: NSSO 65th round (July 2008-June 2009)

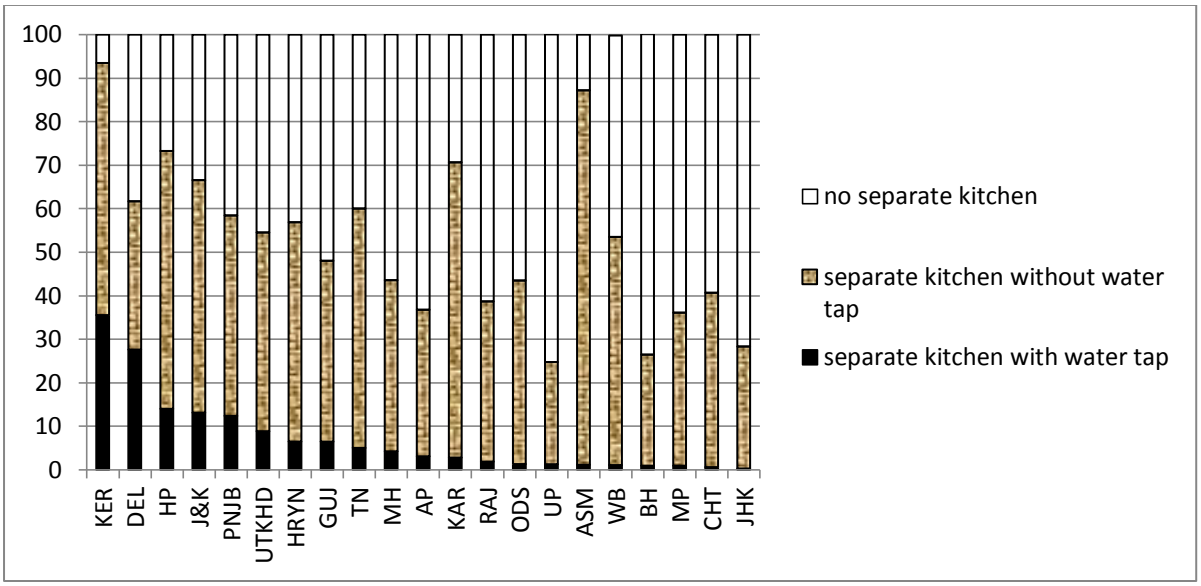
Figure 4.3 reveals that there was widespread disparity among the states in terms of the availability of living rooms, which throws light on the extent of congestion in the dwellings of households. While states of Kerala (73 percent) and Jammu & Kashmir (69 percent) had majority of their households in rural areas living in houses with three or more rooms, Tamil Nadu (59 percent) and Andhra Pradesh (54 percent) had major proportion of their rural households living in houses with just one living room or no exclusive room.

Ventilation

Classification of households in rural areas on the basis of the ventilation of houses shows that Kerala (45 percent) had the highest proportion of households living in houses with 'good' ventilation, followed by Tamil Nadu (41 percent) and Gujarat (40 percent). Odisha had the highest proportion of households living in houses with 'bad' ventilation(48 percent), followed by and Jharkhand (47 percent) and West Bengal (35 percent). (see Table ... in Appendix to this chapter).

Type of kitchen

Figure 4.4: Distribution of household by type of kitchen



Source: NSSO 65th round (July 2008-June 2009)

From figure 4.4 we can see that majority of the states in the country had major proportion of their households with a separate kitchen but without water tap. Kerala had the highest proportion of rural households with a separate kitchen and water tap (36 percent) while Jharkhand with just 0.3 percent had the lowest proportion. Himachal Pradesh (59 percent) had the highest proportion of households with separate kitchen but no water tap and UP with only 23 percent of households having a separate kitchen had the lowest proportion. Major proportion of rural households in 9 large states such as UP (75 percent), Bihar (74 percent), Jharkhand (72 percent) and Madhya Pradesh (64 percent) had no separate kitchen.

Type of wall

Table 4.2 shows that there was strong disparity among states on the type of material used for wall. The two most prominent material of wall in rural India were burnt brick/stone/lime stone and mud/unburnt brick. While burnt brick/stone/lime stone was the prominent material of wall in Haryana (88 percent), Punjab (84 percent), Uttaranchal (82 percent), Andhra Pradesh (70 percent) and Kerala (68 percent); mud/unburnt brick was the prominent material used for wall in Chattisgarh (64 percent), Jharkhand (60 percent), Odisha (59 percent), and West Bengal (46 percent). Among the rural households in north eastern states grass/straw/leaves/reeds/bamboo, etc was the most prominent material of wall (see Appendix Table). In Bihar 28 percent of rural households lived in houses with grass/straw/leaves/reeds/bamboo as the predominant material of wall.

Table 4.2: Distribution of households by type wall (in percentages)				
States	Burnt brick/stone/lime stone	Mud/unburnt brick	Cement/RBC/RCC	Other Materials
Haryana	87.6	2.4	9.1	0.9
Punjab	84.0	3.4	11.6	1.0
Uttaranchal	82.4	3.8	11.4	2.4
Delhi	73.9	0.3	25.8	0.0
Himachal Pradesh	72.2	19.1	5.8	3.0
Andhra Pradesh	70.1	19.0	5.1	5.5
Kerala	68.5	20.0	7.0	4.5
Rajasthan	67.6	26.7	0.9	4.8
UP	64.4	25.5	5.3	4.7
Maharashtra	61.3	23.8	5.6	9.4
Jammu&Kashmir	60.9	31.4	4.1	3.6
Gujrat	58.7	29.8	4.4	7.1
Tamil Nadu	55.6	31.6	8.8	4.0
Karnataka	53.8	37.1	4.7	4.4
ALL INDIA	**53.3**	**30.8**	**5.7**	**10.3**
Madhya Pradesh	47.7	44.6	2.4	5.2
Bihar	42.1	21.4	7.4	29.0
Orissa	32.0	59.3	3.3	5.5
Jharkhand	31.6	60.0	3.9	4.5
Chattisgarh	29.2	64.0	0.7	6.1
West Bengal	26.4	46.1	7.7	19.7
Assam	12.0	33.3	7.2	47.4
Source: NSSO 65th Round (July 2008-June2009)				

Type of roof

Type of material used for roof also reveals diversity in the rural areas across the states (Table 4.3). While in rural Uttarakhand (66 percent) and Andhra Pradesh (59 percent), cement/RBC/RCC was the predominant material of roof, in rural Chattisgarh (73 percent), Jharkhand (55 percent), Madhya Pradesh (48 percent), Karnataka (46 percent) and Kerala (44 percent), tile/slate was the prominent material of roof. In Odisha (40 percent) and Bihar (38 percent) major proportion of rural households' had grass/straw/leaves/reeds as the predominant material of roof.

Table 4.3: Distribution of households by the type of roof (in percentages)				
States	cement/RBC/RCC	tile/slate	asbestos or other metal sheet	grass/straw/ leaves/reeds/ bamboo,etc
Delhi	65.8	0.5	2.4	0.0
Uttarakhand	59.1	4.1	6.5	3.5
Andhra Pradesh	43.6	20.4	8.1	17.6
Kerala	42.2	44.3	8.9	2.8
Himachal Pradesh	39.0	37.7	13.5	0.5
Punjab	38.9	4.8	0.2	4.8
Tamil Nadu	34.0	36.5	4.4	20.8
UP	32.1	10.7	1.5	17.0
Bihar	30.3	17.2	7.0	37.9
Haryana	27.6	6.5	0.9	3.2
Gujrat	27.0	38.2	15.8	6.3
All INDIA	**24.7**	**25.4**	**13.9**	**16.6**
Jammu&Kashmir	22.7	0.1	54.2	9.3
Odisha	19.4	26.2	9.0	39.6
Maharashtra	18.4	25.3	43.5	3.9
West Bengal	16.7	24.9	30.6	23.7
Jharkhand	15.7	55.4	3.3	13.3
Karnataka	13.3	46.4	15.0	6.0
Chattisgarh	10.2	73.0	1.3	0.9
Madhya Pradesh	8.4	48.1	6.0	5.2
Rajasthan	5.3	16.4	2.9	14.5
Assam	1.6	0.0	61.0	36.5
Source: NSSO 65th Round (July 2008-June2009)				

It is also important to note that in the states of Jammu & Kashmir (54 percent), Maharashtra (44 percent) and West Bengal (31 percent) major proportion of rural households lived in houses with roof made of asbestos or other metal sheet, which are not considered healthy material of roofing.

Type of floor

Table 4.4 shows that cement and mud were the two predominant material of floor. While states like Tamil Nadu (73 percent), Kerala (72 percent), Haryana (52 percent) and Punjab (49 percent) had a higher proportion of their rural houses living in houses with cement floor in Assam (78 percent), UP (77 percent), Jharkhand (76 percent), Madhya Pradesh (75 percent), Bihar (74 percent), West Bengal (70 percent) and Maharashtra (50 percent) major proportion of rural households lived in houses with mud flooring.

Table 4.4 : Distribution of households by the type of floor (in percentages)

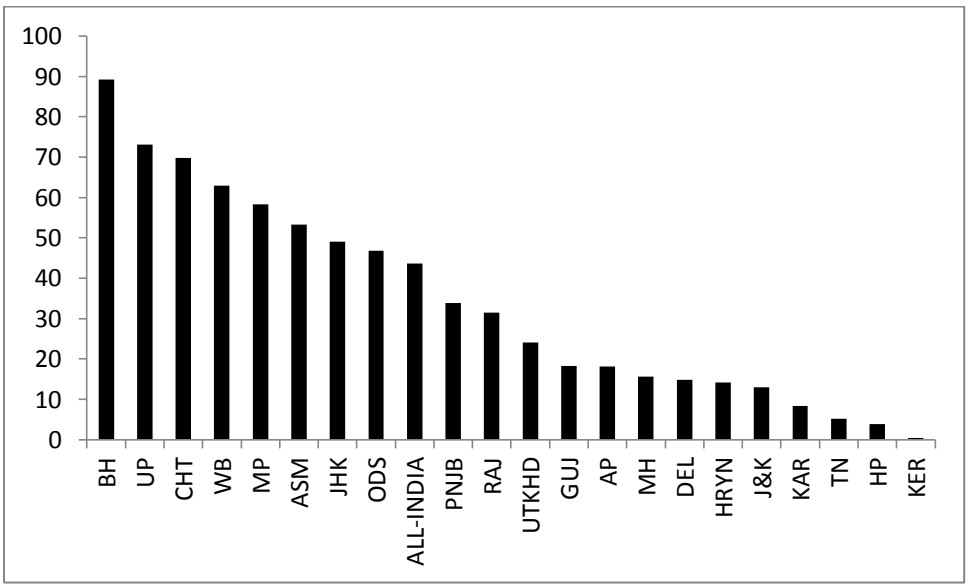
States	Cement	Mud	Brick/limestone/stone	Others
Delhi	73.6	0.7	6.8	18.9
Tamil Nadu	73.1	20.4	1.3	5.3
Kerala	72.3	9.0	1.7	17.0
Haryana	52.2	29.6	15.8	2.4
Punjab	49.4	33.3	14.9	2.4
Himachal Pradesh	47.2	28.8	2.8	21.2
Jammu&Kashmir	47.0	47.6	2.8	2.6
Karnataka	44.0	25.6	23.5	6.8
Uttaranchal	39.4	32.7	15.3	12.6
Andhra Pradesh	38.8	24.0	33.8	3.5
Rajasthan	38.7	45.8	14.0	1.6
Orissa	33.5	64.3	1.7	0.5
Gujrat	32.5	45.5	4.7	17.3
All INDIA	**30.9**	**54.1**	**10.3**	**4.8**
West Bengal	24.3	70.4	3.9	1.2
Maharashtra	21.4	49.9	15.8	13.0
Jharkhand	17.7	76.4	5.1	0.8
UP	16.8	76.9	5.5	0.8
Bihar	16.8	73.7	8.4	1.1
Assam	16.2	77.7	2.6	3.5
Madhya Pradesh	13.0	75.4	9.2	2.4
Chattisgarh	10.2	82.4	5.5	1.8

Source: NSSO 65th Round (July 2008-June2009)

Major source of drinking water

Our analysis of the census data shows that hand pump was the major source of drinking water in rural India with a proportion of nearly 44 percent households depending on hand pump as the major source of drinking water. This was followed by tap water with 31 percent, well with 13.3 percent and tube well/borehole with 8 percent. Analysis of state level data shows disparities among states on the major source of drinking water. Bihar had the highest proportion (89 percent) of rural households depending hand pumps, followed by UP (73 percent), Chattisgarh (70 percent) and West Bengal (63 percent) [Figure 4.5].

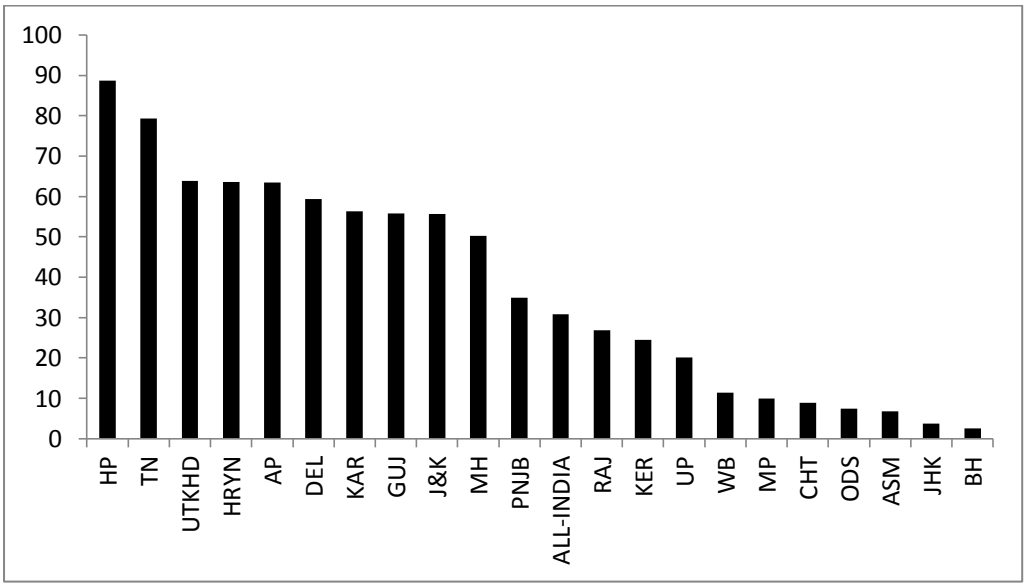
Figure 4.5:Proportion of households with hand pump as the major source of drinking water



Source: Census 2011

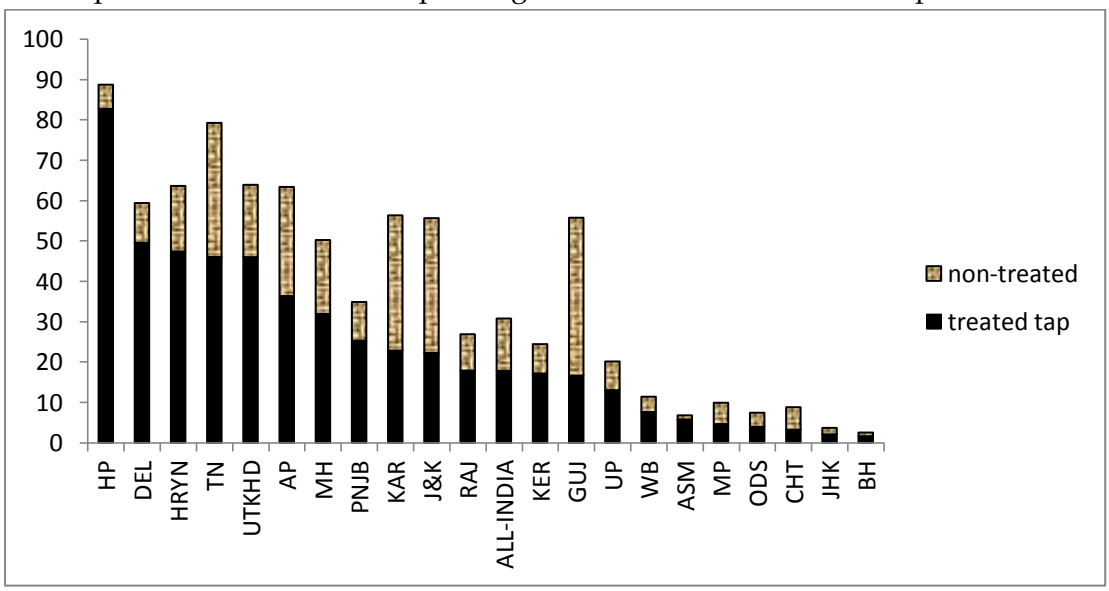
Analysis of data on households depending on tap water shows Himachal Pradesh (89 percent), Tamil Nadu (79 percent) , Uttarakhand (64 percent) had the highest proportion of households depending on tap water as the major source of drinking water. Bihar with just 3 percent had the lowest proportion of households depending on tap water, closely followed by Jharkhand (7 percent), Assam (7 percent) and Odisha (7 percent) [Figure 4.6].

Figure 4.6**:** Proportion of households with tap water as major source of drinking water



Census also provides information on whether the tap water was treated or non-treated. Of the 31 percent households depending on tap water as their major source of drinking water, 18 percent (58 percent of households depending on tap water) had access to treated tap water. Among the states with a greater dependence on tap water in Gujarat 39 percent of the rural households (which is 70 percent of rural households depending on tap water) depended on untreated tap water.

Figure 4.7: Proportion of households depending on treated and non-treated tap water



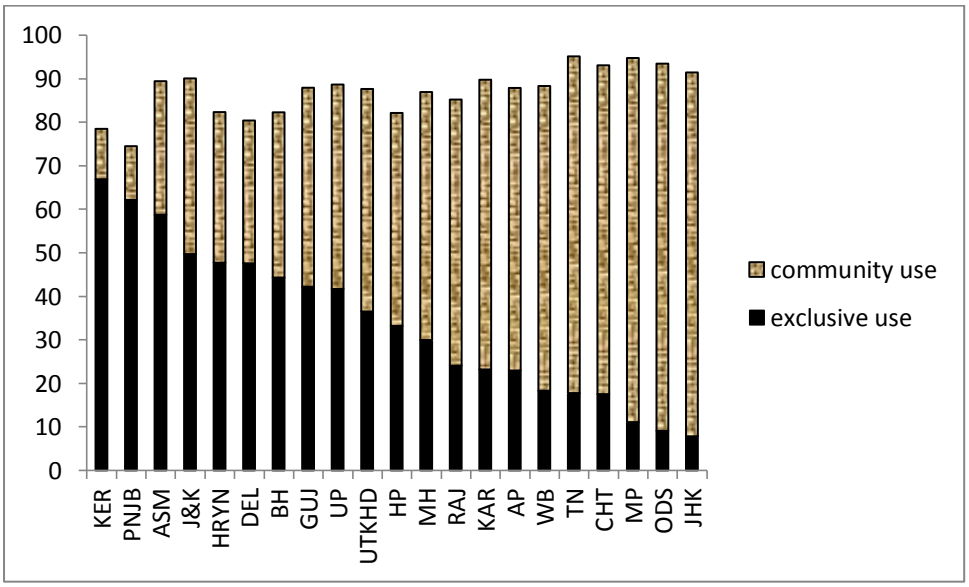
Source: Census 2011

The dependence on well as a major source of drinking water has come down significantly compared to 2001. Notably, Kerala was the only state which had a higher share of households (64.8 percent) depending upon wells for drinking water, though this also has decline considerably since 2001. Open well water is not considered as a safe drinking water. However, the social culture is to drink mainly boiled water which is also supplied in hotels and restaurants. Theis perhaps explain the low incidence of water-borne diseases compared to other states.

NSSO data on the major source of drinking water for rural India shows a close correspondence to the findings based on census data. Tap and hand pump/ tube well were the two most prominent sources of drinking water for rural households. While in the states of Tamil Nadu (87 percent), Karnataka (70 percent), Jammu & Kashmir (66 percent), Andhra Pradesh (64 percent), Gujarat (58 percent) and Maharashtra (57percent) major proportion of rural households depended on tap water, in Bihar (94percent), UP (93 percent), West Bengal (85percent), Chattisgarh (81percent), Madhya Pradesh (74percent) and Orissa (73percent), tube well/hand pump was the major source of drinking water (see Appendix Table).

Nature of access to drinking water

Figure 4.8: Distribution of households by the nature of access to drinking water source, 2011

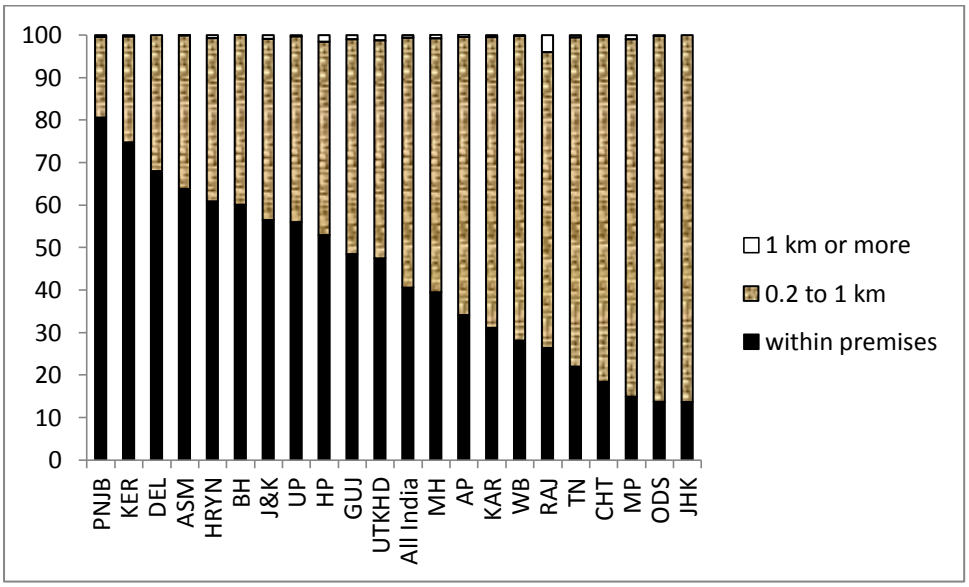


Source: Census 2011

When we look at the nature of access to the major source of drinking water we can see that highest proportion of households in the country (47 percent) depended on community drinking water facility. But there was considerable disparity between the states which is evident from Figure 4.8. While in the states of Kerala, Punjab and Assam major proportion of rural households had drinking water facility for the exclusive use of households, in Jharkhand, Orissa, Madhya Pradesh, Tamil Nadu and West Bengal, community use was predominant. When compared to such other lagging states as MP, Rajasthan and Uttar Pradesh Bihar (44 percent) had a higher proportion of rural households with exclusive use of the water source.

