

Spatial Distribution of household Amenities in India

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ABSTRACT

The spatial variations in terms of kitchen, drinking water, electricity, latrine and bathroom facilities for households in different states and Union territories of India. The household amenities have a great importance in human life because; these contribute to the health improvement of the people and determine the quality of life. The absence of these facilities in an area or section of society is not only the outcome of demand-supply gap but also it has been due to the lack of financial resources, policy intervention, inefficiency of institutions etc. The study is based on the secondary sources and data collected from census 2011 and GIS techniques has been applied to show the spatial pattern. The present research work shows that the availability of drinking water decrease from high in western part and to low in western part of country.

1. Introduction

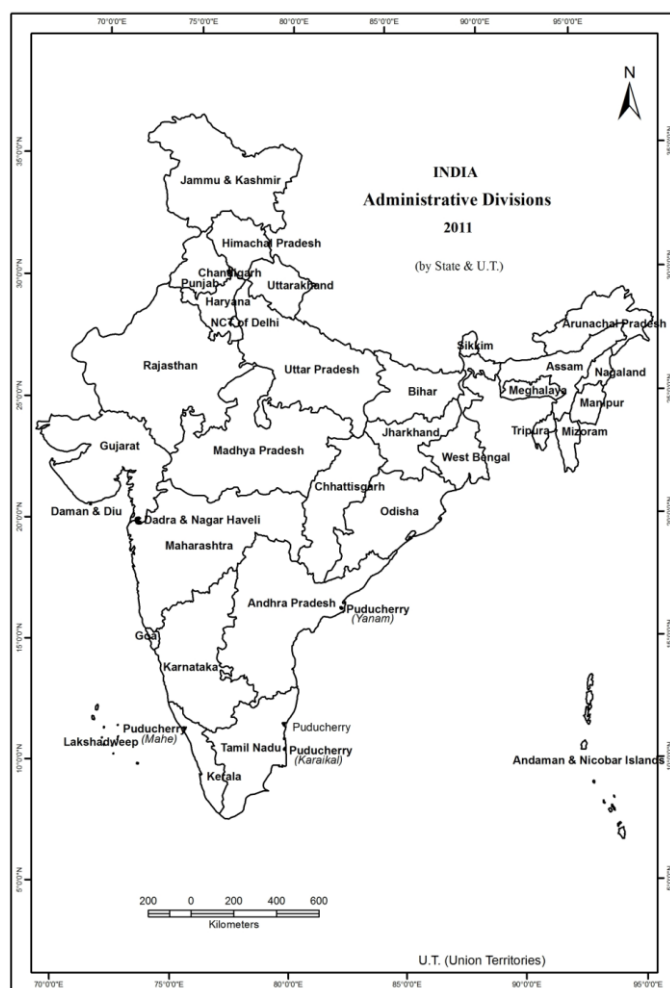
The term “basic amenities”, refers to drinking water supply, sanitation, electricity and so on (Shaw 2007). In general, the basic amenities that are required to prevent ill health and underdevelopment are shelter, water, medicine and education (Street en, 1984), while, household amenities include the amenities that are needed within the premises of households. It is assumed that availability of drinking water, sanitation facilities, etc. might contribute to the health improvement of the people and determine the quality of life of the society (Nayar 1997). The lacking of these facilities or their insufficient availability in an area is not only exerting an impact on the health status of the population but also it has been due to the lack of inefficiency of government. The health indicators such as availability of drinking water, sanitary facilities, electricity, Bathroom facility kitchen and latrine facility etc, are much more required for health improvement among the population. Therefore, this paper revealed that the status of five basic amenities like -Electricity Facility, Drinking Water Facility, Latrine Facility, Bathroom Facility and Kitchen Facility

2. Research Objective

The objective of the present research work is to find out the spatial distribution of household amenities at the level of state and union territory.

3. Data and Methodology

The data used in present study is taken from Censuses of India 2011, which is based on secondary sources. After collecting the data it is arranged, tabulated, calculated and analyzed keeping State and Union Territory as a unit of observation. After collecting the data it is arranged, tabulated, calculated and analysed. Absolute figures are converted into percentages and these percentages are processed for necessary cartographic representations and interpretation. Z score method is used to calculate Composite Index. Requisite maps have been drawn with the help of Arc GIS software.



