



A regional analysis of housing, availability of household amenities and modern facilities in scheduled tribe population in Uttarakhand

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Abstract

India has recorded unprecedented development over recent years, in near about all aspects of development either be economic or technological, yet the pace of development has not been even rather it is unevenly distributed among the regions as well as among the various social groups of country. The condition of living in many territories/regions have been observed lagging far behind compared to progressing territories/regions, likewise, the certain groups of the nation such as STs/SCs were seen to be deprived of better quality of life than the other socio-economically endowed communities. The many of initiatives have been taken by the government since its independence towards the social and economic upliftment of them and as a result there has been witnessed remarkable improvement in their socio-economic condition but even, they are still far behind the desired level of development. These marginalized sections of society still remain deprived of standard housing condition, basic amenities like; potable water, kitchen and bathroom facility, clean fuel, electricity and modern facilities. Moreover, whatever be the changes in their living conditions, have not been even among them, thereby striking the disparity in their living condition because of their remotely located and hardly reachable habitants. Therefore, having assumed all these things, the present study has been carried out to assess the extent of scheduled tribe population to accessibility and availability of housing, amenities and facilities, and to inspect the regional variations in housing condition and availability of household amenities and modern facilities among the scheduled tribe population in Uttarakhand states. The study is entirely based on secondary sources of data collected from census of India, publication 2011, New Delhi. The district of the state has been considered as the smallest unit of study. For the assessment of regional variations, statistics like z-score and composite z-score have been applied. The overall analysis reveals the notable aerial variations across the state in level of development in respect of housing and household amenities and modern assets. The paper also attempts to recommend some pertinent suggestions for eradication of regional disparity and overall development of scheduled tribe population of Uttarakhand state.

Keywords: availability, household, amenities, modern, population

Introduction

The twenty-first century has been defined as the period of sustainability. Sustainability must include environment, economic and social dimensions. Nonetheless, in contest of India, the sustainable development has been emphasized rigorously and though result is reflected from its unprecedented progress, economic growth and too in technological advancement, but the social development and in that particularly the basic infrastructure cannot be ignored which has to be attained

Inclusive development which is viewed in terms of economic and social inclusion reflected in poverty reduction, better health outcomes, increased access to education and improved access to basic amenities such as electricity, drinking water, sanitation, clean fuel, transport, banking facilities, etc. The amenities and facilities are the critical determinants of living conditions and health of the people (Kundu *et al*, 1999) [2].

A large part of the population, particularly deprived and marginalized groups like scheduled castes (SCs), scheduled tribes (STs), and landless agricultural laborers, small and marginal farmers continue to suffer social and economic exclusions. Accordingly, a number of initiatives have been

taken by government of India since independence for the empowerment of these vulnerable sections that have historically faced deprivation, oppression, and social isolation. Despite of formulation of various programmes and planning, and certain constitutional provision, these sections of the country have been socially impoverished, economically deprived, and politically indifferent and could not reach upto the required level of development. Among them, the scheduled tribes' population has been observed to be the most socially, economically, educationally and politically disadvantaged due to many factors such as illiteracy, unawareness, poor connectivity & availability transportation, communication, and geographically isolation and lack of effective equal implementations of government run programmes to inaccessible areas.

The Scheduled Tribes comprise about 8.6 percent, respectively, of India's population (according to the 2011 census) and the Constitution (Scheduled Tribes) Order, 1950 lists 744 tribes across 22 states in its First Schedule. The Scheduled Tribes (STs) are official designations given to various groups of historically disadvantaged indigenous people in India. The terms are recognized in the Constitution