Distance to the source of drinking water

Figure 4.9: Distribution of households by the distance to source of drinking water

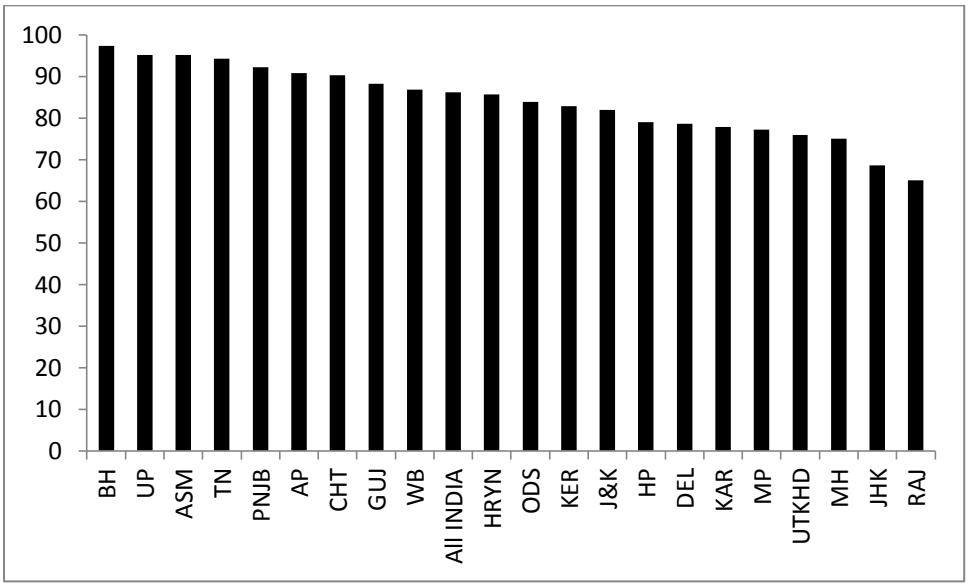


Source: NSSO 65th round (July 2008-June 2009)

From Figure 4.9 we can see that distance to the source of drinking water also shows disparities among states. Among the larger states Punjab (81 percent) had the highest proportion of rural households with drinking water within premises followed by Kerala (75 percent) and Assam (64 percent). In Jharkhand and Odisha 86 percent of rural households had to travel a distance between 0.2-1 km to their major source of drinking water. In Rajasthan 4 percent of rural households had to travel a distance of more than 1 percent to their major source of drinking water.

Sufficiency of drinking water

Figure 4.10: Distribution of households by the sufficiency of drinking water, 2008-09



Source: NSSO 65th round (July 2008-June 2009)

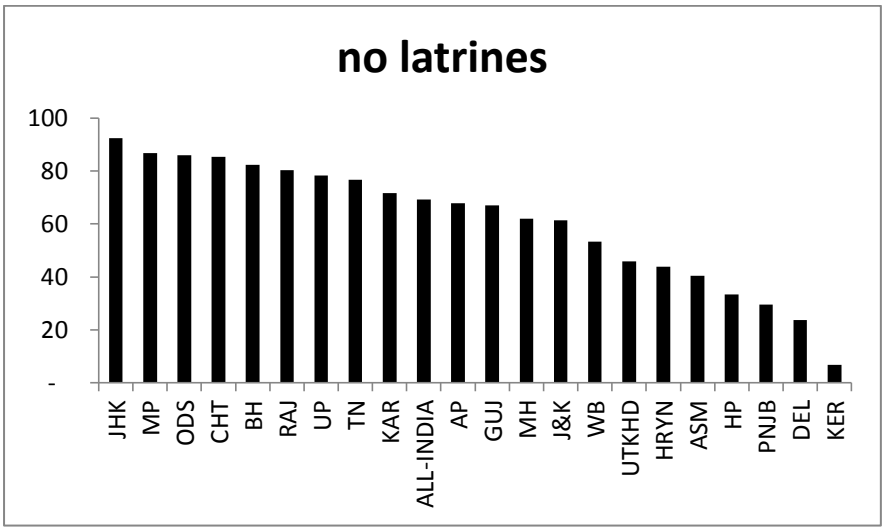
Figure 4.10 shows that Bihar (97 percent) had the highest proportion of rural households with sufficient drinking water throughout the year followed by UP (95 percent), Assam (95 percent) and Tamil Nadu (94 percent). In Maharashtra only 75 percent households had sufficient drinking water and in Rajasthan it was only 65 percent.

Latrine Facility

Our analysis of the census data shows that nearly 70 percent rural households in the country had no latrine facility. However, it is to be noted that there was a nearly 10 percent fall in this proportion at all India level for rural households. This is a good sign, but there is still a long way to go.

It is seen that Jharkhand (92.4 percent) had the highest proportion of rural households without a latrine facility, followed by Madhya Pradesh (86.9 percent). During 2001, it was Chhattisgarh (94.8 percent), followed by Jharkhand (93.4 percent). Even after 10 years Jharkhand has not shown much improvement.

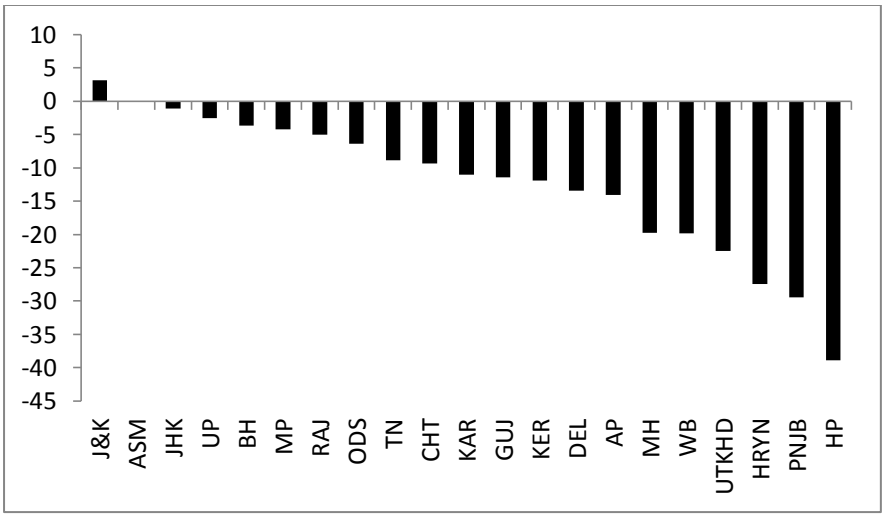
Figure 4.11: Proportion of households with no latrine within premises, 2011



Source: Census 2011

It is evident from Figure 4.12 that in all the states, with the exception of Jammu and Kashmir and Assam, there has been a fall in the proportion of rural households not having latrine facility (in the former it has increased by more than 3 percentage points while in the latter it has remained stagnant over ten years). Remarkable progress in reducing this basic deprivation has been recorded by Himachal Pradesh followed by Punjab and Haryana. These states – Uttarakhand, West Bengal and Maharashtra – can also claim some credit in this respect. Kerala, of course, had already a good record in 2001 which has been further improved although five per cent of its households reputed 'no latrine' in 2011.

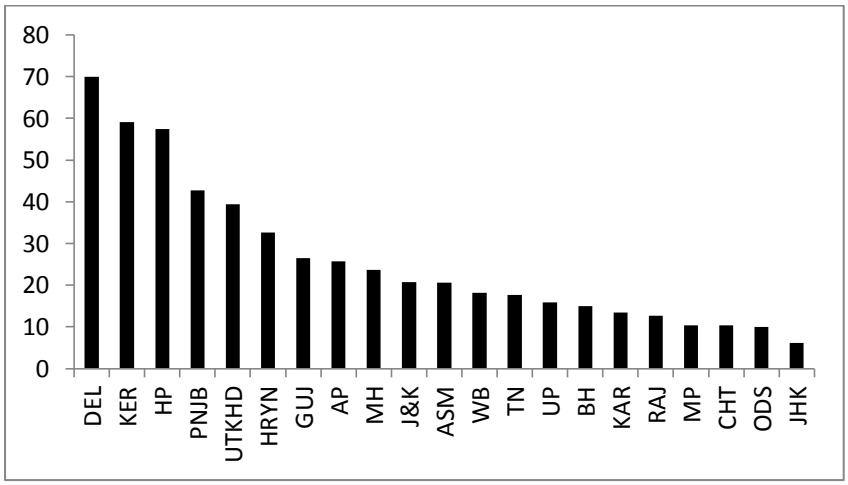
Figure 4.12: Change in the proportion of households with no latrine facility between 2001-2011



Source: Census 2001 and 2011

As for the types of latrine, the all India data for 2011 shows a more than 12 percent increase in the proportion of rural households with water closet compared to that of 2001 (Appendix table). The state level data also shows a similar trend with all the states showing an increase in the proportion of rural households having a water closet.

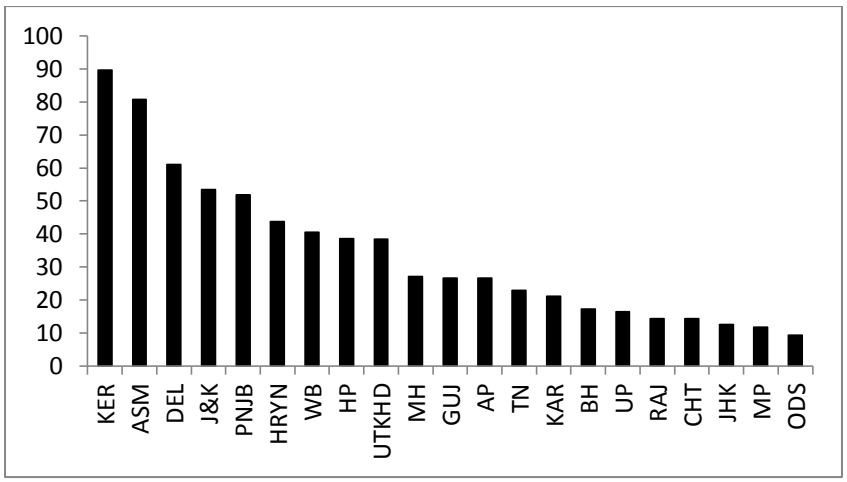
Figure 4.13: Proportion of households with flush/pour flush latrine, 2011



Source: Census 2011

The state with the highest proportion of flush/pour flush latrine in rural households was Kerala (59 percent) followed by Himachal Pradesh (57 percent) and Punjab (43 percent). Jharkhand (6.2 percent) remained as the state with the lowest proportion of rural households with flush/pour flush latrine followed by Odisha, Chattisgarh and Madhya Pradesh (10 percent).

Figure 4.14: Distribution of households with latrine facility for the exclusive use of households



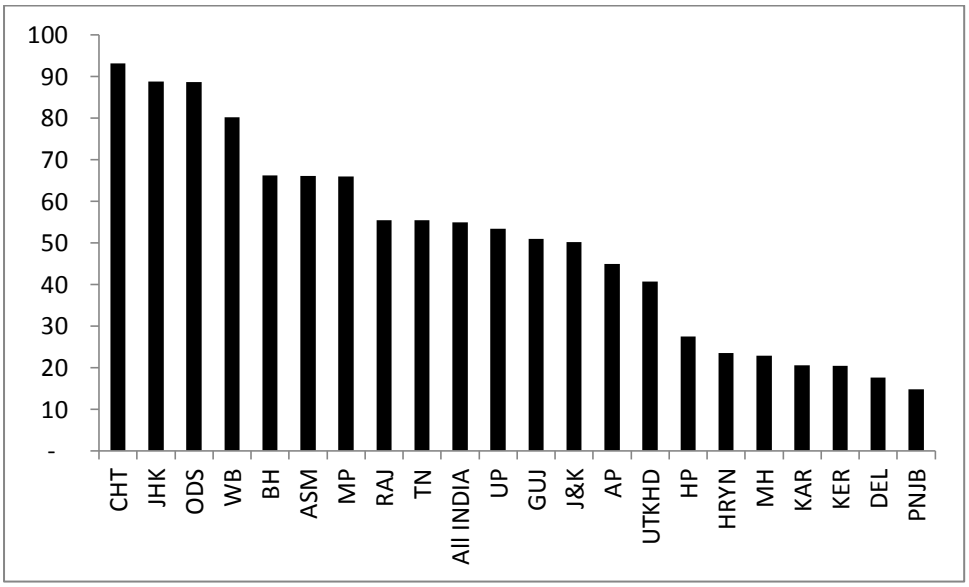
Source: NSSO 65th round (July 2008-June 2009)

NSSO provides data on whether latrine facility is available for the exclusive use of households. From Figure 4.14 we can see that in rural India only 28 percent of households had latrines for the exclusive use of households. Kerala (90 percent) had the highest proportion of rural households with latrine facility for the exclusive use of the households. while Odisha had only 9 percent of rural households had latrine facility for the exclusive use of households.

Bathroom facility

Our analysis of the census data shows that the share of rural households not having bathing facility stood at 55 percent, and it was highest in Chhattisgarh with 93.2 percent. This was then followed by Odisha and Jharkhand with more than 88 percent. Here too, vast differences across states exist, seen Figure 4.15.

Figure 4.15: Proportion of households with no bathroom facility



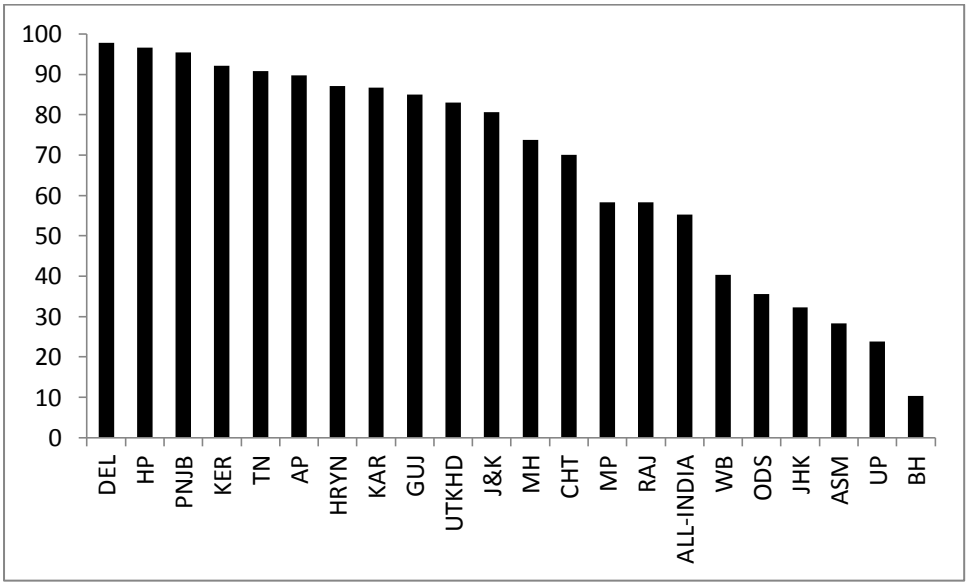
Source: Census 2011

Our analysis of the NSSO data on the availability of bathroom facility corresponds to the findings based on census data. NSSO data shows that only a small proportion (12 percent) of rural households in the country had attached bathroom.

Lighting Facility

Our analysis of census data shows that electricity was the major source of lighting in rural areas in 2011 with 55 percent of households reporting electricity as the major source of lighting, a shift from kerosene as the major source of lighting in 2001. We can see from Figure 4.16 that Delhi (98 percent) had the highest share of rural households having electricity, followed by Himachal Pradesh (97 percent). We can also see that Punjab, Kerala, and Tamil Nadu had a proportion of more than 90 percent of rural households having electricity as their major source of lighting.

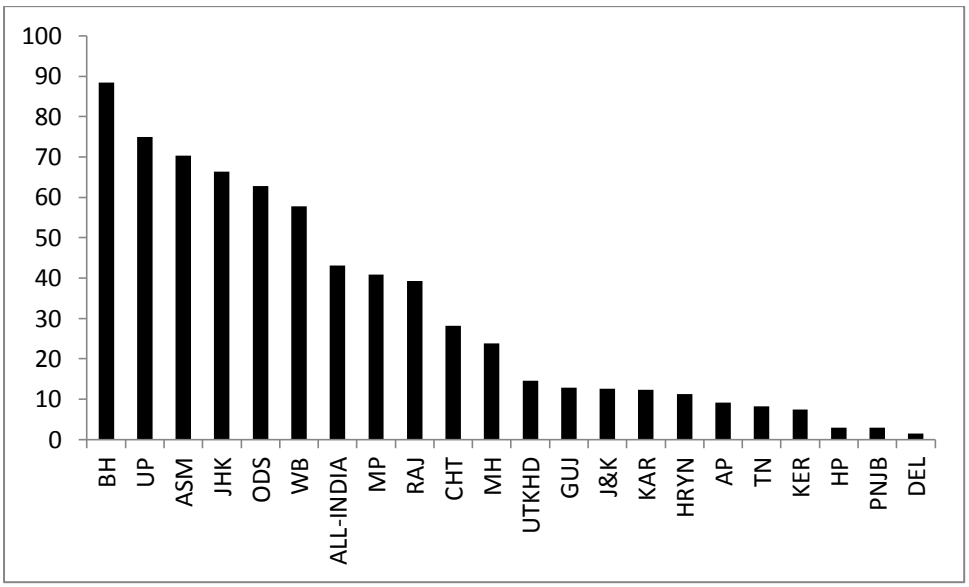
Figure 4.16: Proportion of households with electricity as the major source of lighting, 2011



Source: Census 2011

Our analysis shows that 43 percent of rural households still depend on kerosene as the major source of lighting.

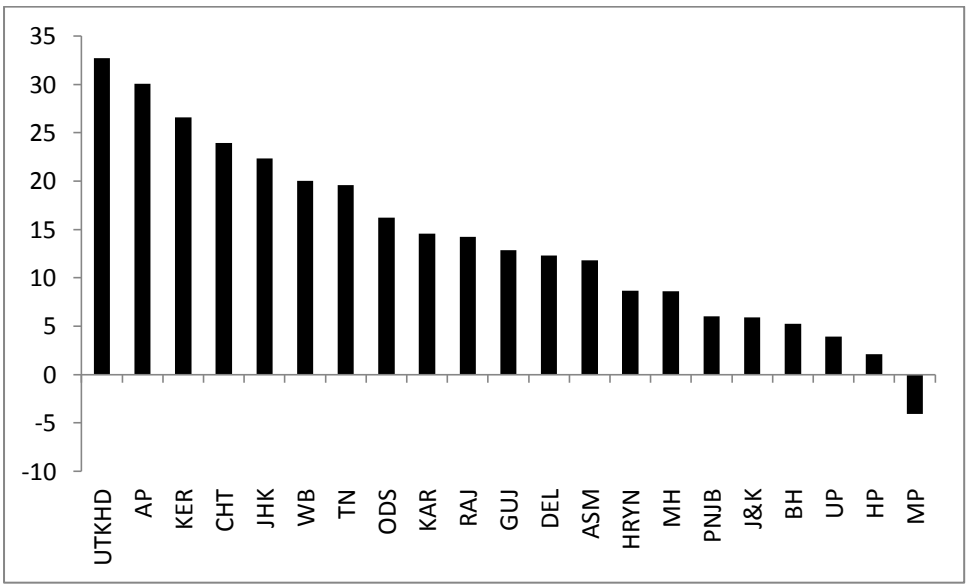
Figure 4.17: Proportion of households with kerosene as the major source of lighting, 2011



Source: Census 2011

Bihar had the highest proportion of rural households depending on kerosene (88.4 percent) as the major source of lighting, followed by Uttar Pradesh (75 percent) and Assam (70.4 percent).

Figure 4.18: Change in the proportion of households with electricity as the major source of lighting between 2001-2011



Source: Census 2001 and Census 2011

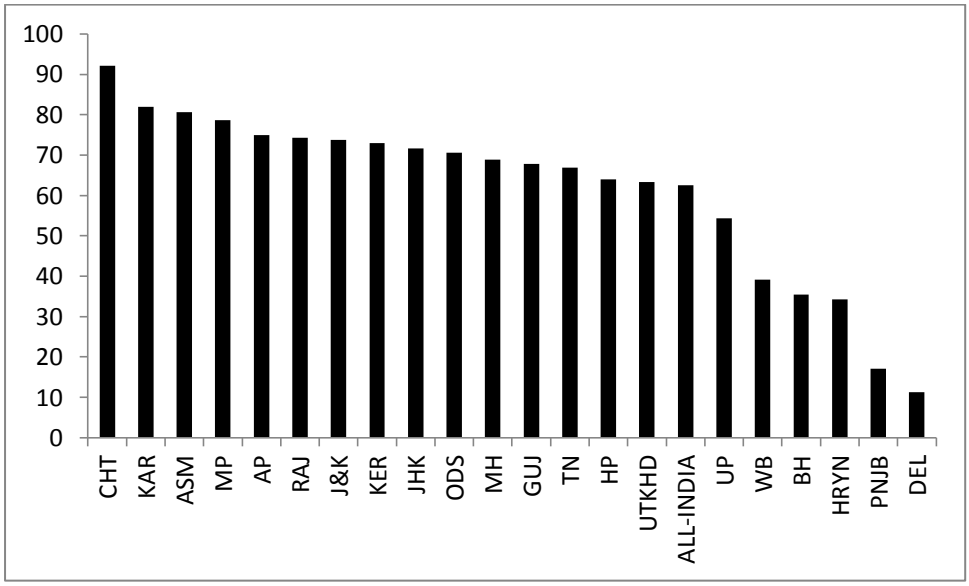
We can see from Figure 4.18 that Uttarakhand registered the highest change (33 percentage points), Madhya Pradesh showed a *reduction* in the proportion of households with electricity as the major source of lighting because it showed a negative four per cent change.