4. Study Area

For the present research work; India as a whole is taken as the study area and the state/ union territories are taken as the unit. There were 28 states and seven union territories at the time of census enumeration 2011. India lies between 8°4'N to 37°6'N latitude and 68°7' E to 97°25' E longitude. The total geographical area of India is 32, 87,263 square kilometers (2.4 per cent of world's geographical area).

It is bounded by the Himalayas in the north and Indian ocean in the south, surrounded by Pakistan and Afghanistan in the north-west, China, Bhutan and Nepal in the north, Bangladesh and Myanmar in the east. The north-south extension of the country is 3,214 kilometres and east-west expansion is 2,933 kilometres.

India is the second most populated country in the world. It has total population of 1210 million of which 68.84 per cent is

rural and remaining 31.16 per cent is urban. Population density of India is 382 persons per square kilometre.

5. Results and Discussion

Table 1 shows state/UTs-wise distribution of household amenities like electricity, drinking water, latrine, kitchen and bathroom in the country.

Table 1

India: Household Amenities, 2011					
State/U.T.	Electricity	Latrine (within premises)	Bathroom	Kitchen (inside house)	Drinking water (within premises)
Jammu & Kashmir	85.1	51.1	52.4	85.7	48.2
Himachal Pradesh	96.8	69.1	67.5	88.2	55.5
Punjab	96.8	79.3	71.5	72	85.9
Chandigarh	98.4	87.6	86.6	73.6	86.2
Uttarakhand	87	65.8	60.5	70.1	58.3
Haryana	90.5	68.6	68.1	66.5	66.5
Delhi	99.1	89.5	87	79.1	78.4
Rajasthan	67	35	36.8	50.8	35
Uttar Pradesh	36.8	35.7	29.1	40.7	51.95
Bihar	16.4	23.1	11.3	33.5	50.1
Sikkim	92.5	87.2	65.1	90.2	52.6
Arunachal Pradesh	65.7	62	29	89.2	41.1
Nagaland	81.6	76.5	52.4	96	29.3
Manipur	68.4	89.3	31.1	93	16.1
Mizoram	84.2	91.9	65.2	83.8	31.2
Tripura	68.4	86	18.9	85.9	37.1
Meghalaya	60.9	60.9	62.9	33.3	24.1
Assam	37.1	64.9	24.5	88.3	54.8
West Bengal	54.5	58.9	27.1	60.9	38.6
Jharkhand	45.8	22	16.5	39.4	23.2
Orissa	43	22	14.1	62.9	22.4
Chattisgarh	75.3	24.6	14.8	56.1	19
Madhya Pradesh	67.1	28.8	25.8	46.8	23.9
Gujarat	90.4	57.4	56.5	72.3	64
Daman & Diu	99.	78.2	70.7	65.9	76.4
Dadra & Nagar Haveli	95.2	54.8	51.7	84.4	52.6
Maharashtra	83.9	53.1	64.3	72.7	59.4
Andhra Pradesh	92.2	49.6	50.6	54.2	43.2
Karnataka	90.6	51.2	74.8	89.3	44.5
Goa	96.9	79.7	81.4	92.9	79.7
Lakshadweep	99.7	97.8	96	95.5	83.7
Kerala	94.4	95.2	81.2	96.7	77.7
Tamil Nadu	93.4	48.3	49.9	76.5	34.9
Pondicherry	97.7	68.5	70	77.5	77.4
Andaman Nicobar Island	86.1	70.1	63.5	94.1	60.6
India	67.3	46.9	42.0	61.3	46.6

Electricity Facility

Electricity is considered as a necessary household infrastructure and has bearing on the quality of life of individuals in the household. According to census 2011, at national level two third (67.3 per cent) of households has access to electricity

facility. An examination of data given in Table 1 reveals that there are great variations in respect of accessibility of electricity for household. The availability of electricity varies from 16.40 per cent in Bihar to 99.70 per cent in Lakshadweep. Access of electricity facility to household is high in the states

namely Dadra & Nagar Haveli, Himachal Pradesh, Punjab, Goa, Puducherry, Chandigarh, NCT of Delhi, Lakshadweep, Daman & Diu, Chandigarh, NCT of Delhi and Daman & Diu. Some other states like Bihar, Uttar Pradesh, Assam, Odisha, Jharkhand, West Bengal, Meghalaya, Arunachal Pradesh and Rajasthan have very low level of accessibility of electricity facility. Rest part contains moderate and low level of accessibility.