of India and the various groups are designated in one or other of the categories. During the period of British rule in the Indian subcontinent, they were known as the Depressed Classes. In modern literature, Scheduled Tribes is used as an official term for Adivasis. Since independence, the Scheduled Castes and Scheduled Tribes were given Reservation status, guaranteeing political representation. As per census of 2011, there were 246.6 million households in India. Out of which scheduled tribe households account for ST Population depicts heterogeneity at national, state and even in district level having differences in language, cultural practices and pattern of livelihood which influence their socio-economic status. Their problems differ from area to area even within their own groups (Dubey, 2009) ^[1]. The disparity in basic infrastructure such as housing, housing condition, drinking water, latrine, and electricity and modern facilities is also considerable. The census of India 2011 regarding the housing condition and availability of basic amenities and modern assets among the scheduled tribe population reveals that only 18 percent tribal population households have the drinking water facility within their houses, nearly 21 percent have the accessibility of latrine facility within their houses, 29 percent about 7 percent household are able to have the accessibility of bathroom and LPG as clean fuel respectively. The tribal population household having the facility of electricity constitutes only fifty percent. It clearly indicates that 82 percent, 79 percent, 71 percent, 93 percent and 50 percent scheduled tribe population households in India are still deprived of facility of drinking water, latrine, bathroom, clean fuel as LPG, and electricity respectively within their household. A comparative assessment of scheduled tribes, and scheduled caste regarding their availability of basic amenities discloses the wide disparity as Scheduled caste population households having the accessibility of drinking water, latrine, clean fuel and electricity in which they constitute 35.4 percent, 33.9 percent, 16.9 percent, 59 percent respectively are much better in living condition than the scheduled tribe population. The comparison of scheduled tribe with the total population in respect of availability of the amenities shows much wider gap as percentage share of total population of India having the accessibility of drinking water, latrine, clean fuel and electricity where they correspondingly account for 46.57 percent, 46.91 percent, 25.11 percent and 67.28 is increasingly higher than the both scheduled caste and scheduled tribe population but the disparity between the scheduled tribe and total population in is much higher than scheduled caste population. Thus, the assessment of data unfolds the fact that scheduled tribe population is the most deprived sections of the India in respect of living condition which requires an immediate action for their development. The present study attempts to show how the housing, basic amenities in terms of drinking water, latrine facility, LPG as clean fuel, electricity and modern assets such as TV, mobile, motorcycle/scooter, computer, etc. vary across the districts of state Uttarakhand.

An overview of scheduled tribe, scheduled caste and total population with regard of availability of amenities exposes that accessibility of drinking water, latrine facility, LPG and electricity to ST households out of total households constitute 55.8, 46.1, 30.4 percent and 83.9 percent respectively whereas the corresponding figures of SC households are 44.6 percent,

44.7 percent, 26.1 percent and 79.8 percent which surprisingly depicts that ST population possessing these basic amenities are significantly greater than the SC population. However, there percentage share still remains very behind than the state average where the total population of Uttarakhand by comprising 58.25 percent, 65.77 percent, 44.22 percent, and 87.03 percent exceeds than that of the both ST and SC. It is interesting to note that of the ST of Uttarakhand in respect of availability of basic amenities and modern facilities are much better than the ST of India.

Objective

The present study has been carried out to assess the extent the of scheduled tribe population to accessibility of housing and household amenities and facilities and to inspect the district wise variations in housing condition and availability of amenities and modern facilities, in schedule tribe population households in Uttarakhand state.

Data Base and Methodology

The study is based on secondary sources of data obtained from the census of India, publication, 2011, New Delhi. To assess the level of development in respect of availability of housing, and accessibility of scheduled tribe population in household amenities and modern facilities in thirteen districts of the states, thirty two indicators of housing and modern amenities and facilities have been taken into considerations. The selected indicators come under the categories like housing condition, building material used in construction of houses, drinking water, lighting, cooking fuel, kitchen and bathroom facility, and modern assets. At first, the raw data of each selected indicators have been added district wise. These indicators fall into the categories like building material used in the construction of houses, drinking water, lighting, and other household amenities. In the second step, the raw data for each variable which determines the areal variation of levels of housing and modern household amenities have been computed into standard score. It is generally known as Z value or Z-score. The score quantifies the departure of individual observations, expressed in a comparable form. This means it becomes a linear transformation of the original data (Smith, 1973)⁹. It may be expressed as:

$$Z_{ij} = \frac{X_{ij} - \bar{X}_i}{\sigma_i}$$

Where: Z_{ij} = Standardised value of the variable i in district j ,

X_{ij} = Actual value of variable i in district j ,

\bar{X}_i = Mean value of variable i in all districts,

σ_i = Standard deviation of variable i in all districts.

In the second step, the Z-scores of all variables have been added district wise and the average has taken out for these variables which may be called as composite score (CS) for each district and may be algebraically expressed as:

$$CS = \frac{\sum Z_{ij}}{N}$$

Where: CS stands composite score,
 $\sum Z_{ij}$ indicates Z-scores of all variables i in district j ,
 N refers to the number of variables.