Cooking Fuel

Our analysis of census data shows firewood as the major source of fuel among rural households (63 percent), followed by crop-residue (12 percent), LPG/PNG (11 percent) and cow dung cake (11 percent). Very interestingly, kerosene has the least share with less than 1 percent households depending on it as major source of fuel.

We can see from Figure 4.19 that Chhattisgarh (92 percent) had the highest proportion of rural households depending on firewood as the major source of fuel for cooking followed by Karnataka (82 percent) and Assam (81 percent).

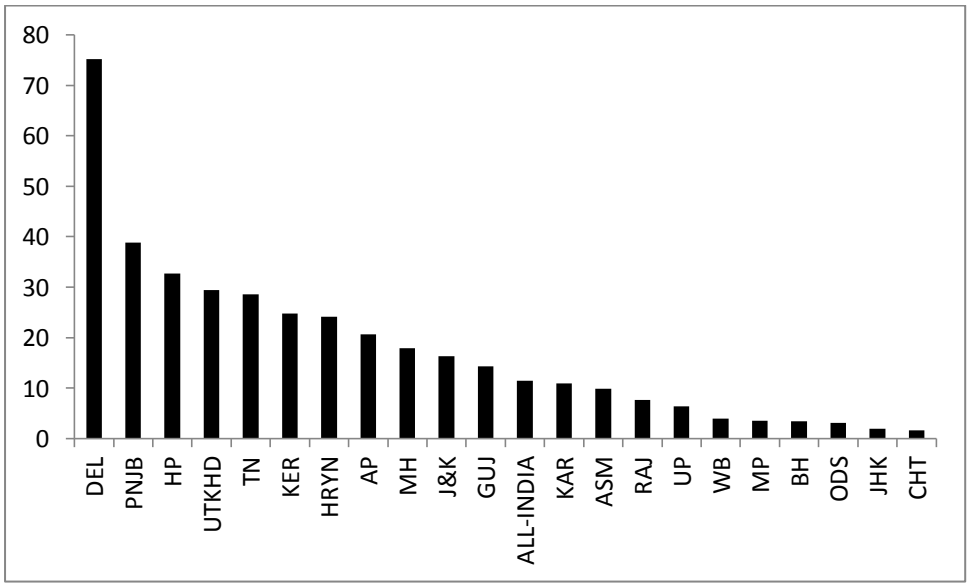
Figure 4.19: Proportion of households with firewood as the major source of fuel for cooking, 2011



Source: Census 2011

While Delhi had the highest proportion of rural households (75 percent) depending on LPG/PNG, Chhattisgarh (2 percent) has the lowest share of households depending on this.

Figure 4.19: Proportion of households with LPG/PNG as the major source of cooking fuel, 2011



Source: Census 2011

In Bihar and West Bengal more than 35 percent of rural households depended on crop residue as a source of cooking fuel.

It is interesting to note that in the country, in rural areas around 83 percent of households cook inside the house which also shows that around 16 percent of households cook outside the house. Of households that cook inside, around 45.5 percent (63.6 million) households do not have a kitchen (which is 37.9 percent of total rural households). Of the total households cooking outside, 55. 4 percent (14.2 million) do not have a kitchen.

This is to be understood keeping in mind that 61. 7 percent of households which do not have kitchen and cooking inside the house use firewood as the major source of cooking fuel while 16.3 percent use cow dung cake as the major source of coking fuel. This can have severe health hazards.

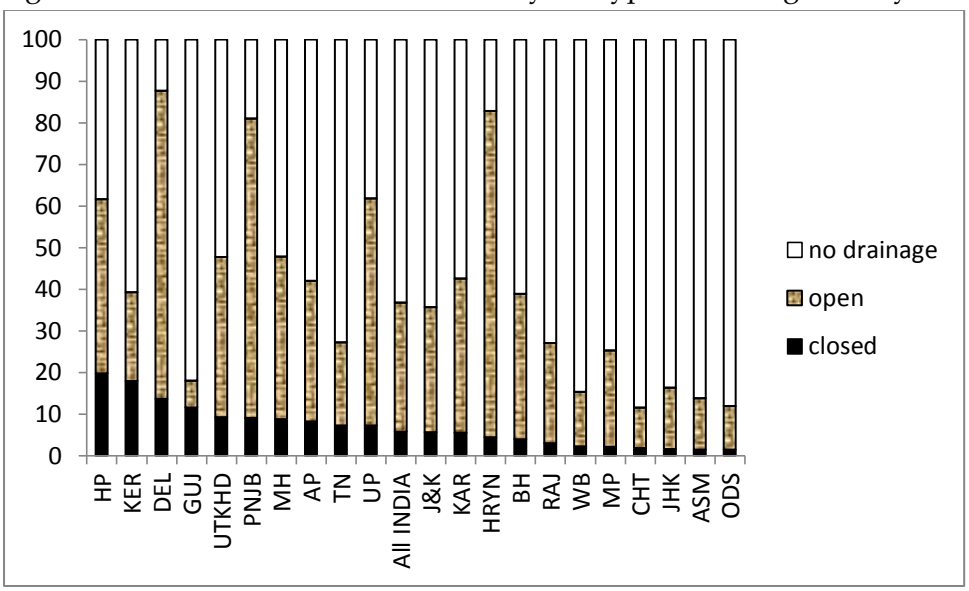
Garbage collection and Drainage

Across the states in rural India major proportion of households do not have any arrangement for garbage collection. Among the larger states Tamil Nadu (13 percent) and Andhra Pradesh (12 percent) had the highest proportion of households with the panchayat collecting the garbage (Table 4.5).

Table 4.5: Distribution of households by garbage collection facility (in percentages), 2008-09				
States	panchayat/municipality/corporation	by residents	by others	no arrangement
Delhi	22.3	39.9	31.9	5.8
Tamil Nadu	13.3	33.8	0.5	52.4
Andhra Pradesh	11.6	6.1	0.5	81.8
Maharashtra	7.1	38.6	1.6	52.7
Haryana	4.2	43.8	1.1	50.9
Gujrat	3.6	22.9	0.0	73.5
Madhya Pradesh	2.4	21.6	0.7	75.3
Karnataka	1.8	12.4	1.1	84.7
Chattisgarh	1.7	29.7	5.1	63.6
UP	1.5	23.6	6.6	68.3
Himachal Pradesh	1.4	6.6	8.3	83.7
Punjab	1.4	29.1	0.6	68.9
Uttaranchal	1.2	14.5	0.7	83.6
Jammu&Kashmir	1.1	4.4	1.2	93.2
Rajasthan	0.6	18.5	0.3	80.6
Assam	0.6	27.2	4.3	68.0
Bihar	0.2	7.3	1.3	91.3
West Bengal	0.1	3.7	0.5	95.7
Kerala	0.1	5.6	1.9	92.4
Orissa	0.0	16.8	0.3	82.9
Jharkhand	0.0	17.3	0.3	82.4
Source: NSSO 65th Round (July 2008-June2009)				

Our analysis of the census data shows that all India share of rural households not having drainage facility was quite high with more than 63 percent. Among the states, the highest proportion of rural households not having drainage facility was in Odisha and Chhattisgarh, with more than 88 percent of rural households not having any drainage facility. As is evident from Figure 4.20 in most of the states with the exception of Himachal Pradesh and Haryana, major proportion of households had no drainage facility.

Figure 4.20: Distribution of households by the type of drainage facility, 2011



Source: Census 2011

As for the type of the drainage, we have two categories, closed and open, and all India picture shows the proportion of households with open drainages is a staggering six times more than the proportion with closed drainage. Hence, drainage is a very worrying attribute among rural households.

Access to road

From Table 4.6 we can see that Tamil Nadu (55 percent) had the highest proportion of households with houses having direct opening to motorable road with street light while Jammu & Kashmir had just 0.04 percent of the rural households having direct opening to road. Assam (0.9 percent), Jharkhand (1.3 percent), Bihar (1.9 percent), West Bengal (2.3percent) and UP (2.5 percent) also had very small proportion of households with direct opening to motorable road. In these states major proportion of the rural households had direct opening to other road/lane without street light. Proportion of households with no direct opening to road was the highest for Sikkim (43.4 percent), followed by Jammu & Kashmir (42 percent) and Himachal Pradesh (40 percent).

Table 4.6: Distribution of households by their access to road (in percentages)					
States	direct opening to				no direct opening
	motorable road		other road/lane		
	with street light	without street light	with street light	without street light	
Tamil Nadu	54.9	7.9	23.3	8.8	5.1
Andhra Pradesh	51.1	11.9	16.5	13.3	7.3
Karnataka	40.3	13.4	20.4	19.4	6.5
Delhi	36.7	16.8	0.1	44.7	1.7
Kerala	32.2	20.4	4.4	25.3	17.7
Maharashtra	30.2	13.2	22.7	19.5	14.6
Gujrat	11.1	25.9	11.2	33.1	18.6
Chattisgarh	8.3	16.6	6.8	55.1	13.2
Uttaranchal	7.9	13.9	1.8	39.1	37.3
Himachal Pradesh	5.9	9.7	1.1	43.2	40.0
Punjab	4.7	39.2	0.6	49.0	6.4
Madhya Pradesh	3.7	24.3	3.6	43.8	24.6
Orissa	3.0	35.8	1.1	47.6	12.6
UP	2.5	19.1	1.5	56.7	20.2
Rajasthan	2.4	22.6	1.7	44.0	29.2
West Bengal	2.3	14.0	3.2	60.4	20.2
Bihar	1.9	14.5	1.0	57.2	25.4
Haryana	1.6	46.5	0.7	40.0	11.1
Jharkhand	1.3	20.7	1.9	44.7	31.5
Assam	0.9	19.3	0.9	61.3	17.6
Jammu&Kashmir	0.04	18.5	0.1	39.0	42.3
All INDIA	15.7	18.6	7.6	40.4	17.7
Source: NSSO 65th Round (July 2008-June2009)					

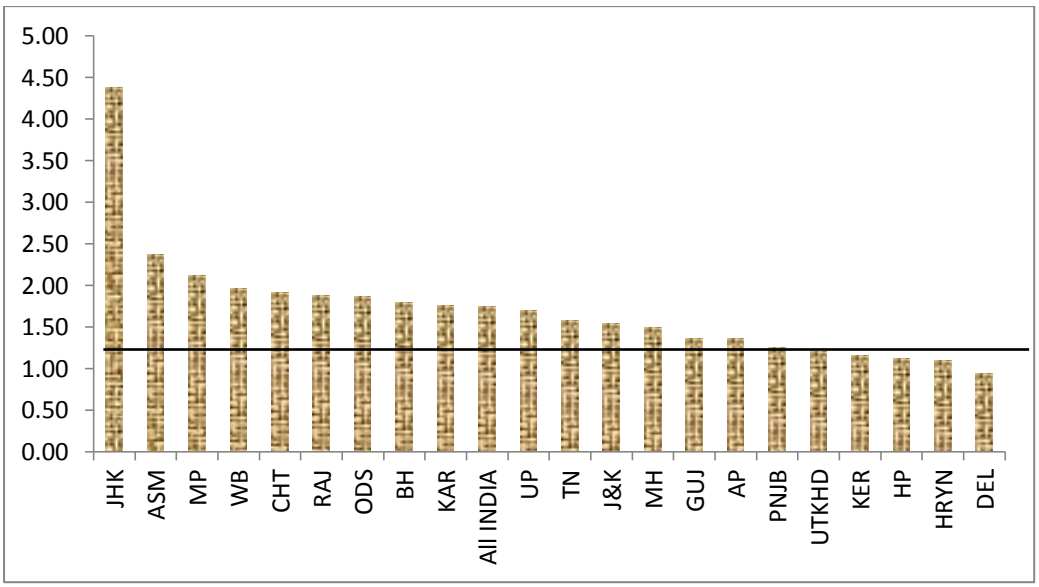
Section 2
Rural-Urban Gap

In this section we discuss the rural-urban gap at the state level for various aspects of housing and amenities. We define rural-urban gap for a particular indicator as the ratio of the proportion of households in the urban and rural areas possessing that attribute. For example the rural urban gap for the availability of electricity is given by dividing the percentage of households with electricity in urban area divided by the percentage of households with electricity in rural area. A value greater than 1 implies that urban area is better than rural area for that particular aspect. A value of 1 shows that both rural and urban areas are at the same level. A value less than 1 implies that urban area lags the rural area.

This ratio is also an indicator of rural-urban inequality in the spatial sense. The findings bring out the unequal access and/or achievement in almost all indicators with rural areas falling significantly behind urban areas. Moreover, there is also the inter-state inequality across states. The urban-rural inequality is considerably higher in states that have a poor overall record in many indicators of the housing condtion. This suggests the neglect or low priority given to rural housing condition.

Condition of structure

Figure 4.21: Rural-urban gap in terms of households living in 'good' houses



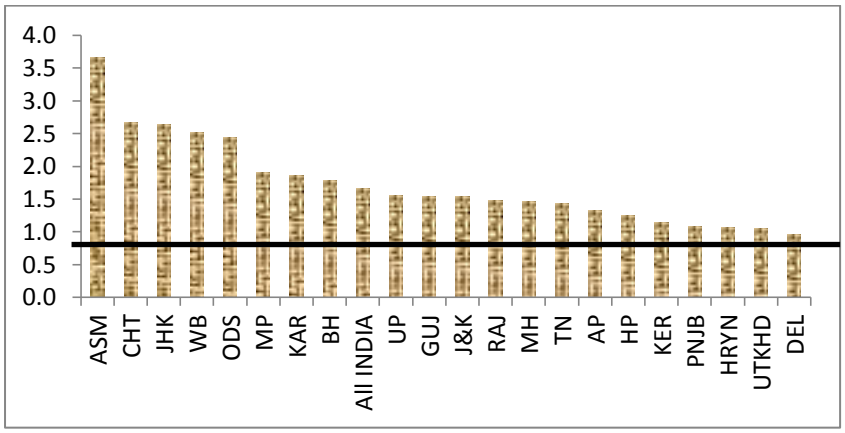
Source: Calculated from NSSO 65th round (July 2008-June 2009)

To understand rural urban gap in the condition of structure we consider the proportion of good houses. The rural-urban gap for the condition of the structure of houses shows that the gap between rural and urban areas was the highest for Jharkhand, followed by

Tripura, Assam and Madhya Pradesh. In Delhi and Arunachal Pradesh rural areas are slightly better than urban areas in terms of the availability of 'good' houses.

Type of structure

Figure 4.22: Rural-urban gap in terms of the proportion of households living in *pucca* houses

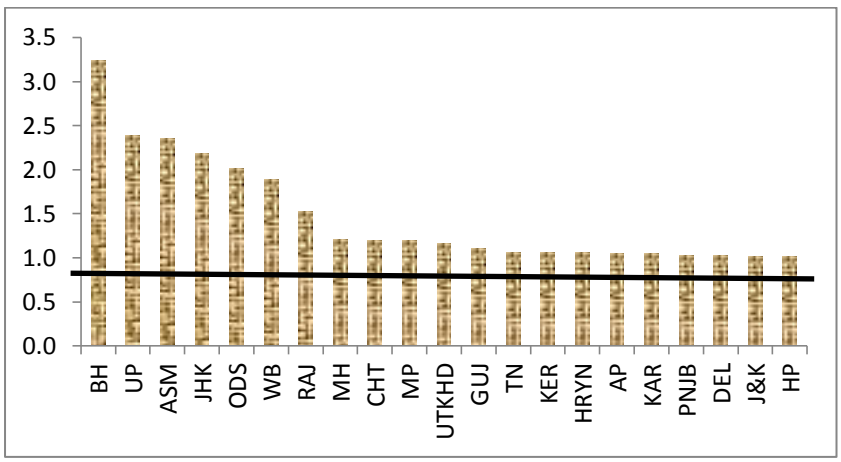


Source: Calculated from NSSO 65th round (July 2008-June 2009)

To understand the rural-urban gap in the type of structure we consider the proportion of households living in *pucca* houses. Our analysis shows that Tripura, Assam, Chattisgarh and Jharkhand had a higher rural urban gap. In states like Kerala and Punjab rural-urban gap was very low.

Electricity

Figure 4.23: Rural-urban gap in terms of proportion of households with electricity as major source of lighting, 2008-09



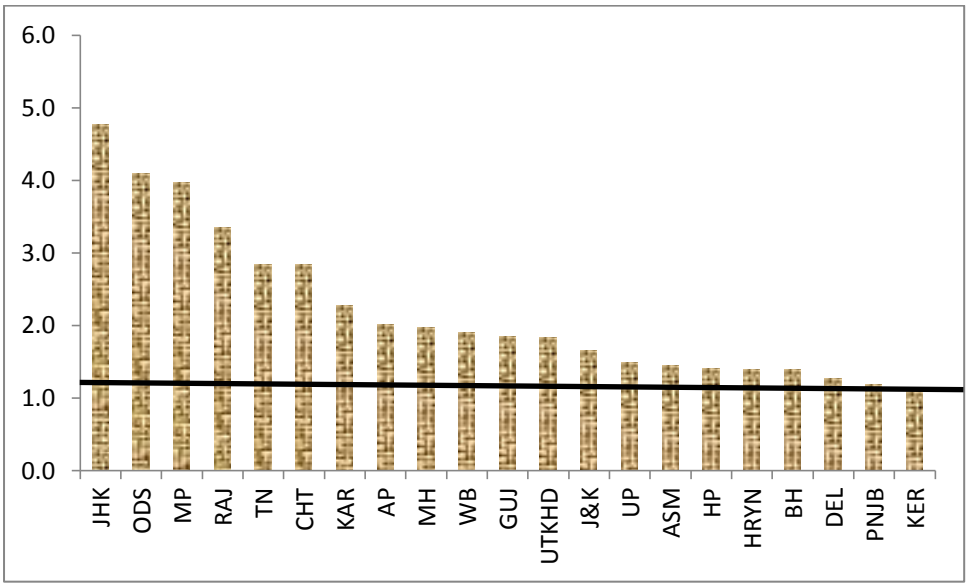
Source: Calculated from NSSO 65th round (July 2008-June 2009)

Our analysis shows that in Bihar, UP, Assam and Jharkhand there was enormous rural-urban gap in the availability of electricity. The four southern states along with the

contigeous north-west region of India consisting of Haryana, Delhi, Punjab, Himachal Pradesh and Jammu and Kashmir showed the lowest gap.

Distance to the Source of drinking water (within premises)

Figure 4.24: Rural-urban gap in terms of households' availability of drinking water within premises, 2008-09



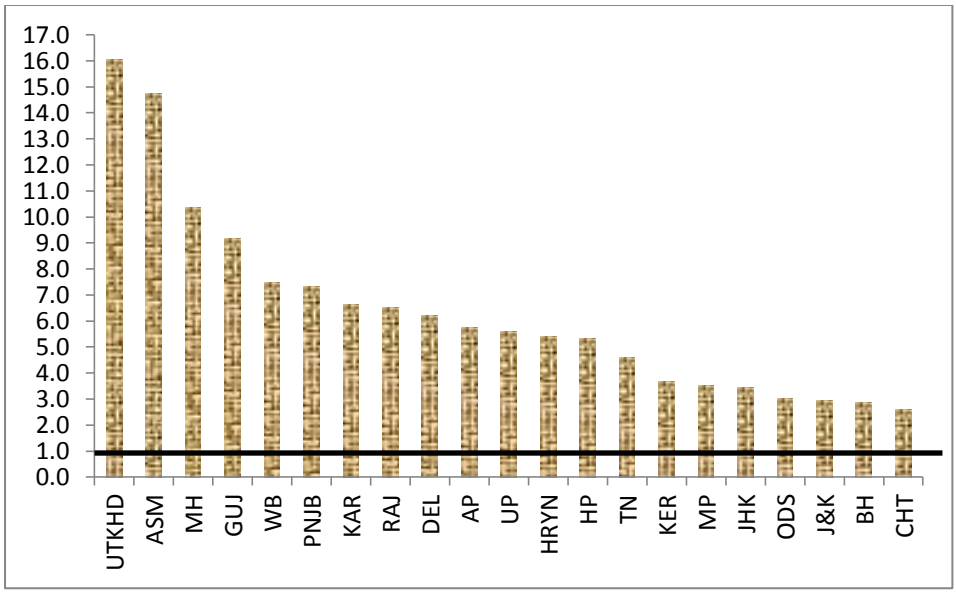
Source: Calculated from NSSO 65th round (July 2008-June 2009)

The gap between rural and urban areas in terms of the availability of drinking water within premises shows that in the states of Jharkhand, Odisha and Madhya Pradesh rural areas are in much adverse condition than the urban areas. The gap was lowest in Lakshadweep, Chandigarh and Kerala.

To obtain the rural urban gap in the availability of latrine facility we calculated the ratio of rural households and urban households with no latrine facility (R/U). Our analysis shows that Uttarakhand, , Assam, Maharashtra, Gujarat and West Bengal had very high values implying that in these states the rural areas are much worse than urban areas in terms of availability of latrine.