Drinking Water

Access to safe drinking water has been emphasized worldwide as a basic need for survival and freedom from a whole host of ailments. The constitution of India through the provision of Article 47 guaranteed the states to provide the clean drinking water and improve the public

health. According to Census of India, if a household has access to drinking water supplied from a tap or hand pump/ tube well situated within or outside the premises, it is considered as having access to safe drinking water. On the basis of 'distance travelled' to collect the water, census of India classified all the households in three categories. These are households having 'water within the premises', 'near the premises' and 'away from the premises'. 'Within the Premises' refers the availability of water within the premises where households lived. According to census 2011 only 46.6 per cent of households have access to drinking water 'Within the Premises' 35.8 per cent households 'Near the Premises' and 17.6 per cent 'Away from the premises'. The proportion of households having drinking water availability 'Within the Premises' increased during 2001-11 from 39 per cent to 46.6 per cent.

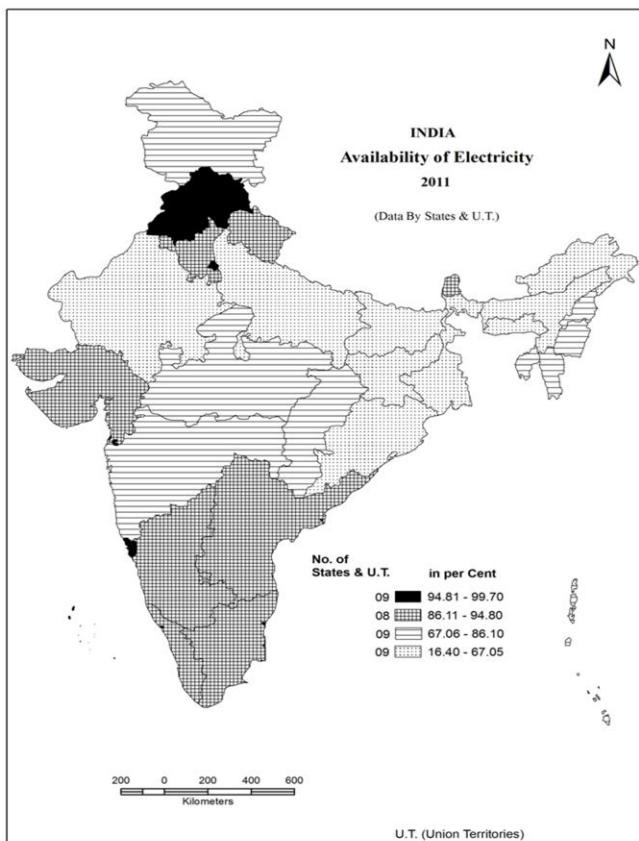


Figure 1

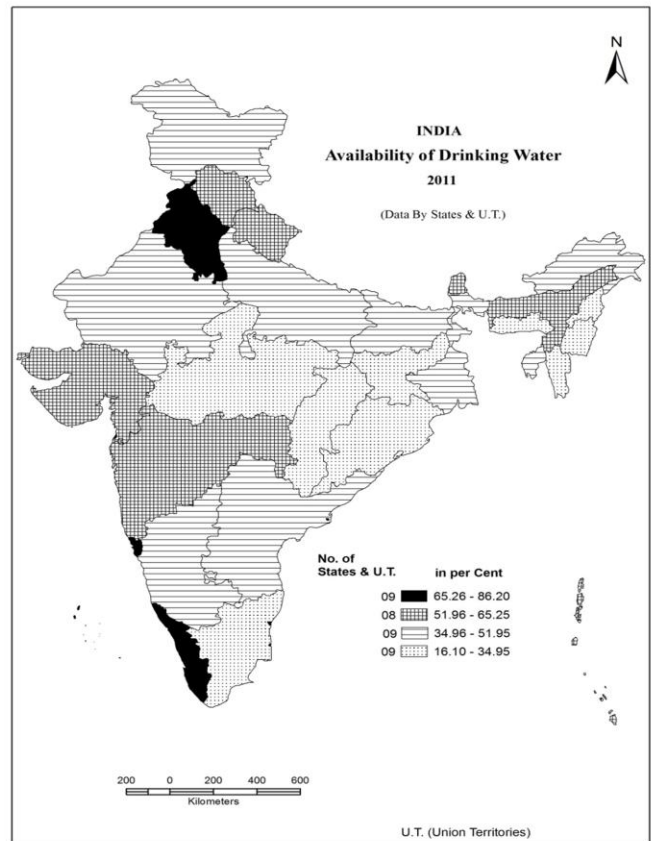


Figure 2

Table 1 shows that there is a great variation in availability of drinking water to household among the states and union territories in the country. The availability of drinking water to household varies from 16.10 per cent in Manipur to 86.20 per cent in Chandigarh. Punjab, Haryana, Goa, Kerala, Chandigarh, NCT of Delhi, Daman & Diu and Puducherry have