The positive values relating to the Z-score of a district explain high level of development in respect of housing and modern household amenities and negative values show the low level of development in these aspects. To compute the statistical

data by applying the advanced statistical techniques, the SPSS Software (Version 16.0) and R Software (Version 2.12.2) have been used. Besides, advanced statistical techniques, GIS-Arc view program (Version 3.2 a) has been applied to show the spatial patterns of availability of total housing and modern household amenities and facilities among the districts of Uttarakhand state through maps.

Table 1: Indicators of Housing and Household Amenities and Modern Facilities

SR. No	Variable	Definitions
1	X_1	percentage of households living in good condition of households
2	X_2	Percentage of households living in livable condition households
3	X_3	Percentage of households living in Dilapidated households
4	X_4	Percentage of Households used burnt brick as material of roof to total households
5	X_5	Percentage of household used stone as the material of roof to total households
6	X_6	Percentage of household used concrete as the material of roof to total households
7	X_7	Percentage of households having burnt brick walls
8	X_8	Percentage of household having stone walls
9	X_9	Percentage of households having concrete walls
10	X_{10}	Percentage of households used bricks for the construction of the floor
11	X_{11}	Percentage of Households used stones for the construction of floors
12	X_{12}	Percentage of households used cement for the construction of floors
13	X_{13}	Percentage of households used mosaic/tiles for the construction of floors
14	X_{14}	Percentage of households having owned houses
15	X_{15}	Percentage of households with three dwellings rooms
16	X_{16}	Percentage of households with four dwellings rooms
17	X_{17}	Percentage of households with five and more dwelling rooms
18	X_{18}	Percentage distribution of households having sources of drinking water within their households
19	X_{19}	Percentage of household used taps as drinking water
20	X_{20}	Percentage of household used hand pump for drinking water
21	X_{21}	Percentage of households used tube well for drinking water
22	X_{22}	Percentage of households used electricity for lighting
23	X_{23}	Percentage of households having bathroom facility within the house
24	X_{24}	Percentage of households having the latrine facility within the house
25	X_{25}	Percentage of households used flush toilet within the house
26	X_{26}	Percentage of households used pit latrine within the house
27	X_{27}	Percentage of households having the kitchen within the house
28	X_{28}	Percentage of households used LPG cooking
29	X_{29}	Percentage of households having television
30	X_{30}	Percentage of households having Telephone
31	X_{31}	Percentage of households having computer
32	X_{32}	Percentage of households having scooter/motorcycle/moped

Study Area

The state Uttarakhand as a whole has been selected for the present study and the district has been taken as the smallest unit of the analysis. The state lies in the northern part of India. Geographically extends between 28°43' N to 31°28' N latitudes and 77°34'E to 81°03' E longitudes. The state covers an area of 54,483 square kilometer which is 1.83% of total geographical area of the country.

The state Uttarakhand came into existence after the bifurcation the state Uttar Pradesh on 9th November, 2000. Administratively, it has been divided into thirteen districts and

the unit of district has been considered as the smallest unit of the study. The state is bounded by Nepal in East, Tibet in the North, Himachal Pradesh on the West, and Uttar Pradesh in South and Haryana in the northwest.

Topographically, the state Uttarakhand has been divided into three regions namely, the Himalayas, the Siwalik and the Tarai. The two holy rivers; the Ganga and the Yamuna have their origin in the state. Climatically, the state is characterized by temperate climate excluding the plain where the climate is tropical. The average temperature of the state is 26 degree Celsius whereas the average rainfall is