Latrine facility

Figure 4.25: Rural-urban gap in terms of non-availability of latrine facility

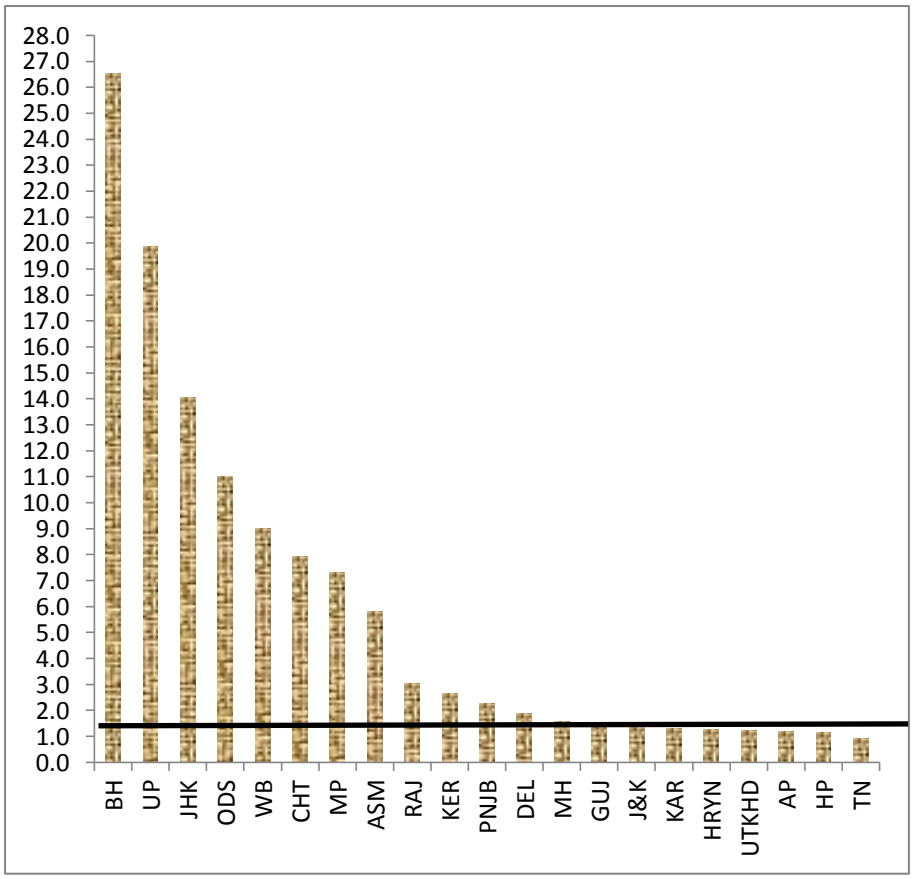


Source: Calculated from NSSO 65th round (July 2008-June 2009)

Source of drinking water

We have calculated the rural-urban gap in terms of the availability/access to tap water as major source of drinking water. It shows that in Bihar, UP, Jharkhand, Orissa and West Bengal there exists enormous rural-urban gap.

Figure 4.26: Rural-urban gap in terms of households' access to tap water

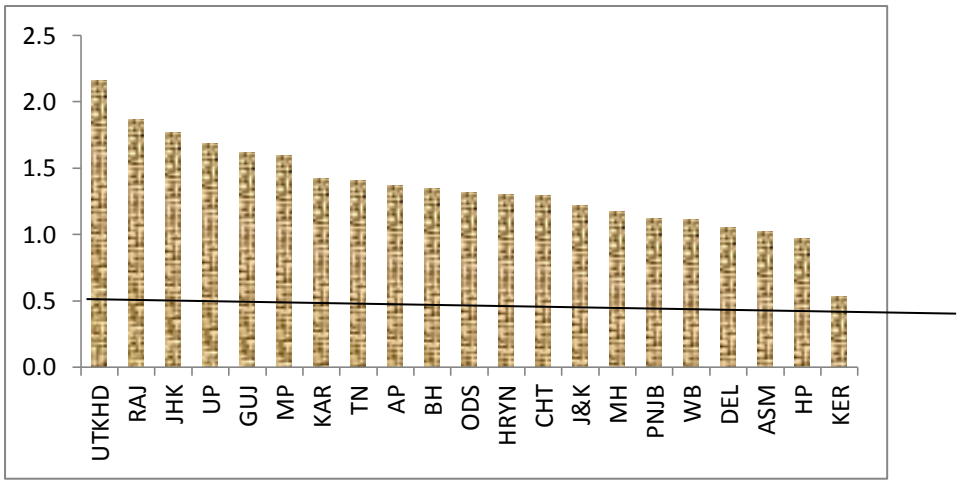


Source: Calculated from NSSO 65th round (July 2008-June 2009)

Kitchen Facility

To understand the rural urban gap in the availability of kitchen we calculated the ratio of the proportion of rural households with no separate kitchen and the proportion of urban households with no separate kitchen. Our analysis shows that Uttarakhand had the highest gap followed by Rajasthan and Jharkhand. In most other states also rural households are worse off but the extent of gap was smaller, the only exception being Kerala where rural area was better off than urban area in this respect.

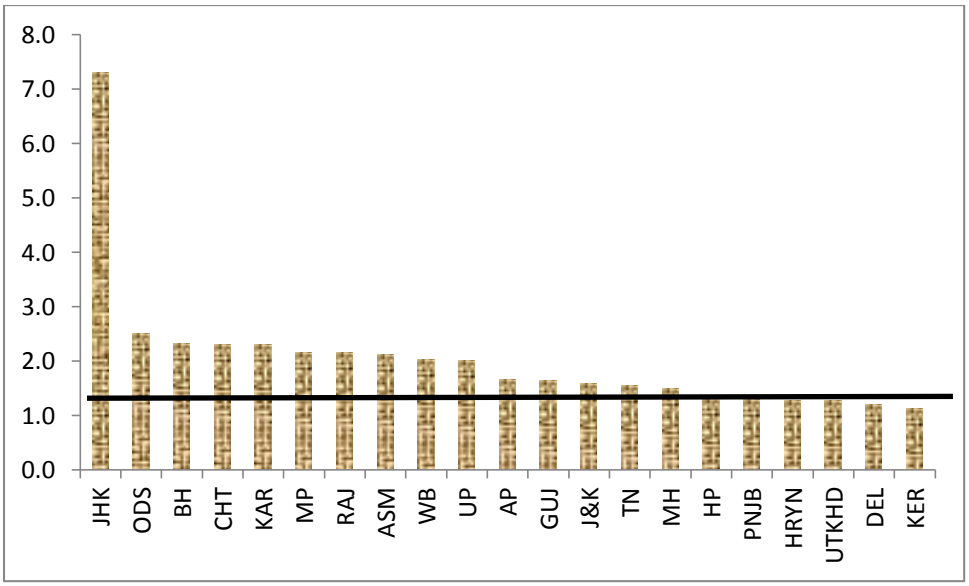
Figure 4.27: Rural-urban gap in terms of households' with separate kitchen



Source: Calculated from NSSO 65th round (July 2008-June 2009)

Ventilation

Figure 4.28: Rural-urban gap in terms of 'good' ventilation, 2008-09



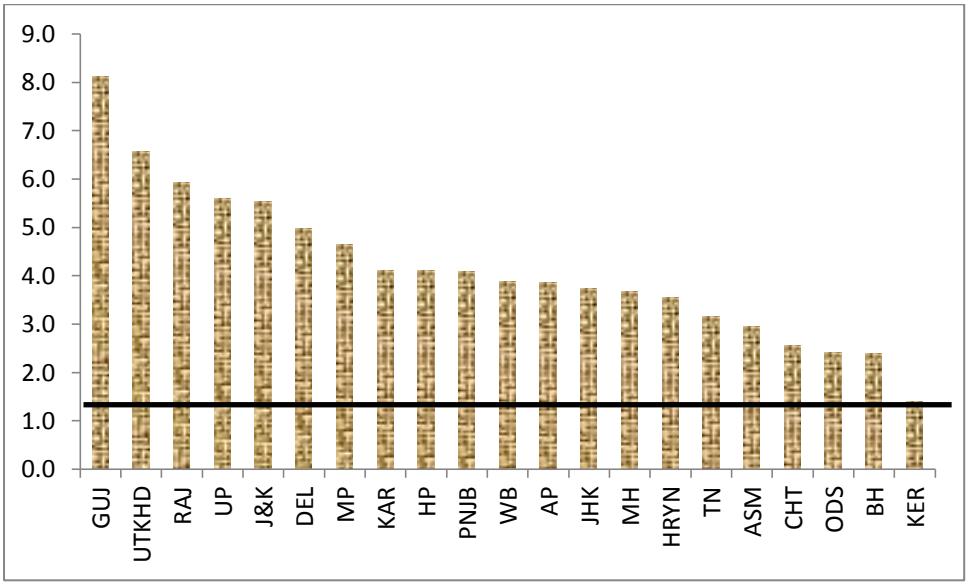
Source: Calculated from NSSO 65th round (July 2008-June 2009)

To understand the rural-urban gap in ventilation we calculated the ratio of proportion of houses with 'good' ventilation in urban areas to the proportion of households with 'good' ventilation in rural area. Rural-urban gap was very high for Jharkhand. For the rest of the states also rural areas lagged behind urban areas but the gap was not as high as that of Jharkhand.

Drainage

To understand the rural-urban gap in the availability of drainage facility we calculated the ratio of the proportion of rural households with 'no' drainage to the proportion of urban households with 'no' drainage. The rural-urban gap was very high for Gujarat, Uttaranchal, Rajasthan and UP.

Figure 4.29: Rural-urban gap in terms of households with no drainage facility, 2008-09

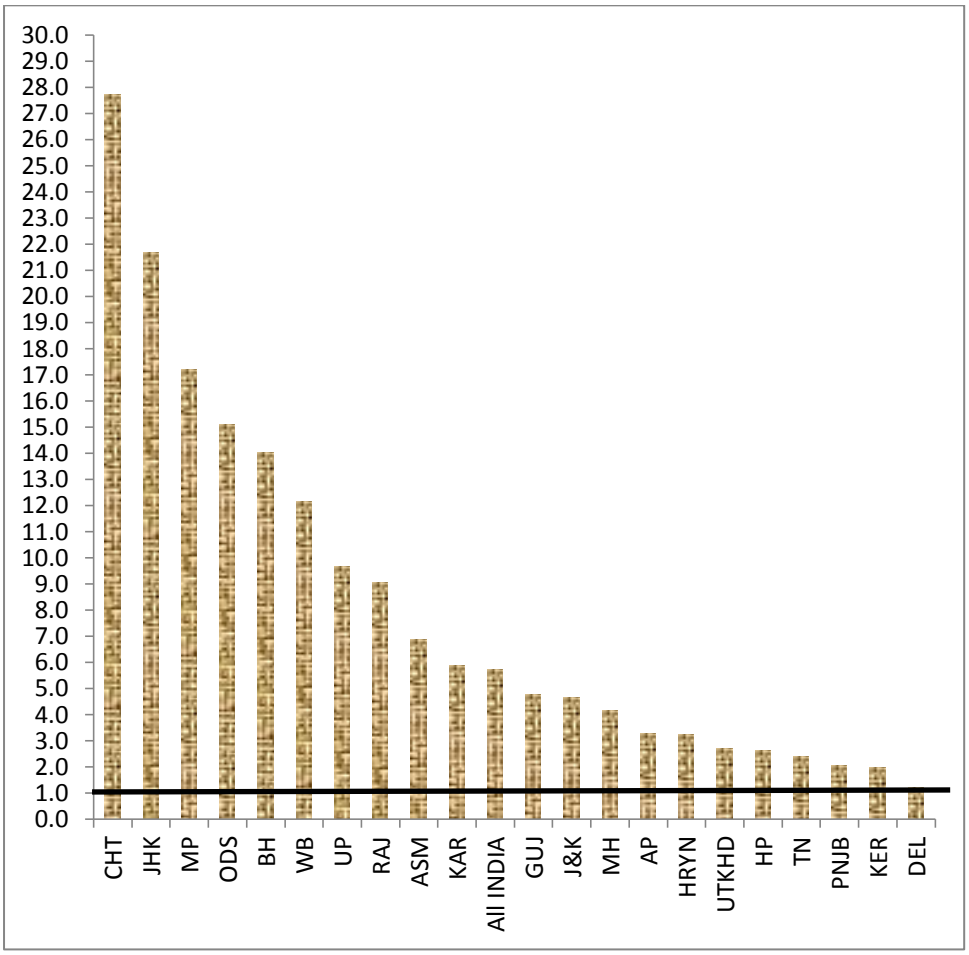


Source: Calculated from NSSO 65th round (July 2008-June 2009)

Fuel

Figure 4.20 shows that there exists huge gap between rural and urban areas with respect to the availability of LPG/PNG as the major source of cooking fuel. Chattisgarh had the highest gap followed by Jharkhand, Madhya Pradesh and Odisha. Kerala, Punjab and Tamil Nadu had comparatively lower gap between rural and urban areas.

Figure 4.20: Rural-urban gap in terms of availability of LPG/PNG as the major source of cooking fuel



Source: Calculated from NSSO 65th round (July 2008-June 2009)

Chapter 5

Social Dimension of Housing Condition
Unequal Access to ST and SC Households

Introduction

In this chapter we analyse the housing condition and amenities in terms of social groups with particular reference to STs and SCs across the states. These two social groups have been historically disadvantaged and were at the margins of society. Over the past decades successive governments have launched several programmes and schemes aimed at improving the housing condition of STs and SCs. Our preliminary analysis of housing condition and amenities at the all-India level showed that as a social group ST and SC households performed the worst in all the aspects we analysed.

Through the analysis of NSSO's 65th Round data on housing condition and amenities, we study the achievement ratio in the various aspects of housing condition and amenities between ST-SC households viz-a-viz 'Other' households. For our analysis we have selected fifteen aspects which are considered to be desirable like 'good' condition houses, availability of electricity for domestic use, availability of drinking water within premises, latrine facility, separate kitchen with water tap, etc.

In this chapter we present our analysis for the larger states only. Detailed tables on all states and UTs are given in the appendix.

Calculation of the Achievement Rate between ST-SC and 'Other' households

The achievement rate can be expressed as:

$$Achievment\ Rate\ (AR) = \left(\frac{ST\ or\ SC}{'Others'}\right) * 100$$

100- AR gives us the gap to be covered.

Where *AR* represents the distance covered by ST/SC households as compared to 'Other' households. A value of *AR* lower than 100 percent for a particular aspect indicates that ST/SC households are worse in that particular aspect and a value of *AR* higher than 100 percent indicate ST/SC households are better than 'Other' households. A value of *AR* equal to 100 indicates that no gap exists between ST/SC and 'Others' households. Closer the value of *AR* to 100, lower the disparity between ST/SC and 'Others' and vice versa.

Distribution of Households across Social Groups

Before moving into detailed discussion we present the distribution of ST, SC and 'Other' households across states in Table 5.1. There are 11 major states where the

share of SC population is 20 per cent or above of the total population. These are Punjab and Haryana have 36 and 30 percent respectively followed by West Bengal (27%), UP (26%). The remaining seven states of Bihar, Himachal Pradesh, Tamil Nadu, Andhra Pradesh, Odisha and Uttarakhand vary from 20 to 23 per cent. Among smaller states/UT's Tripura and Chandigarh have above 20 per cent.As for the share of ST population, there are only four larger states with a share of 20 or more percent. These are Chattisgarh (37%), Jharkhand (27%), Odisha (27%) and MP (21%). However, in a number of smaller states and UT's, the ST population constitute an overwhelming majority that are also distinguished for higher human development indicators. These are Mizoram (98%), Meghalaya (90%), Lakshadweep (85%),

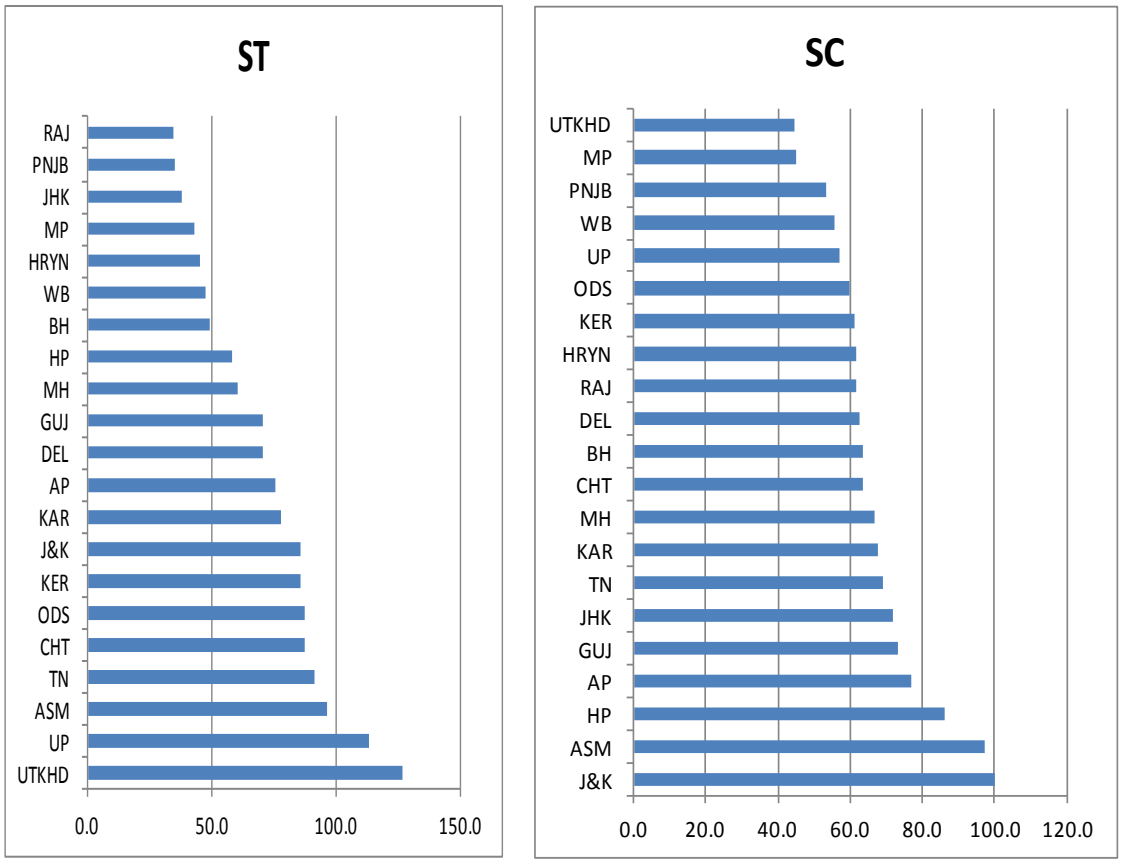
If we combine the two socially most disadvantaged and often excluded population – ST and SC- Chattisgarh emerges as the only one among the larger states with a major share (53%) ….. there are three others – Jharkhand, Odhisha and MP – minimum share of more than forty per cent share of the population. Another nine states – Punjab, West Bengal, Rajasthan, Gujarat, Haryana and Andhra Pradesh – have a share between 30 and 37 percent. Another four have a share of close to 25 and 29 percent.

Table 5.1 Distribution of households by social groups (as percentage of the respective total)										
Sl.No	States	Rural			Urban			Rural+Urban		
		ST	SC	Others	ST	SC	Others	ST	SC	Others
	Larger States									
1	UP	0.7	29.3	70.0	1.3	15.8	82.8	0.8	26.4	72.8
2	Maharashtra	14.5	15.7	69.8	2.7	14.3	83.1	9.2	15.0	75.8
3	Bihar	1.1	22.8	76.1	1.2	11.9	87.0	1.1	21.6	77.3
4	West Bengal	6.9	30.5	62.6	2.1	18.2	79.7	5.7	27.3	67.0
5	Andhra Pradesh	7.0	23.5	69.5	3.5	14.3	82.3	5.9	20.6	73.4
6	Madhya Pradesh	26.7	19.5	53.8	5.2	17.8	77.0	21.4	19.1	59.5
7	Tamil Nadu	1.9	31.7	66.5	0.5	12.9	86.7	1.2	22.8	75.9
8	Rajasthan	16.9	19.6	63.5	2.2	13.4	84.4	13.0	17.9	69.2
9	Karnataka	7.9	21.5	70.5	3.7	11.6	84.7	6.4	17.8	75.9
10	Gujrat	25.7	12.5	61.8	7.4	9.2	83.4	18.5	11.2	70.3
11	Orissa	25.7	21.8	52.5	11.5	17.8	70.7	23.4	21.2	55.4
12	Kerala	2.6	9.2	88.1	0.8	7.7	91.5	2.2	8.8	89.0
13	Jharkhand	30.7	16.0	53.3	9.3	10.5	80.1	27.4	15.1	57.6
14	Assam	20.5	8.2	71.4	9.2	15.5	75.4	19.2	9.0	71.8
15	Punjab	0.6	44.8	54.7	0.5	22.9	76.6	0.5	36.2	63.2
16	Chattisgarh	42.6	15.1	42.3	12.0	13.2	74.8	36.9	14.8	48.3
17	Haryana	0.1	34.3	65.6	0.3	19.4	80.3	0.2	29.6	70.2
18	Delhi	1.7	15.7	82.6	1.4	21.4	77.2	1.5	21.0	77.6
19	Jammu&Kashmir	3.6	13.1	83.3	2.0	8.0	90.0	3.2	12.0	84.8
20	Uttarakhand	2.0	23.0	75.0	4.7	8.8	86.6	2.6	19.9	77.5
21	Himachal Pradesh	8.5	22.2	69.4	1.2	16.6	82.3	7.7	21.6	70.8
	Smaller states and Union Territories (UTs)									
22	Tripura	34.2	24.7	41.1	9.8	22.9	67.3	29.7	24.3	45.9
23	Meghalaya	93.7	1.1	5.2	73.4	1.4	25.2	89.8	1.2	9.0
24	Manipur	41.8	2.3	55.9	4.9	4.9	90.3	31.2	3.1	65.8
25	Nagaland	97.2	1.9	0.9	77.9	5.6	16.6	91.7	3.0	5.3
26	Goa	14.4	5.9	79.7	0.3	5.5	94.2	7.4	5.7	86.9
27	Arunachal Pradesh	71.6	1.0	27.4	47.0	7.1	45.9	66.3	2.3	31.4
28	Pondicherry	*	40.5	59.5	0.3	7.4	92.3	0.2	17.2	82.6
29	Mizoram	99.1	0.0	0.9	97.4	1.4	1.2	98.3	0.6	1.0
30	Chandigarh	2.2	20.8	77.0	0.2	20.0	79.8	0.5	20.1	79.5
31	Sikkim	40.6	7.2	52.3	23.0	8.8	68.2	37.9	7.4	54.7
32	A&N Island	18.0	*	82.0	2.0	*	98.0	12.7	*	87.3
33	D&N Haveli	75.9	7.6	16.6	17.4	1.7	80.9	61.6	6.1	32.3
34	Daman&Diu	11.7	5.8	82.5	0.5	1.0	98.5	7.8	4.2	88.1
35	Lakshadweep	77.5	*	22.5	95.8	*	4.2	85.0	*	15.0
	All India	11.2	22.7	66.1	3.3	14.4	82.3	8.8	20.2	71.0
Source: NSSO 65th Round (July 2008-June2009). Note: * means nil or negligible.										