high level of availability of drinking water facility while Manipur, Chattisgarh, Odisha, Jharkhand, Madhya Pradesh, Nagaland, Mizoram, Tamil Nadu and Meghalaya have very low level of availability of drinking water facility to household. Rest part contains moderate and low level.

Latrine Facility

Latrine Facility is one of the very essential components of the sanitation. Sanitation is an integral component of public hygiene and health in India. It contributes to clean and improved environment, social development and generates significant economic benefits. The problem is not only economic but of human dignity as well. With this felt need of sanitation in general and latrine facility in particular, the government of India launched a total sanitation campaign in 1999 as a demand-driven, community-led programme to make sanitation coverage universal. India's performance on this front is poor and raises a serious concern for the country. According to census 2011, at national level only 47 per cent households have access to latrine facility.

Figure 3 shows the spatial pattern of availability of latrine facility. Availability of latrine facility varies from 22.00 per cent in Bihar and Odisha to 97.8 per cent in Mizoram. Goa, Tripura, Sikkim, Chandigarh, Manipur, NCT of Delhi, Mizoram, Kerala and Lakshadweep contain high level of availability of latrine

facility. Jharkhand, Odisha, Bihar, Chhattisgarh, Madhya Pradesh, Rajasthan, Uttar Pradesh, Tamil Nadu, Andhra Pradesh, and Jammu & Kashmir contain very low level (22.00-50.35 per cent) of availability of latrine facility while rest part of the country contain medium and low level.