Condition of houses

To understand the gap in terms of the condition of houses in which the households belonging to ST and SC social groups live, we have considered the proportion of households living in 'good' condition houses.

Figure 5.1: Gap between ST/SC households and 'Other' households in terms of 'good' houses (Rural+ Urban)



Source: NSSO 65th Round (July 2008-June 2009). Note : * ST Population less than two percent of total

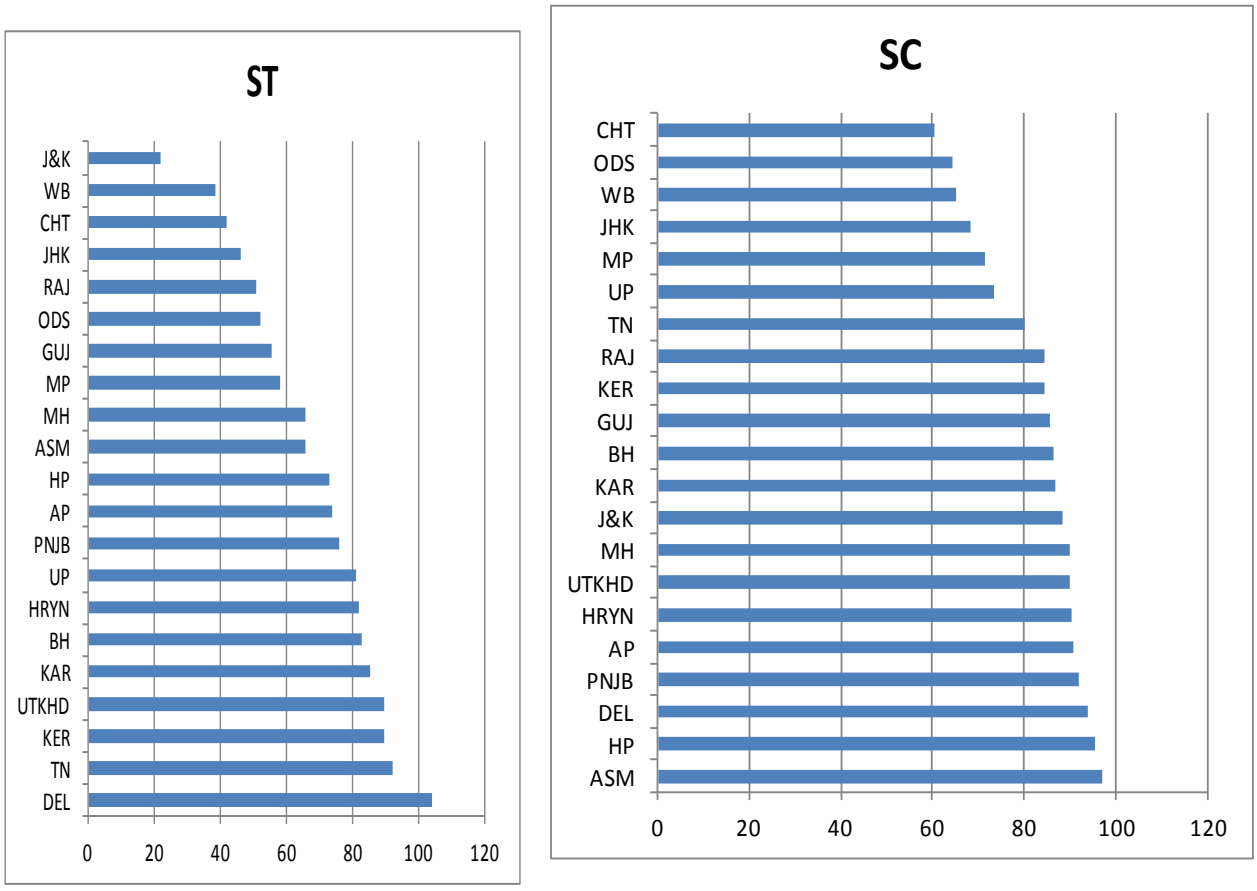
From Figure 5.1 we can see that with the exception of Uttarakhand and UP in all other states ST households were worse than 'Others' in terms of the proportion of households living in 'good' houses. Both these were states with a low proportion of ST housesholds – 2.6 and 0.8 percent of the total – only and hence this 'impressive' AR. Rajasthan had the highest gap with the proportion of ST households living in 'good' houses being only 35 percent of the proportion of 'Other' households living in 'good' condition houses. Rajasthan was closely followed by Madhya Pradesh and Jharkhand, two states with significant proportion of ST households. In Chattisgarh which had the highest proportion of ST households (37 percent) the gap was comparatively low.

Analysis of the gapbetween SC and 'Other' households show that Uttarakhand (which had a proportion of 20 percent SC households) had the highest gap with only 45 percent of SC households living in 'good' houses as a proportion of 'Other' households i.e, a gap of 55 per cent

Type of structure

To analyse the gap in terms of the structure of house, we have considered the proportion of households living in 'Pucca' houses. 'Pucca' houses are made of permanent material which can better withstand natural calamities and adverse climatic conditions.

Figure 5.2: AR of households living in 'Pucca' houses (Rural+Urban)



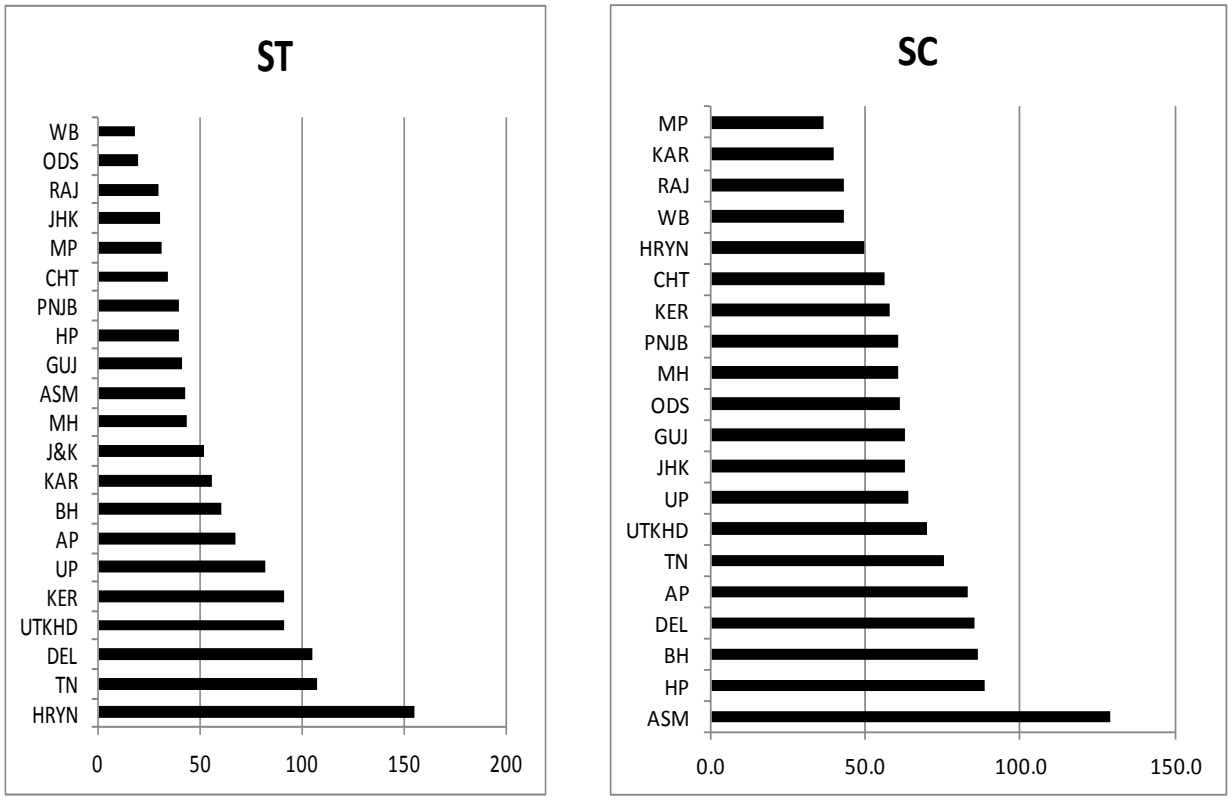
Source: NSSO 65th Round. Note * indicates states where ST population is less than two per cent of total.

From Figure 5.2 we can see that states with a sizeable proportion of ST households namely Chattisgarh, Jharkhand, Rajasthan and Odisha had the lowest AR. This is not surprising as major proportion of ST households in these states live in forest areas. Compared to ST households SC households had lower gap across states.

Roof Type

To analyse the AR in terms of roof type we have taken 'concrete' roof as desirable. We can see from Figure 5.3 the gap among STs were higher than that of SCs.

Figure 5.3: AR of households living in houses with concrete roof (Rural+Urban)



In this case also states with a sizable proportion of ST households had the highest gap. For instance in Odisha the proportion of ST households with concrete roof was only 20 percent of 'Other' households with concrete roof.

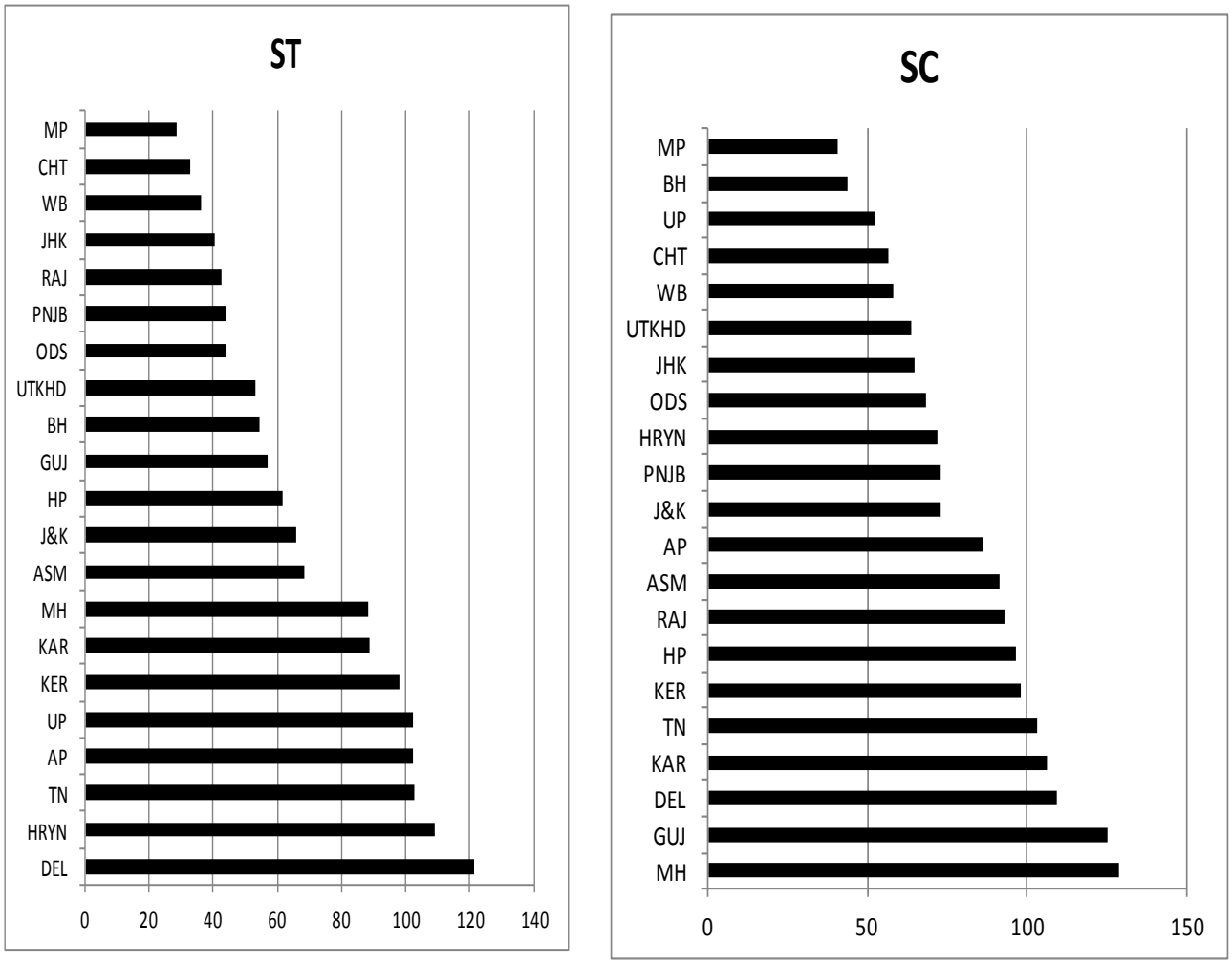
The condition of SCs though better than STs, was considerably worse than 'Others'. In Madhya Pradesh which had the highest gap, the proportion of SC

households with concrete roof was only 36 percent of 'Other' households with concrete roof.

Floor

The material used for the floor of the house is very important from the point of view of health and hygiene. For our analysis we have considered cement floor as desirable.

Figure 5.4: AR of households living houses with cement floor (Rural+Urban)



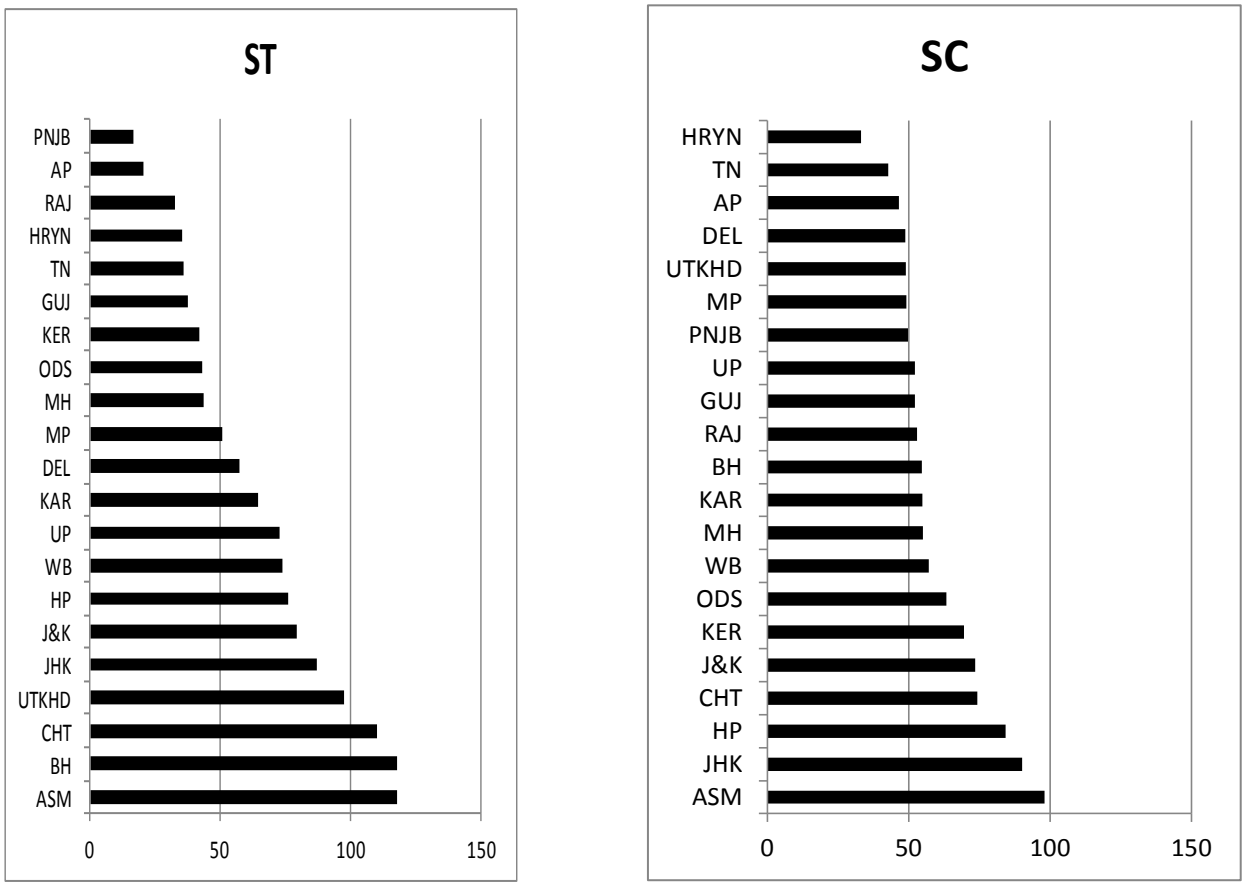
Our analysis shows that there exist huge disparities in the case of both STs and SCs. We can see from Figure 5.4 that the states like MP, Chattisgarh and Bengal

which had the highest gap for STs also had the highest gaps for SCs. The condition of SC households in Maharashtra, Gujarat, Delhi, Karnataka and Tamil Nadu was better than 'Other' households.

Number of living rooms

The number of living rooms a house has is an indicator of the level of congestion and comfort of the house. To understand the gap in this regard we have considered three or more living rooms as the desirable attribute. A three room house would indicate a separate kitchen, living room and a bed-room for an average family size of five members.

Figure 5.5: AR of households living in houses with three or more living rooms (Rural+Urban)



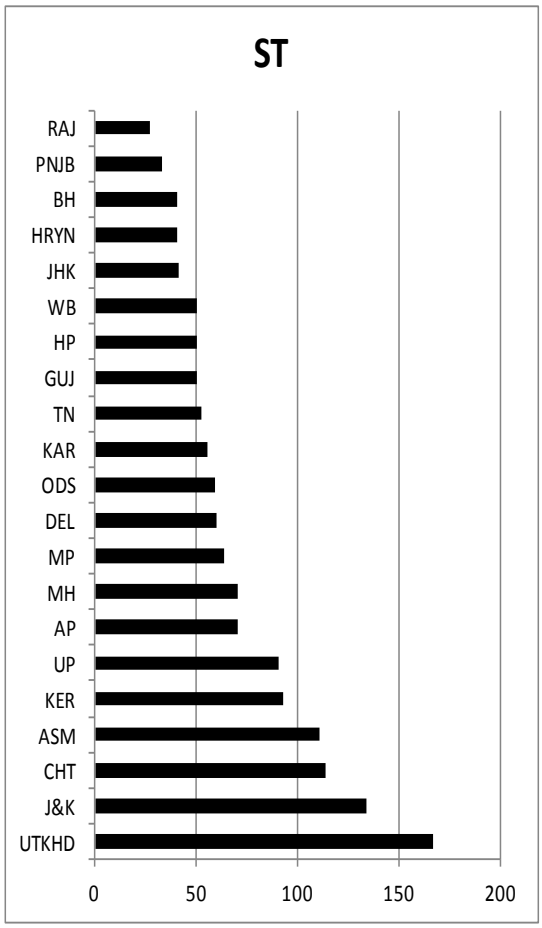
While in Assam, Bihar and Chattisgarh STs were better than 'Others' in terms of having three or more living rooms, in Andhra Pradesh, Kerala, Odisha and Maharashtra they were worse off with huge gap.

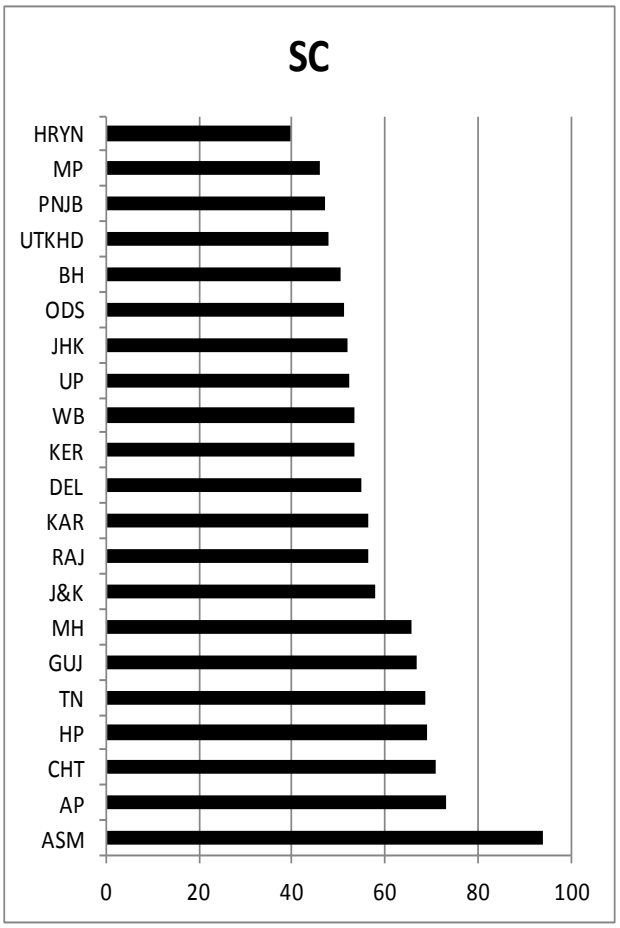
In the case of SCs Haryana, Tamil Nadu, Andhra Pradesh and Delhi had the highest gap.

Ventilation

Ventilation is also an important indicator of the quality of housing. Houses with poor ventilation can have adverse health impacts. We have considered proportion of households with 'good' ventilation for our analysis.

Figure 5.6: AR of households living in houses with good ventilation





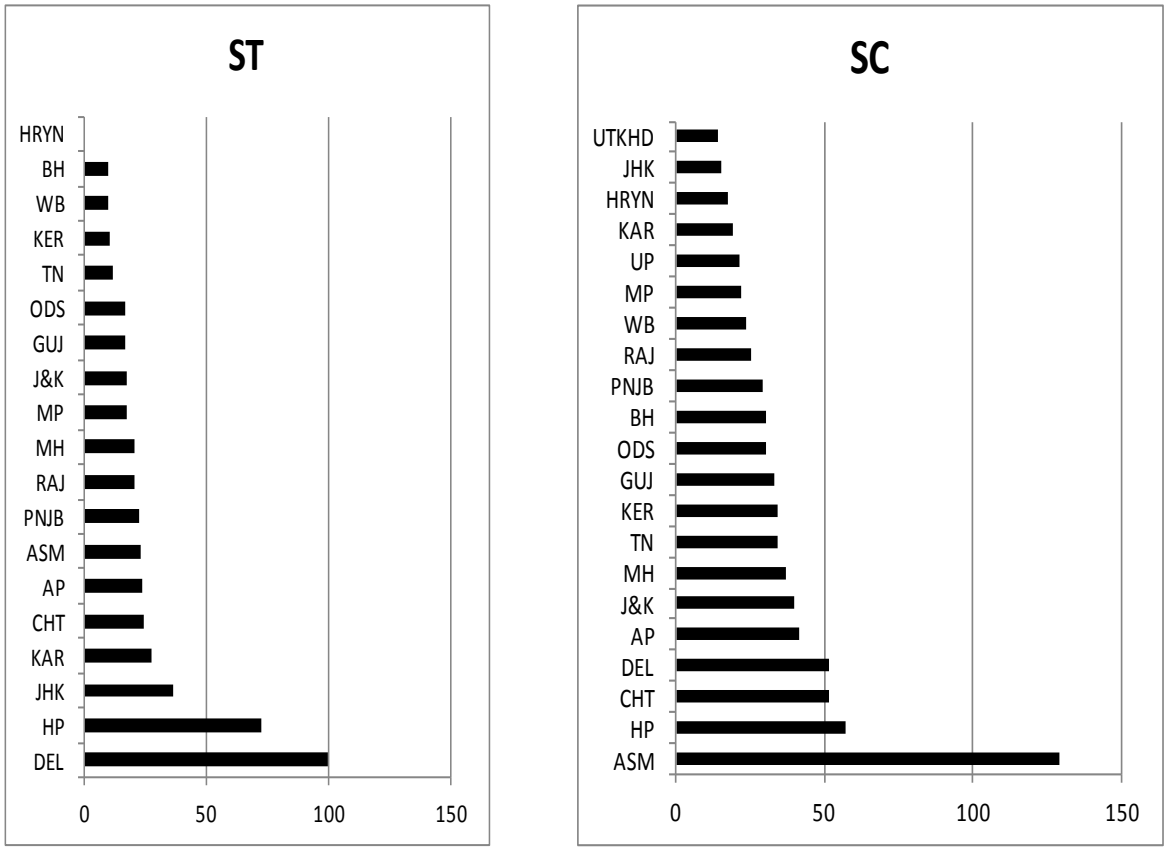
In terms of good ventilation for STs the gap was highest for Rajasthan, Bihar, Jharkhand and West Bengal. In the states of Uttarakhand, Jammu & Kashmir, Chattisgarh and Assam, STs were better than 'Others'.

As for SCs they were better than 'Others' in none of the states. While Assam and Andhra Pradesh had smaller gap in comparison to other states, Haryana, Madhya Pradesh, Punjab, Uttarakhand and Bihar had huge gap.

Kitchen Type

To study the gap in this aspect we have considered the proportion of households with separate kitchen and water tap.

Figure 5.7: AR of households with separate kitchen and water tap



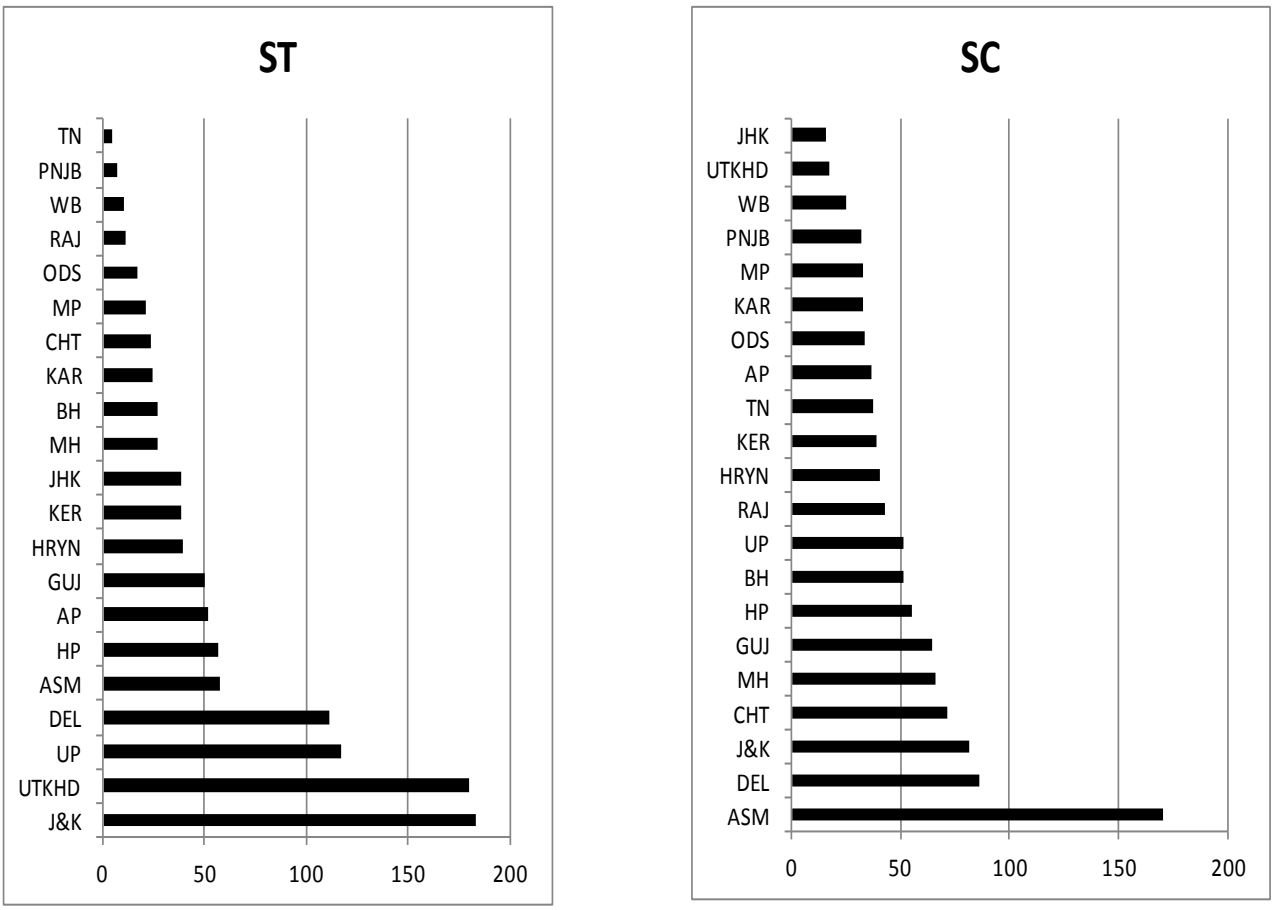
We can see from figure 5.7 that there exist huge gap between ST-SC and 'Other'households across states. In Bihar, West Bengal and Kerala as a proportion of 'Other' households with separate kitchen and water tap,the AR was only 9 percent, 10 percent and 11 percent respectively for the ST households That shows a huge disparity between the ST and Others. In the case of SCs, with the exception of Assam

in all other states there existed huge gap (more than 50 percent). Uttarakhand had the highest gap followed by Jharkhand, Haryana, Karnataka and UP.

Drainage Facility

The presence of proper drainage facility is very important for the health and hygiene of dwellers. To understand the gap between social groups in this respect we consider the proportion of households with underground/closed pucca drainage.

Figure 5.8: AR of households with underground/closed pucca drainage (rural+Urban)



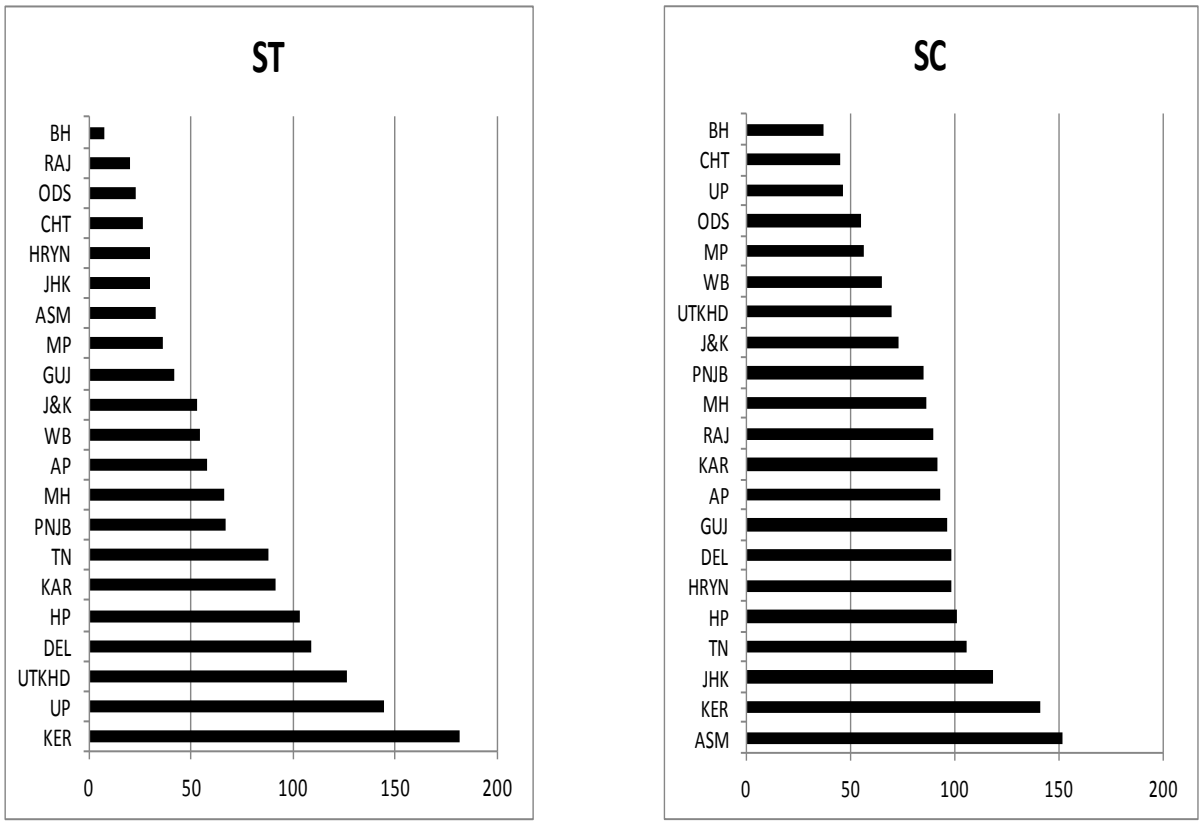
From Figure 5.8 we can see that for both STs and SCs, in majority of the states there existed a gap of more than 50 percent.

In the case of STs the gap was highest for Tamil Nadu, followed by Punjab, West Bengal, Rajasthan, Madhya Pradesh and Odisha. STs were better off than 'Others' in Jammu & Kashmir, Uttarakhand, UP and Delhi.

In the case of SCs too Punjab, West Bengal, Madhya Pradesh and Odisha had huge gaps. It is interesting to note that in Uttarakhand while STs were better off than 'Others', SCs were worse off than 'Others'.

Tap Water

Figure 5.9: AR of households with tap water as major source of drinking water (Rural+ Urban)



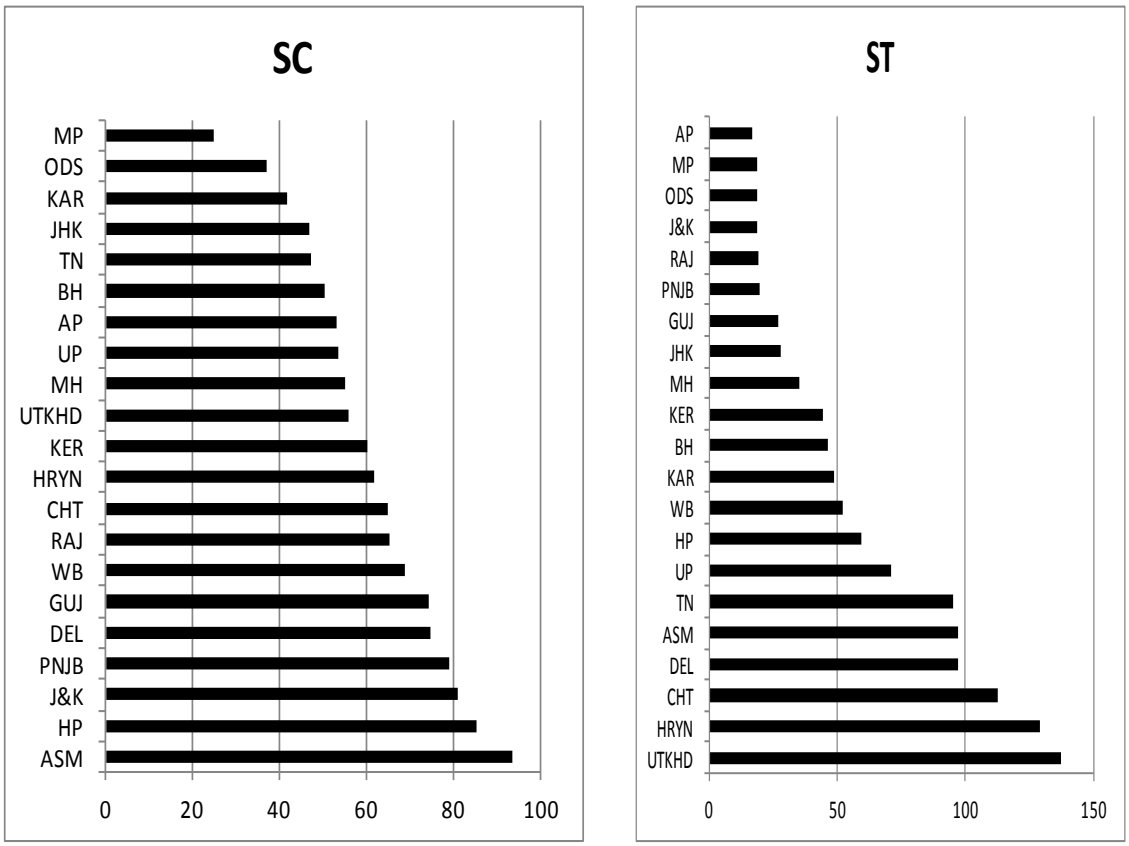
From Figure 5.9 we can see that for both STs and SCs, the gap was highest in the states of Bihar, Rajasthan, Odisha and Chattisgarh. We can also see that across the states the gap was higher for STs compared to SCs.

It is interesting to note that in Kerala for both STs and SCs, the dependence on tap water was more than that of 'Others'. It is not surprising given the fact that Kerala is a state where well the prominent source of drinking water is the open well. The higher dependence of STs and SCs on tap water may imply their greater reliance on publicly provided drinking water and location of houses with less water availability or access to land (especially for SC) and/or economic capacity to construct a well.

Nature of access to drinking water

To understand the gap in the nature of access to major source of drinking water, we consider the proportion of households with exclusive access to drinking water source.

Figure 5.10: AR of households with exclusive access to drinking water (Rural+Urban)



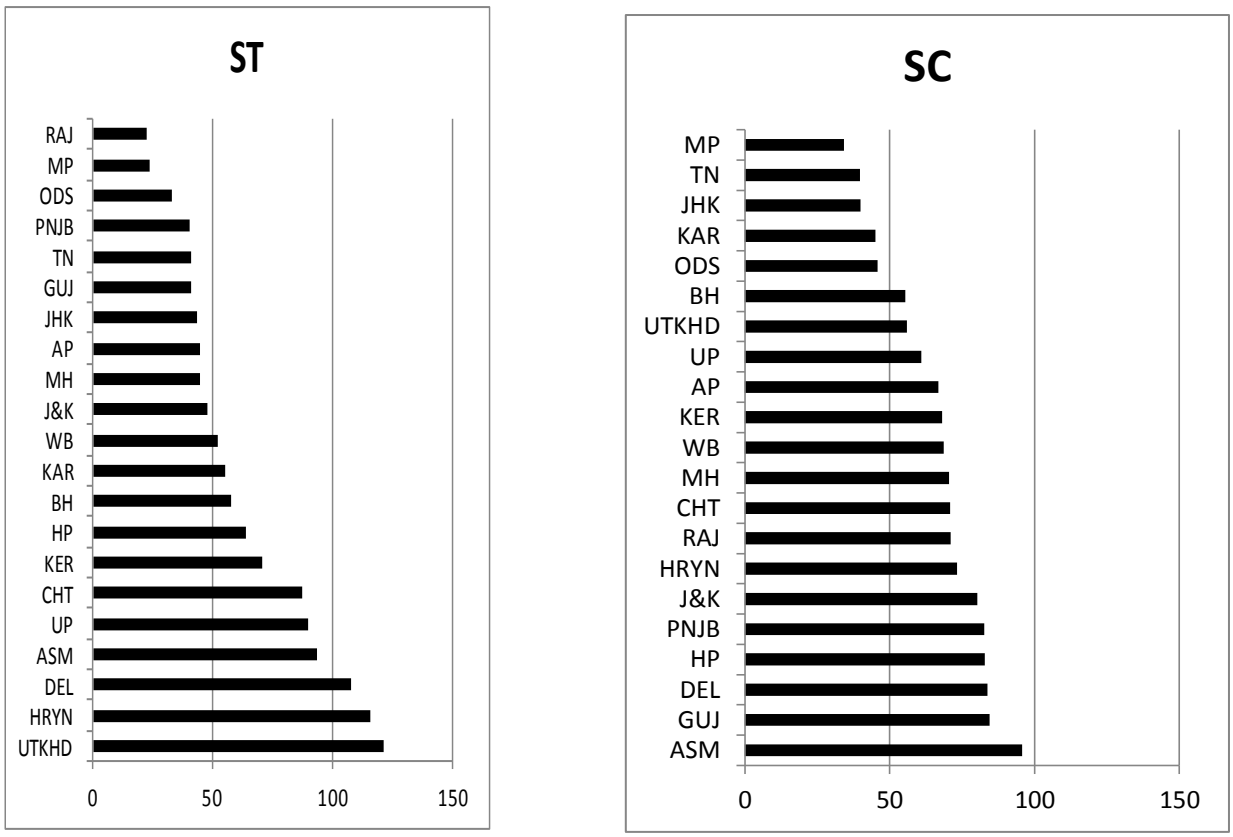
From Figure 5.10 we can see that with the exception of Chattisgarh and Assam all other states with a sizable proportion of ST households such as MP, Odisha, Gujarat and Rajasthan there existed huge gaps in terms of exclusive access to drinking water source.

In the case of SCs, they were worse off than 'Others' across the states. Figure 5.10 also reveals that in the states of Kerala, Gujarat, Punjab, West Bengal and Rajasthan, SCs were better off than STs whereas in Chattisgarh, Haryana and Uttarakhand STs were better off than SCs.

Distance to the source of drinking water

Distance to the source of drinking water is also an important aspect of housing. To understand the gap we considered the proportion of households with drinking water source within premises.

Figure 5.11: AR of households with drinking water within premises (Rural+ Urban)



We can see from Figure 5.11 that in majority of the states STs were worse off than 'Others'. The gap was highest in the case of Rajasthan, Madhya Pradesh and Odisha. Like many other indicators in this also STs were better off than 'Others' in

Uttarakhand and Haryana. For SCs also there existed significant gap across the states. They were however better off compared to STs.