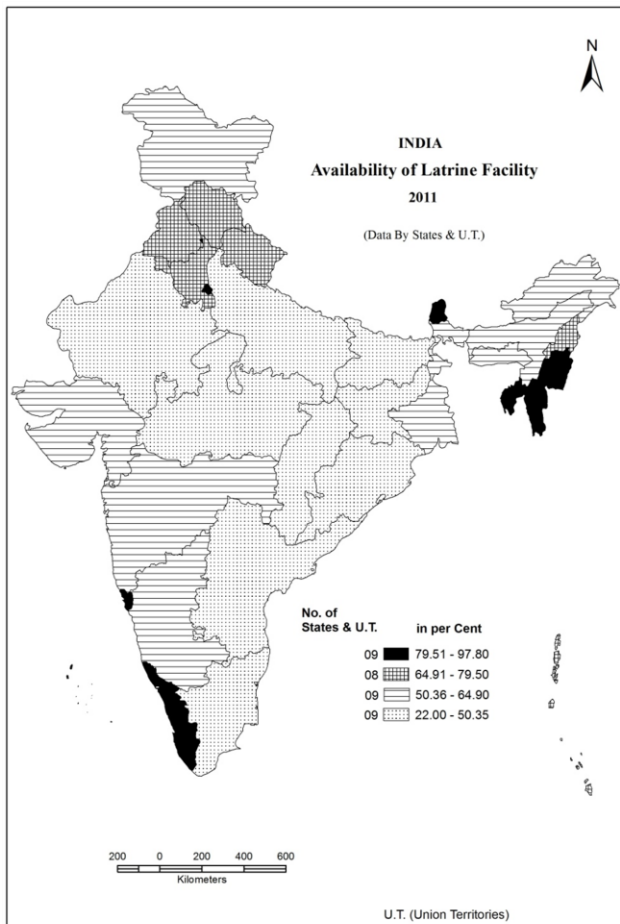


Figure 3

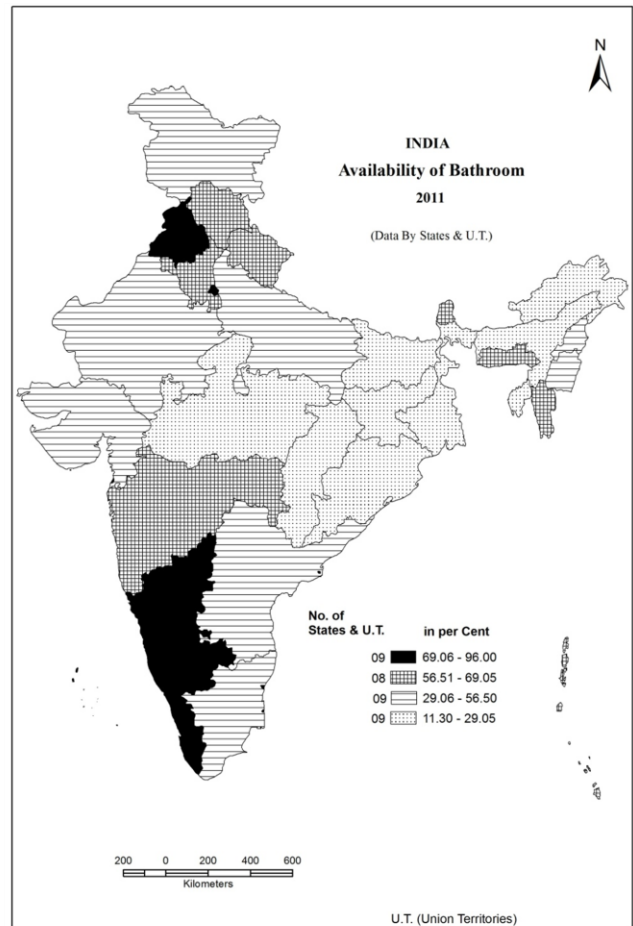


Figure 4

Bathroom Facility

Bathroom facility is one of the very essential for household. 58 per cent households have bathing facility in 2011 compare to 36 per cent in 2001. So, 22 per cent increase during this period. Table 1 reveals that there is a great variation in the availability of bathroom facility among the different states and union territories. Availability of bathroom facility varies from 11.30 per cent in Bihar to 96.00 per cent in Lakshadweep.

Daman & Diu, Puducherry, Punjab, Karnataka, Kerala, Goa, NCT of Delhi, Chandigarh and Lakshadweep contain high level of bathroom facility while Bihar, Odisha, Chhattisgarh, Jharkhand, Tripura, Assam, Madhya Pradesh, West Bengal, and Arunachal Pradesh contain very low level of bathroom facility. Rest part contains moderate and low level.

Kitchen Facility

Table 1 shows that 61.3 per cent household have kitchen facility inside home in 2011. There is a great variation in availability of kitchen facility (inside home) among the states and union territories of the country. Availability of kitchen facility varies from 33.30 per cent in Bihar to 96.70 per cent in Kerala.

Sikkim, Meghalaya, Goa, Manipur, A & N Island, Lakshadweep, Nagaland and Kerala have high level of availability of kitchen facility. The north eastern part, Jammu & Kashmir, Himachal Pradesh and Karnataka contain moderate level. On the other hand, north India (include Chhattisgarh, Odisha and Andhra Pradesh) contains very low level of availability of kitchen facility. Rest part of country contains low level.