Sufficiency of drinking water

Figure 5.12: AR of households with sufficient drinking water throughout the year (Rural+Urban)

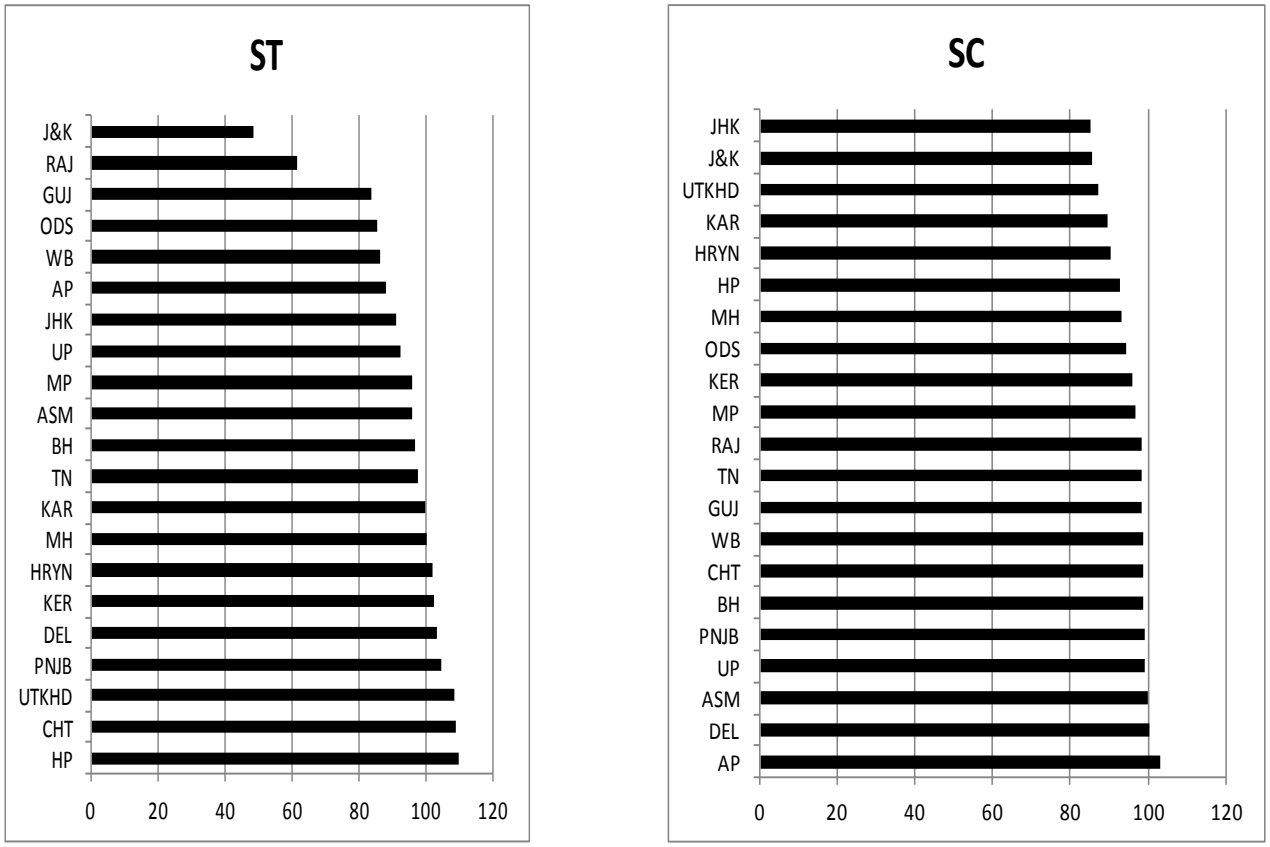
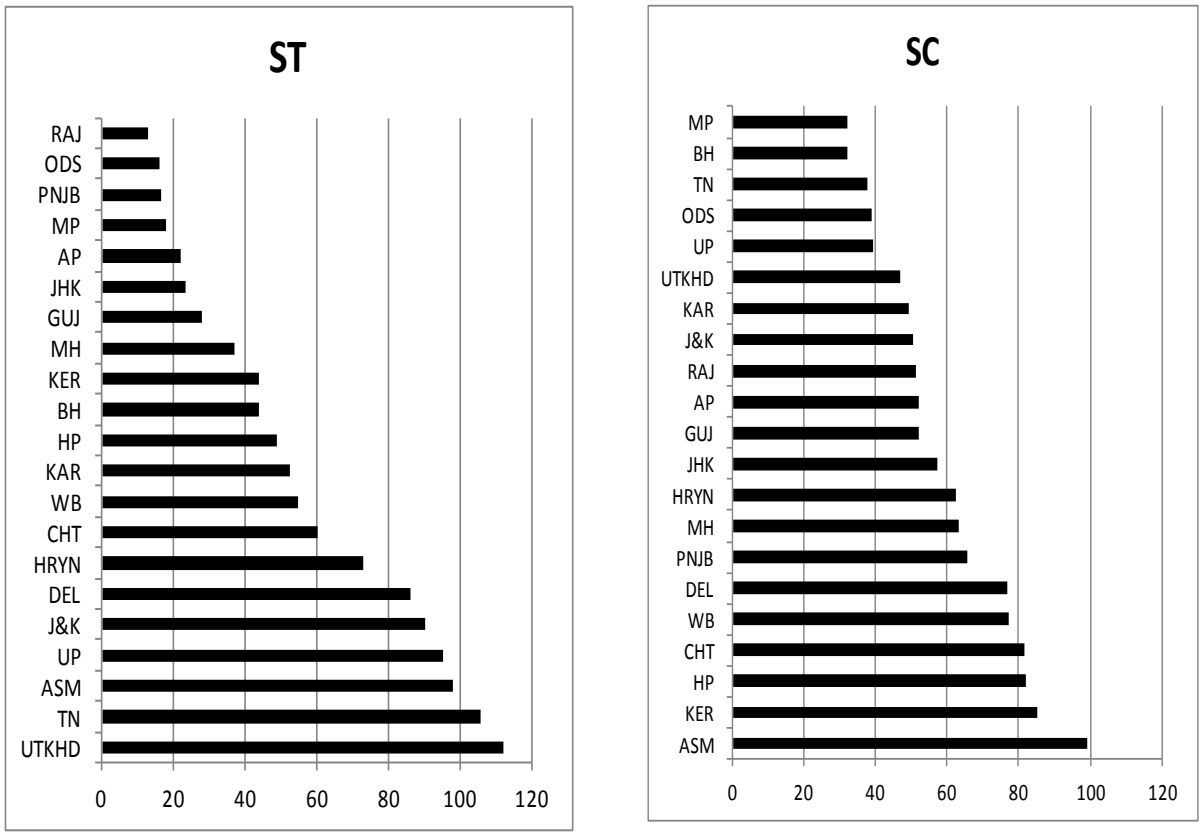


Figure 5.12 shows that for STs the gap was highest in the case of Jammu & Kashmir

Latrine Facility

To analyse the gap in the avilability of latrine facility we considered the proportion of households with latrine facility for the exclusive use of households.

Figure 5.13: AR of households with latrine facility for exclusive use of households (Rural+ Urban)



From figure 5.13 we can see that there exist significant gap between ST-SC households and 'Other' households in this very important indicator of the quality of housing.

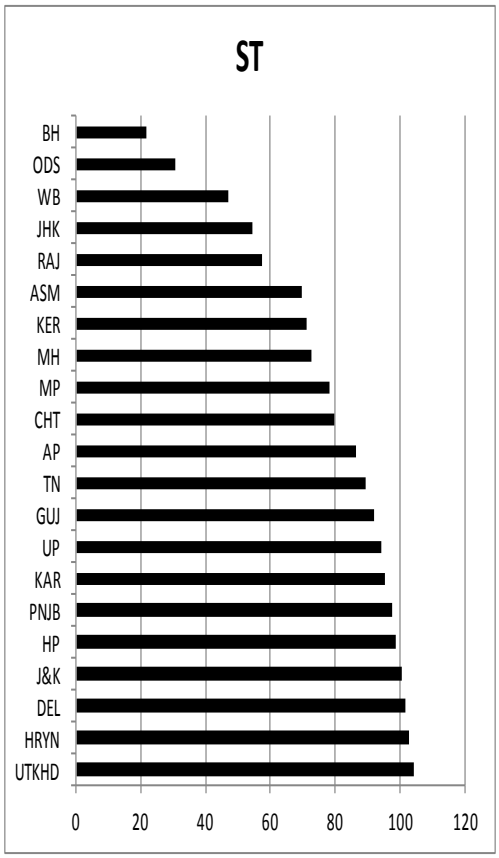
For STs the gap was highest in Rajasthan followed by Odisha, Punjab and Madhya Pradesh. In the case of Gujarat, Maharashtra and Kerala, the gap was higher than Bihar, Karnataka, West Bengal and UP. In the case of Tamil Nadu and Uttarakhand, STs were better off than 'Others'.

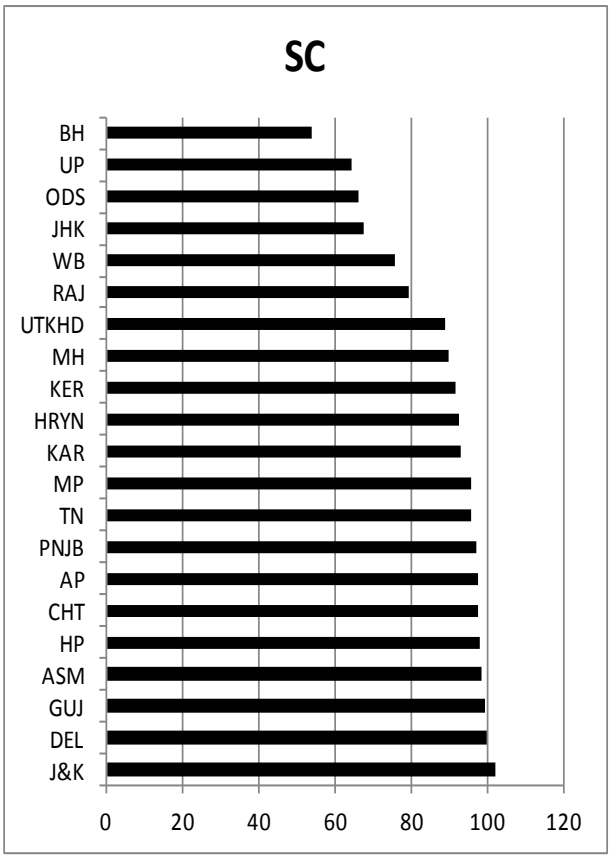
For SCs the gap was highest in Madhya Pradesh followed by Bihar, Tamil Nadu, Odisha and UP.

Electricity

Availability of electricity of domestic use is a very important indicator of the quality of living.

Figure 5.14: AR of households having electricity for domestic use (Rural+Urban)





From Figure 5.14 we can see that for both SCs and STs the gap was highest in the states of Bihar, Odisha, West Bengal, Jharkhand and Rajasthan. Kerala had a higher gap compared to other states for both SCs and STs. In all these stats SCs were better off than STs, the only exception being Uttarakhand.

Chapter 6

Concluding Remarks

In the introductory chapter, we have already summarized the major findings of this study. The main purpose of this concluding chapter is to comment on the overall situation of housing and related amenities in the country as well as to point out the regional and social differences.

At the outset, it must be pointed out that the housing condition captured by both the Population Censuses as well as by the National Sample Survey closely resemble each other thereby confirming the overall situation. While some progress in the quality of housing (revealed by such indicators as the proportion of *pucca* houses, durability of materials used for wall and roof, etc.) as well as living amenities such as having a private latrine, access to drinking water, and electrification of houses have registered some progress between 2001 and 2011, the country as a whole still faces significant gaps in assuring a minimum of quality housing and related amenities to its people. Indeed, in terms of such basic amenities as the availability of floor space, access to a private toilet facility and access to safe drinking water, India continues to face a housing question that should be seen as part of its larger social question of many dimensions.

Drinking water being a major constraint there is need for fresh thinking on the subject. Given the size and varied climatic conditions, piped water is unlikely to be an effective answer to this problem. There is need to explore the decentralized development route which could develop the multiple sources of drinking water with local management and local level resources. Rain water harvesting and storing as well as protection and development of wells will have to be considered more seriously than before. Equally urgent is the need to provide a private toilet facility to all the currently deprived households both in rural and urban areas.

This study has given a special focus on the situation in rural areas by separating the progress in housing and related amenities into rural and urban. The findings clearly point out to the fact that the rural areas of the country not only lag behind the urban areas in every indicator but the gap is also widening. Of course, this inequality is not confined to the housing condition only. From a basic economic point of view, it is reflected in increasing income/consumption inequality as well as in the quality of employment as well as wages and earnings. Of particular significance here is the record of high growth rate of the Indian economy during the past three decades that seems to have only inadequately benefitted the rural areas. This calls for renewed efforts in rural development and transformation beginning with the further development of agriculture and related activities assuring significant and gainful employment generation than before. Increase in employment and income could

contribute to better housing conditions but the latter also could contribute to economic development through better health, increased productivity as well as social dignity.

State Level Scenario

While the overall picture sums up the housing condition in the country as a whole, it is important to examine the regional picture given the size of the country and the number of states that are ultimately responsible for implementing various programmes and schemes. We have divided the states and Union Territories into two major groups viz., (a) 21 Larger States where the total population of a given state is not below 0.5 per cent of the country's population, and (b) 14 Smaller States and Union Territories where the population in each unit is less than 0.5 per cent of the country's population. Here there are 9 smaller states and 5 Union Territories.

In general, we find that the ranking of the Indian States in terms of human development corresponds closely, if not wholly, to the ranking according the housing condition and related amenities. We list below the first seven states in terms of best achievements from among the 21 larger states in the country.

Table 6.1: First seven States in terms of best performance in core indicators of housing and related amenities (Rural and Urban Combined)

HDI ranking	'Good' housing	'Pucca' housing	Three rooms and above	Having separate kitchen	Drinking water within premises	Private latrine facility	Electricity as the major source of lighting
1.Kerala (0.790)	1.HP	1.Haryana	1.Kerala	1.Kerala	1.Punjab	1.Kerala	1.Delhi
2.Delhi (0.750)	2.TN	2.Delhi	2.J& K	2.Assam	2.Delhi	2.Assam	2.HP
3.HP (0.652)	3.AP	3.UTKD	3.Assam,	3.HP	3.Kerala	3.Delhi	3.Punjab
4.Punjab (0.605)	4.Guj	4.Punjab	4.HP	4.GUJ	4.Haryana	4. J&K	4.Kerala
5.MAH (0.572)	5.UTKD	5.HP	5.JHKD	5. J& K	5.Assam	5.TN	5.TN
6.TN (0.570)	6.Kerala	6.Kerala	6.Punjab	6.TN	6. J&K	6.Haryana	6.AP
7.Haryana (0.552)	7.Delhi	7.MAH	7.CHTG	7.Haryana/ UTKD	7. GUJ	7.UTKD	7.Karnataka
8.J&K(0.529)	Note: Column 1 as per the India Human Development Report 2011 (prepared by the Institute of Applied Manpower Research, New Delhi); Column 2 on 'Good' housing as per Census 2011; all other indicators as per NSS 2008-09.						

The picture that emerges from Table 6.1 is worthy of some comments. First of all, overall human development indicator is a good guide to gauge the housing and related living condition. Except one state – Maharashtra - all the states that are in the forefront of HDI also figure in the first seven states ranked in terms of the core indicators of housing and living conditions selected in the table. Maharashtra, with one of the highest per capita income as well as the highest rate of industrialization, figures only in one indicator as a seventh rank holder under 'pucca' housing. This should indeed be a food for thought for those who believe that maximization of per capita income and industrialization will automatically lead to a better quality of life.

This shows the nature of exclusion, both regionally and socially, leading to a situation of poor housing condition.

A similar surprise in the reverse direction is the case of Assam. Although Assam does not figure prominently in terms of HDI, the state figures among the first seven in four out of the seven core indicators. This calls for a nuanced understanding of the different indicators of social/human development and be careful in using the summary indicator of HDI only cautiously and not a synonym for social/human development. Assam's relative achievement in having a private toilet facility, adequate space in the residence, having a separate kitchen and access to drinking water call for a detailed understanding of the situation.

There is another state – Gujarat – which figures in two of the seven core indicators but which do not figure among the first seven high HDI states. That means in some aspects of housing condition, Gujarat seems to have done well from a comparative perspective but not enough to emerge as a strong contender in a majority of the indicators. That means it has a long way to go before claiming to be a leading state let alone a 'model' that is sometimes touted around in the current development discourse in the country.

Among the high human development states, Kerala which has been a front-ranking one among all states for a considerable period of time is the only state that figures in all the seven core indicators of housing and living conditions selected here. That surely speaks of its comparative lead in several dimensions of social/human development. Of course, as the earlier chapters have shown, Kerala has to continue its efforts especially in meeting the deficit in housing and living conditions among its SC and ST people and achieve a much higher rate of success that is certainly within its reach.

Himachal Pradesh is the next best state as far as housing and living condition is concerned. It figures in five out of the seven core indicators. Delhi is in a similar position but it has certain inherent advantages being the national capital of the country.

On the whole the four states of Kerala, Tamil Nadu, Delhi, Himachal Pradesh, Punjab and Haryana are the leading states in providing a minimum of quality housing and living amenities to the households.

What about Rural India?

When we examine rural India only what we are trying to find out is about the 'urban bias' which seems to have strengthened since the early 1990s. Interestingly, most of the states that figure in the first seven ranks also figure when the ranking is done only for rural India. But there are some important drop outs that could be interpreted as 'urban bias' in achieving the relatively better overall performance. In terms of 'good' housing one state - Gujarat – drops out of the list in rural ranking and in its place Punjab comes in the fourth position. As for 'pucca' housing, Maharashtra is absent in

the rural ranking and in its place the undivided Andhra Pradesh comes in. As for the availability of adequate space within the residence (three rooms and above), Chhattisgarh drops out and in its place Uttarakhand comes in. In terms of having a separate kitchen, both Gujarat and Haryana drops out and in their place Karnataka and Delhi enter the first seven states. Gujarat gets dropped out from the indicator of 'access to drinking water' and Bihar takes the place. In terms of having a private latrine facility three states – Assam, Jammu and Kashmir and Tamil Nadu – get dropped out and their places are taken by Himachal Pradesh, Punjab and Gujarat. For electricity as a source of lighting, Karnataka gives way to Uttarakhand.

While this is an interesting finding, that by itself cannot be counted as absence of 'urban bias' because we are only ranking the states according to their performance in housing condition in rural areas. As we have shown and discussed in Chapter 4, in most states the housing condition in urban areas is considerably better than that in rural areas. However, the gap is either negligible or low in six states that are prominent in the first seven rank holders. These states are Delhi, Himachal Pradesh, Kerala, Punjab, Haryana and Uttar Pradesh. Even here, there are some glaring gaps in a few basic indicators such as access to a private latrine facility and access to drinking water.

At the other end, the highest rural-urban gap is largely, if not only, among those states in eastern India which are also laggards in overall performance when rural and urban areas are combined. This of course is a double disadvantage that the rural households find them in.

Table 6.2: First seven States in terms of best performance in core indicators of housing and related amenities (Rural Only)

'Good' housing	'Pucca' housing	Three rooms and above	Having separate kitchen	Drinking water within premises	Private latrine facility	Electricity as the major source of lighting
1.Delhi	1.Delhi	1.Kerala	1.Kerala	1.Punjab	1.Delhi	1.Delhi
2.Kerala	2.Haryana	2.J&K	2. Assam	2.Kerala	2.Kerala	2.HP
3.AP	3.UTKD	3.Assam	3.HP	3.Delhi	3.HP	3.Punjab
4.Punjab	4.Punjab	4.HP	4.KAR	4.Assam	4.Punjab	4.Kerala
5.HP	5.HP	5.JHKD	5. J&K	5.Haryana	5.UTKD	5.TN
6.Gujarat	6.Kerala	6.Punjab	6.Delhi	6.Bihar	6. Haryana	6.AP
7.Haryana	7.AP	7.UTKD	7.TN	7.J&K	7.Gujarat	7.UTKD

Note: Column 1 on 'Good' housing as per Census 2011; all other indicators as per NSS 2008-09.

What about the Social Dimension?

While rural-urban divide in housing and living amenities is quite prominent, as in the case of many other social and human development indicators, the social divide seems to be a more prominent feature. Here we focus mainly on the plight of ST and SC communities viz-a-viz Others who consist of the socially advantaged groups as well as somewhat less advantages groups called the OBC and the Muslims.

First let us take the case of Scheduled Tribe households. The two states that figure in the first seven among the Larger States are Uttarakhand and Tamil Nadu with the former registering a much better performance. The next three states are Delhi, Himachal Pradesh and Kerala. It must however be mentioned that the performance of Kerala with regard to the coverage of ST population is quite low compared to its coverage of the other segments viz. SC and Others.

It needs to be emphasized that of these five states, all but one are also the ones with relatively high HDI. Therefore, their performance should also be viewed as part of a larger process of human and social development.

Among the Smaller States the first three best performing ones (constituting one-third of the total Small States) are those from the North East as far as coverage of ST population is covered. That these states have a significant share of ST in their population might have worked as a favourable factor.

As for the SC group is concerned, the best performing ones are Punjab and Himachal Pradesh followed by Delhi. The other states that figure in the well performing list are Haryana, Gujarat, Kerala, Assam, Uttarakhand, Tamil Nadu, Karnataka, Andhra Pradesh, and Maharsshtra. This shows that the states with a better record are quite scattered in the case of SC population than that of ST as well as Others. The best performers are also the ones with a relatively high rank in HDI. What is surprising is that Kerala figures quite low in two indicators and absent in others. As in the case of ST, Kerala's record in covering the SC population is in contrast with its overall high performance in housing conditions as well as the HDI.

Among Smaller States the first three front runners are Goa, Pondicherry and Sikkim as well as Meghalaya and Mizoram. That some of the North Eastern States such as Meghalaya, Mizoram and Sikkim are sensitive to all segments of the population is something that should be noted. Same is the case with the State of Goa given its all round achievement in several indicators of human developments that are reflected in the housing condition too.

In the case of social groups under 'Others', we must point out that this is quite a varied group consisting of the traditionally socially advantaged groups of upper caste Hindus, Jains, Christians and Sikhs and other religions as well as those who are considered as intermediate groups such as OBC as well as Muslims. In this case only Punjab and Delhi figure as front ranking ones in all core indicators. Others are quite scattered including Kerala and Himachal Pradesh which are otherwise front ranking in many indicators of human and social development.

Three main lessons that need to be drawn from this study need to be emphasized. One, the overall scenario with regard to basic amenities of living including housing is concerned, India has a huge deficit to fill. Two, the neglect of rural India is quite prominent and that constitutes itself as a major challenge. Third, there is a sharp divide in most states, if not all, with regard to the condition of ST and

SC households and Others. This social dimension calls for a special focus on these two communities which together constitute about a quarter of the Indian people.