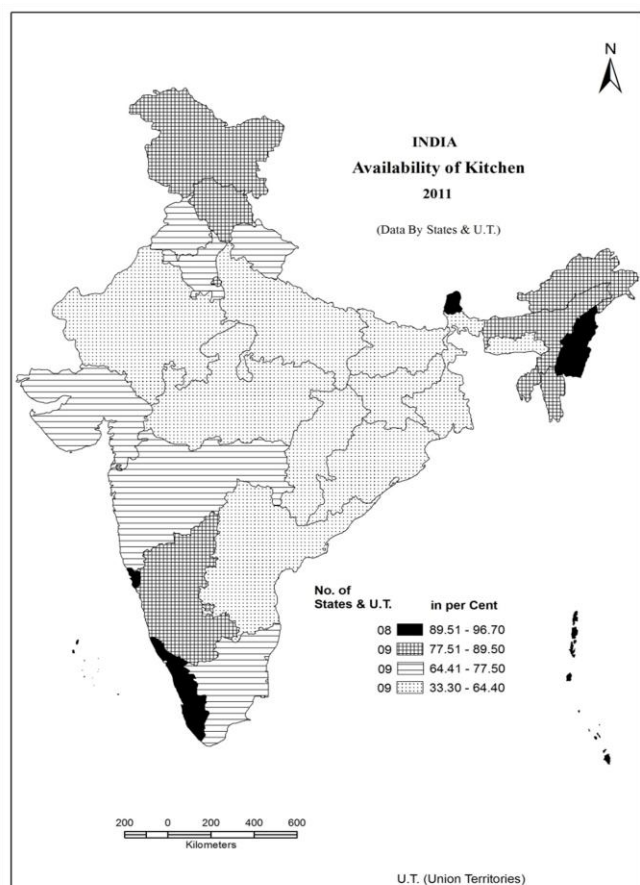


Figure 5

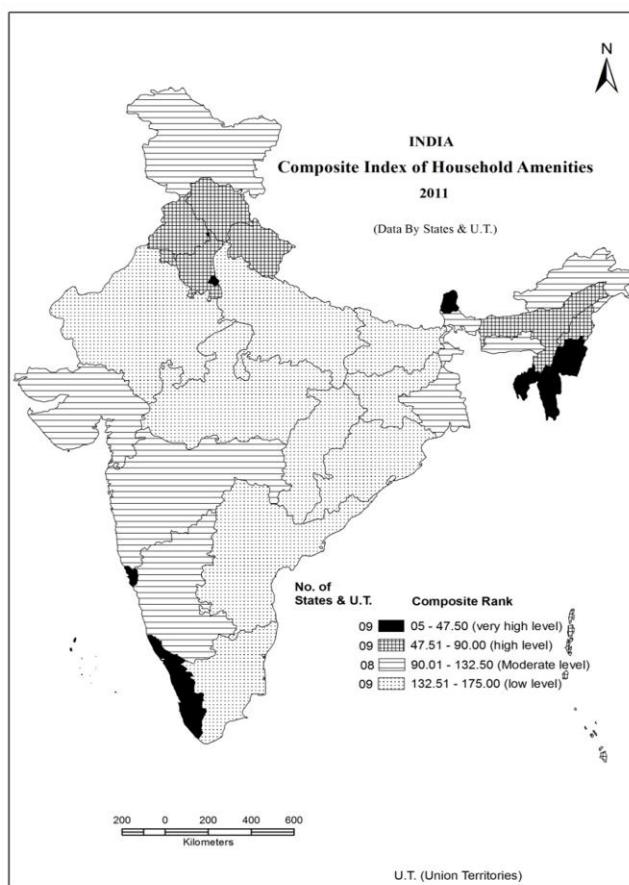


Figure 6

When we examine the value of composite index of these household amenities, we found that Lakshadweep, Kerala, NCT of Delhi, Chandigarh, Sikkim, and Goa contain high level of household amenities while north India as well as Chhattisgarh, Odisha, Jharkhand, Bihar have low level of household amenities. Punjab, Daman & Diu, Nagaland, Andaman & Nicobar Islands, Himachal Pradesh, Haryana, Puducherry, Uttarakhand and Mizoram have almost satisfactory situation. Rest part contains moderate level.

6. Conclusion

The study concludes that there is significant increase in household amenities during last decade (2001) however; regional variations existing between different states and union territories in respect of availability of drinking water, electricity, kitchen, latrine and bathroom facilities for households. North-east states (exclude Arunachal Pradesh and Meghalaya) Himachal Pradesh, Uttarakhand, Punjab, Haryana, NCT of Delhi, Chandigarh, Sikkim, Daman & Diu, Goa, Puducherry, Kerala, Lakshadweep and Andaman & Nicobar Islands have high level of household amenities while north India as well as Chhattisgarh, Odisha, Andhra Pradesh and Tamil Nadu have low level of household amenities.

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