Table 6.3: First seven States among the Larger States and the first three States among the Smaller States in terms of best performance in core indicators of housing and related amenities for ST, SC and 'Others'(Rural and Urban combined)

Good housing			Pucca housing		
ST	SC	Others	ST	SC	Others
1.UTKD(55.5)	1.AP (45.0)	1.PNB (65.2)	1.DEL (100.0)	1.DEL (90.1)	1.HAR (97.6)
2.TN (47.7)	2.HP (43.1)	2.AP (58.5)	2.UTKD(86.2)	2.PNB (88.5)	2.PNB (96.4)
3.KER (46.2)	3.GUJ (42.4)	3.GUJ (57.7)	3. KER (73.3)	3.HAR (88.2)	3.UTKD(96.0)
4.AP (44.2)	4.J&K (36.3)	4.DEL (54.3)	4.TN (71.1)	4.UTKD(86.3)	4.DEL (95.8)
5.KAR (41.3)	5.KAR (35.9)	5.KER (53.9)	5. HP (60.0)	5.HP (79.4)	5.GUJ (83.9)
6.GUJ (40.8)	6.TN (35.9)	6.KAR (52.9)	6. AP (58.9)	6.MAH (74.6)	6.HP (83.2)
7.DEL(38.4)	7.PNB (34.8)	7.TN (52.2)	7. KAR (56.)	7.AP (72.4)	7.MAH (83.0)
Smaller States					
1.MEG(58.3)	1.MEG(55.8)	1.MEG (68.3)	1.GOA (89.6)	1.GOA(67.0)	1.NAG (86.9)
2.SIKM (57.0)	2.MAN (48.3)	2.PON (66.7)	2.MIZO (67.3)	2.PON (50.3)	2.PON (84.8)
3.MIZO (53.2)	3.ARP (48.3)	3.SIK (63.9)	3.SIKM (62.2)	3.SIK (46.7)	3.MEG (66.1)

Source: All columns computed from unit level data from NSS 65th Round (2008-09). Note: Those states with less than one per cent of the total population in SC or ST categories are ignored in the ranking.

Electricity			Private latrine facility			Drinking water within premises		
ST	SC	Others	ST	SC	Others	ST	SC	Others
Larger States								
1.DEL(100)	1.J&K(98.2)	1.HP (99.2)	1.ASM (79.3)	1.ASM(79.7)	1.KER(91.1)	1.DEL(92.4)	1.DEL (79.4)	1.PNB (92.4)
2.HP (97.9)	2.DEL(98.2)	2.PNB(98.6)	2.UTKD(47.5)	2.KER (77.5)	2.ASM (80.3)	2.UTKD (68.3)	2.PNB (72.5)	2.DEL (86.1)
3.J&K(96.4)	3.HP(7.4)	3.DEL(98.5)	3.J&K (47.5	3.DEL (49.9)	3.DEL (64.9)	3.ASM (63.7)	3.ASM(59.5)	3. KER (76.9)
4.UTKD (94.2)	4.PNB(95.3)	4.KAR(97.0))	4.KER (39.2)	4.PNB (41.4)	4.PNB (63.2)	4.KER (31.0)	4.GUJ (49.3)	4.GUJ (73.8)
5.KAR(92.5)	5.GUJ(94.2)	5.TN (96.2)	5.TN (38.3)	5.WB (37.3)	5.J&K (60.6)	5.TN (31.1)	5.KER (47.0)	5.HAR (73.5)
6.GUJ(87.4)	6.HAR (89.8)	6.J&K (96.0)	6.WB (24.2)	6.HP (35.8)	6.HAR (57.2)	6.CHT (30.9)	6.J&K (46.0)	6.BHR (69.0)
7.TN(86.0)	7.CHT(89.1)	7.AP (95.8)	7.HP (21.0)	7.HAR (35.7)	7.UTKD (50.9)	7.HP (29.9)	7.HP (45.5)	7.ASM (^8.5)
Smaller States								
1.GOA(100)	1.NAG(99.6)	1.NAG(100)	1.MIZ (96.5)	1.MEG(85.2)	1.MIZ (84.3)	1.SIK (64.9)	1.ARP (96.1)	1.GOA (92.4)
2.PON(100)	2.PON(98.7)	2.GOA(99.7)	2.MAN (92.2)	2.MAN(84.3)	2.MAN (81.3)	2.NAG (61.1)	2.GOA(87.4)	2.PON (86.3)
3.NAG(99.2)	3.MIZ(98.6)	3.MAN(98.4)	3.SIK (88.5)	3.MIZ (78.2)	3.SIK (79.7)	3.ARP (36.8)	3.PON (71.5)	3.SIK (72.0)

Source: Computed from unit level data from NSS 65th Round (2008-09). Note: Those states with less than one per cent of the total population in SC or ST categories are ignored in the ranking. Note: Drinking water within premises refer to access to water for 'households exclusive use or common use of the household in the building'.

Appendix to Chapter 2

Concepts and definitions

1. Census

Premises
Premises means building along with the land and/or common places in case of apartments/ flats/multi-storey buildings attached to it. A building may not always have a compound wall or fencing. In such cases, the land or the common place as the case may be, that is available to the household may be treated as 'Premises'.

Building
'Building' is generally a single structure on the ground. Usually a structure will have four walls and a roof. Sometimes it is made up of more than one component unit which are used or likely to be used as dwellings (residences) or establishments such as shops, business houses, offices, factories, workshops, work sheds, schools, places of entertainment, places of worship, godowns, stores, etc. It is also possible that buildings which have component units may be used for a combination of purposes such as residence-cum-shop, residencecum- workshop, residence-cum-office, residence-cum-doctor's clinic etc.

Census House
'Census House' is a building or part of a building used or recognized as a separate unit because of having a separate main entrance from the road or common courtyard or staircase etc. It may be occupied or vacant. It may be used for a residential or non-residential purpose or both.

If a building has a number of Flats or Blocks/Wings, which are independent of one another having separate entrances of their own from the road or a common staircase or a common courtyard leading to a main gate, these will be considered as separate Census houses.

Household
'Household' is usually a group of persons who normally live together and take their meals from a common kitchen unless the exigencies of work prevent any of them from doing so.

The persons in a household may be related or unrelated or a mix of both. However, if a group of unrelated persons live in a Census house but do not take their meals from the common kitchen, then they will not collectively constitute a household. Each such person should be treated as a separate household. The important link in finding out whether it is a household or not is a common kitchen. There may be one member households, two member households or multi-member households.
You may come across three types of households namely, i) Normal households, ii) Institutional households and iii) Houseless households.
In a few situations, it may be difficult to apply the definition of household strictly as given above. For example, a person living alone in a Census house, whether cooking meals or not, will have to be treated as a household. Similarly, if husband and wife or

a group of related persons are normally living together in a Census house but are getting cooked meals from outside due to some reason, will also constitute a normal household. [*In House-listing, you are required to cover only the normal and institutional households.]

Other non-residential use
This category will cover the Census houses used as places of entertainment and community gathering and all other non-residential miscellaneous uses of the Census houses which have not been covered in any of the above categories

Vacant
If a Census house is found vacant at the time of house-listing i.e. no person is living in it and it is not being used for any other non-residential purpose

Place of worship:
If the Census house is exclusively used as a temple or gurudwara or mosque or church or any other place of worship

Factory/workshop/work-shed etc. :
If the Census house is exclusively used for running a factory or a workshop or used as a work-shed, record factory/workshop/work-shed

Residence-cum-other use
If the Census house is used for residence in combination with one or more non-residential purpose(s). This situation will apply to those houses which have only one access but are used for residence in combination with non-residential use(s).

Residence
Where the Census house is used for residence only [and not in combination with one or more other purpose(s)].

Dilapidated
Those houses which are showing signs of decay or those breaking down and require major repairs or those houses decayed or ruined and are far from being in conditions that can be restored or repaired may be considered as 'Dilapidated'.

Livable
Those houses which require minor repairs may be considered as 'Livable'.

Good
Those houses which do not require any repairs and in good condition may be considered as 'Good'.

Owned
If a household is occupying the Census house owned by itself and is not making payments in the form of rent to anyone, then the household may be considered as living in owned house. A household living in a Flat or a house taken on 'ownership' basis on payment of installments, should also be regarded as owning the house, notwithstanding the fact that all the installments have not been paid

Dwelling Room
A dwelling room would include living room, bedroom, dining room, drawing room, study room, servant's room and other habitable rooms provided they satisfy the criterion of their dimensions. Do not include kitchen, bathroom, latrine, store room, passageway and veranda which are not normally usable for living. A room, used for multipurpose such as sleeping, sitting, dining, storing, cooking, etc., should be regarded as a dwelling room.

Main source of drinking water
If a household gets drinking water from two or more sources, the source availed of more or during the greater part of the year should be recorded

Availability of drinking water source
The drinking water source available 'Near the premises', i.e., code '2' will be considered only if the available source is within a range of 100 meter from the premises in urban areas and within a distance of 500 meters in the case of Rural areas.

Latrine within the premises
The latrine facility can be exclusive or it may be combined with the place for bathing. In this situation both the facility of latrine and bathroom will be treated as available.

2. National Sample Survey, 65th Round

Household: A group of persons who normally lived together and took food from a common kitchen constituted a household. The adverb "normally" meant that the temporary visitors and guests (whose total period of stay in the household was expected to be less than 6 months) were excluded but the temporary stay-aways (whose total period of absence from the household was expected to be less than 6 months) were included. Thus a child residing in a hostel for studies was excluded from the household of his/her parents, but a resident domestic servant or paying guest (but not just a tenant in the house) was included in the employer's/host's household. "Living together" was given more importance than "sharing food from a common kitchen" in drawing the boundaries of a household in case the two criteria were in conflict. However, in the special case of a person taking food with his family but sleeping elsewhere (say, in a shop or a different house) due to shortage of space, the household formed by such a person's family members was taken to include the person also. Each inmate of a hotel, mess, boarding-lodging house, hostel, etc., was considered to be a single-member household except that a family living in a hotel (say) was considered one household only. The same principle was applicable for the residential staff of such establishments. The size of a household is the total number of persons in the household.

House: Every structure, tent, shelter, etc., was a house irrespective of its use. It might be
used for residential or non-residential purpose or both or even might be vacant.

Building: Building was a free-standing structure comprising one or more rooms or other spaces covered by a roof and usually enclosed within external walls or dividing walls which extended from the foundation to the roof. Dividing walls referred to the walls of adjoining buildings, i.e., dividing walls of a row of houses. These houses were practically independent of one another and likely to have been built at different times and owned by different persons. If more than one physically separated structure constituted one living unit, all of them together also formed a building. Usually, building would have four external walls. But in some areas the nature of building construction was such that it had no walls. Instead, it had a slanting roof which almost touched the ground and it was provided with an entrance. Such structures and also structures standing only on pillars were also be treated as buildings for the purpose of the survey.

Dwelling unit: It was the accommodation availed of by a household for its residential purpose. It might be an entire structure or a part thereof or consisting of more than one structure. There might be cases of more than one household occupying a single structure as those living in independent flats or sharing a single housing unit, in which case, there would be as many dwelling units as the number of households sharing the structure. There might also be cases of one household occupying more than one structure (i.e. detached structures for sitting, sleeping, cooking, bathing, etc) for its housing accommodation. In this case, all the structures together constituted a single dwelling unit. In general, a dwelling unit consisted of living room, kitchen, store, bath, latrine, garage, open and closed veranda etc. A structure or a portion thereof used exclusively for non-residential purposes or let out to other households did not form part of the dwelling unit of the household under consideration. However, a portion of a structure used for both residential and non-residential purposes was treated as part of the dwelling unit except when the use of such portion for residential purpose was very nominal. The dwelling unit covered all pucca, semi-pucca and katcha structures used by a household. Households living more or less regularly under bridges, in pipes, under staircase, in purely temporary flimsy improvisations built by the road side (which were liable to be removed at any moment) etc., were considered to have no dwelling.

Pucca structure: A pucca structure was one whose walls and roofs are made of pucca materials such as cement, concrete, oven burnt bricks, hollow cement / ash bricks, stone, stone blocks, jack boards (cement plastered reeds), iron, zinc or other metal sheets, timber, tiles, slate, corrugated iron, asbestos cement sheet, veneer, plywood, artificial wood of synthetic material and poly vinyl chloride (PVC) material.

Katcha structure: A structure which had walls and roof made of non-pucca materials was regarded as a katcha structure. Non-pucca materials included unburnt bricks, bamboo, mud, grass, leaves, reeds, thatch, etc. Katcha structures could be of the following two types:

(a) **Unserviceable katcha structure** included all structures with thatch walls and thatch roof, i.e., walls made of grass, leaves, reeds, etc. and roof of a similar material and

(b) **Serviceable katcha structure** included all katcha structures other than unserviceable katcha structures.

Semi-pucca structure: A structure which could not be classified as a pucca or a katcha structure as per definition was a semi-pucca structure. Such a structure had either the walls or the roof but not both made of pucca materials.

Independent house: An independent house was one which had a separate structure and entrance with self-contained arrangements. In other words, if the dwelling unit and the entire structure of the house were physically the same, it was considered as an independent house. In some parts, particularly in rural areas, two or more structures together might constitute a single housing unit. While the main residence might be in one of the structures, the other structures might be used for sleeping, sitting and for store, bath etc. In all such cases, all the structures together formed a single housing unit and were treated as an independent house.

Flat: A flat, generally, was a part of the building and had one or more rooms with self-contained arrangements and normal housing facilities like water supply, latrine, toilet, etc., which were used exclusively by the household residing therein or jointly with other households. It also included detached room or rooms with or without other housing facilities.

Room: A room was a constructed area with walls or partitions on all side with at least one door way and a roof overhead. Wall / partition meant a continuous solid structure (except for the doors, windows, ventilators, air-holes, etc.) extending from floor to ceiling. A constructed space with grill or net on one or more sides in place of wall or partition was not treated as a room. In case of conical shaped structures in which the roof itself was built to the floor level, the roof was also regarded as wall.

Living room: A room with floor area (carpet area) of at least 4 square metres, a height of at least 2 metres from the floor to the highest point in the ceiling and used for living purposes was considered as a living room. Thus, rooms used as bedroom, sitting room, prayer room, dining room, servant's room - all were considered as living rooms provided they satisfied the size criterion. Kitchen, bathroom, latrine, store, garage etc. were not living rooms. A room which was used in common for living purpose and as kitchen or store was also considered as living room.

Other room: It was a room which does not satisfy the specification of 4 square metres floor area and 2 metres height from the floor to the highest point of the ceiling or a room which though satisfied the specification was not used for living purposes. A room which satisfied the size criterion when shared by more than one household or when used for both residential and business purposes was treated as other room.

Veranda: It is a roofed space often without a door adjacent to living/other room. It is generally used as an access to the room(s) and is not walled from all sides. In other words, at least one side of such space is either open or walled only to some height or protected by grill, net, etc. A veranda was considered as a 'covered veranda', if it was protected from all sides and an 'uncovered veranda', if was not protected at least from any one of the sides. A covered veranda might have a door also. Corridor or passage within the dwelling unit was treated as portion of a room or a veranda depending on its layout. However, veranda did not cover a common corridor or passage used mainly as an access to the dwelling itself.

Earner of a household, place of work and maximum distance travelled by the earner: A household member with earning either from economic activities and/or from non-economic activities was considered as an earner in the household. Place of work meant a place where the activities, considering both the economic and non-economic activities together, were performed by the earners. Distance meant the one way actual distance from residence to the place of work normally travelled by the earner.

Major source of drinking*:* Information in respect of the household's major source of drinking water during the last 365 days was collected. Since a household might have used more than one source of drinking water, provision was made to record two such sources. First major source was the one that related to that source of drinking water which was used most by the household and the second major source was the one which was the next most used source of drinking water. The classifications of the sources of drinking water of the household were as follows: bottled water, tap, tube well/hand pump, *well*: protected, unprotected, tank/pond (reserved for drinking), other tank/pond, river/canal/lake/spring, harvested rainwater, others.

Bottled water: Drinking water packaged in bottles, pouches, and similar containers were classified as *'bottled water'*. Generally this packaged drinking water conformed to certain safety standards and were considered safe for drinking. However, tap water, well water, etc., kept by households in bottles, for convenience, was not be treated as bottled drinking water.

Well: A '*well'* was considered as protected, if it had generally the following protective measures to lower the risk of contamination: 1) A headwall around the well with a properly fitting cover, 2) A concrete drainage platform around the well with a drainage channel, 3) A hand pump or bucket with windlass.

A '*well'* without the protective measures to lower the risk of contamination was considered an '*unprotected well'*. *Rainwater harvesting* was the gathering or accumulating and storing of rainwater. Traditionally, *rainwater harvesting* is practiced in arid and semi-arid areas, and had provided drinking water, domestic water, water for livestock, etc. The other codes are self-explanatory.

Sufficiency of drinking water: This information was collected in respect of the most often used source. Thus, information was collected on whether availability of drinking water was sufficient throughout the year from the first source (most often used source). However, for collecting this information, the investigator had to depend on the judgement of the informant. For the households which did not get sufficient drinking water throughout the year from the first source (most often used source), information was collected regarding the calendar months of the year during which availability of drinking water was not sufficient from the first source.

Type of use of drinking water facility:For the households which had more than one sources of drinking water, information for this item related to the first source (most often used source). Information was recorded regarding whether the household's first source of drinking water was for: a) *household's exclusive use*; if the source was for the exclusive use of the household, b) *common use of households in the building;* if the

source was shared by the households with one of more households in the building, c) *community use;* if for use of households in the locality or, *d) others.*

Facility of bathroom: Information about the bathroom facility available to the members of the household was recorded as follows: a) attached bathroom: b) detached bathroom and c) no bathroom. If the dwelling unit had no bathroom in its premises, it was considered as having *no bathroom*. If the dwelling unit had one or more bathrooms attached to the dwelling unit (i.e., with direct access from its rooms, veranda or corridor) it was treated as with *attached bathroom*. On the other hand, if the dwelling unit had a bathroom in its premises but not attached to dwelling unit it was considered as *detached bathroom*.

Type of use of latrine facility: Information was collected on whether the household's latrine facility was for its exclusive use or shared with one or more households in the building or for use of households in the locality or whether the household had no latrine facility. If the latrine facility was for exclusive use of the household, these were classified as for *exclusive use of household*. If the latrine facility was shared by the household with one or more households in the building, these were classified as *shared latrine with other household(s).* If the latrine facility was for use of the households in the locality, or was for a specific section of people, these were treated as *public/community latrine*. If the household had no access to latrine facility, i.e., if its members used open area as latrine, these were treated as having *no latrine.*

***Type* of latrine (viz., flush, septic tank, pit latrine and service latrine):** A latrine connected to underground sewerage system was called flush system latrine. A latrine connected to underground septic chambers was considered as a septic tank latrine. A latrine connected to a pit dug in earth was called a pit latrine. In a few areas, one might still come across latrines that were serviced by scavengers. These were called service latrines.

Electricity for domestic use: Information was collected on whether the household had electricity facilities for domestic use. The use of the electricity for domestic use might be for lighting or cooking or for both. Moreover, electricity might be used legally or illegally and the electricity might be supplied to the household either through public agencies, corporations or by private suppliers. However, if the household made its own arrangement, either through generator or solar panel, to generate electricity, the household was not considered as having electricity for domestic use.

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Condition of structure*:* Condition of structure meant the physical condition of the structure of the house. The specific types of conditions in which the house was classified were: a) good, b) satisfactory, c) bad. If the structure did not require any immediate repairs, major or minor, it was regarded as in '*good'* condition. If the structure required immediate minor repairs but not major repairs, it was regarded as in '*satisfactory'* condition. If the structure of the building required immediate major repairs without which it might be unsafe for habitation or required to be demolished and rebuilt, it was regarded as in '*bad'* condition.

Ventilation of the dwelling unit: Information as to whether, in general, ventilation of the dwelling unit was good, satisfactory or bad was collected. Ventilation meant the

extent to which the rooms were open to air and light. Ventilation of all the rooms in the dwelling unit was considered. For assessing the situation the following guidelines were followed: (i) If the majority of the rooms had two or more windows with arrangement for cross ventilation, the dwelling unit was considered as having 'good' ventilation. (ii) If the majority of the rooms had two or more windows without having any arrangement for cross ventilation or if majority of the living rooms had only a single window each with proper arrangement for cross ventilation, the dwelling unit was considered to have a 'satisfactory' ventilation arrangement.

(iii) If the majority of the rooms had no window or had only one window each without
any arrangement for cross ventilation, the dwelling unit was considered to have 'bad' ventilation. However, in some cases, if the rooms of the dwelling unit had no proper ventilation, as per the criteria mentioned above, but the rooms had proper air-conditioning facility, such cases were considered as 'good' ventilation.

Drainage arrangement: Drainage arrangement meant a system for carrying off waste water and liquid waste of the house. It may be noted that if no system existed to carry off the waste water of the house, but water flowed down by its own gravity, in an unregulated manner, it was considered as no drainage.

Garbage collection arrangement*:* Garbage collection arrangement meant the arrangement which usually exist to carry away the refuse and waste of households to some dumping place away from the residential areas. In some places, the public bodies collected the garbage from the premises of the household or from some fixed points in the locality where the residents put their garbage; in others, a body of residents themselves made the arrangement of carrying the garbage to the final dumping place away from residential areas without participation of any public body.

Animal shed: Animal shed for the purpose of this survey, meant a structure where livestock (cattle, buffalo, horse, goat, pig, etc. but not poultry and pets) were sheltered. If there was no animal shed within 100 feet of the house (even on the adjacent plots) it was considered as having no animal shed. If there was an animal shed in the house or attached to the house, it was considered as a house with attached animal shed. If there was an animal shed within 100 feet of the house but not within / attached to, it was identified as a house with detached animal shed. It was not necessary that the animals and / or the shed was owned or possessed by any household in the house.

Experience of flood during last 5 years*:* If rain water during monsoon and / or water from sea, river, etc., entered into the ground floor of the house, or though water did not enter the house but the house was surrounded by water for some days then the house was considered to have experienced flood.