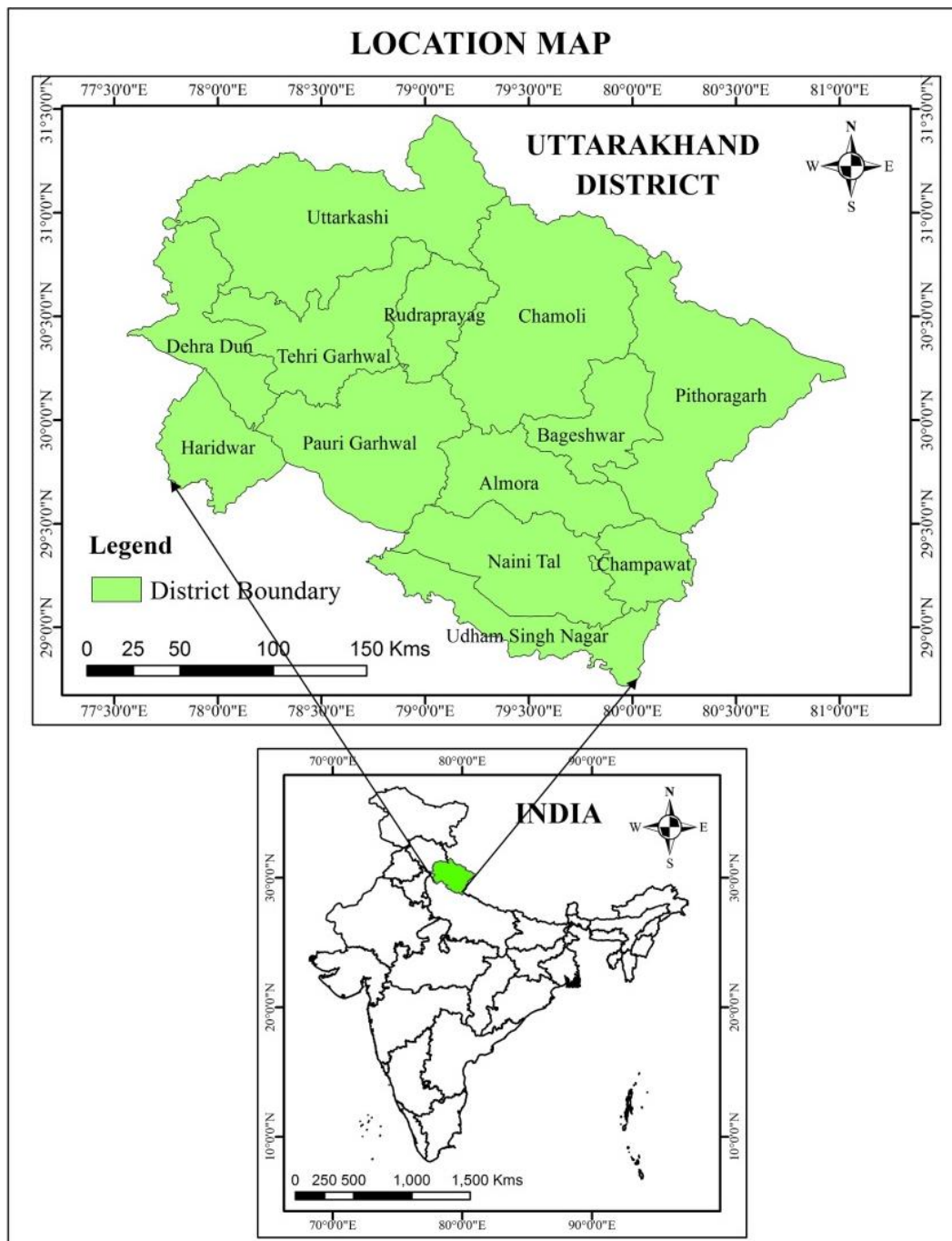


Fig 1

The total population of Uttarakhand, as per the census of 2011, is 10,086,292 in which male and female population constitute 5,137,773 (50.93%) and 4,948,519 (49.07%) respectively. Out of total population, 74.33 percent live in rural areas and the remaining 25.67 percent in urban areas. The state is 20th most populous state of the country constituting 0.89 percent population of the country. The density of Uttarakhand is 189 persons per square kilometer. The general sex ratio, that is the number of females per 1000 males, is 963 which is higher than the national average sex ratio (943), while the child sex ratio is 890 girls per 1000 boys. The literacy of Uttarakhand is 78.82%. The literacy of scheduled caste and scheduled tribe is 78% and 89%

respectively.

Scheduled Tribes in Uttarakhand

There are many reasons for the selection of Uttarakhand. First, the state has the scheduled tribe population having the distinct and chronic culture. Uttarakhand is a home of sizeable population of tribal and the scheduled tribes. As per census of 2011, the state has the 0.8% of tribal population of the country by constituting 2.8% of its total population. These are spread over all the districts of Uttaranchal, but their major concentrations (94% population) are in district Udham Singh Nagar, Dehradun, Pithoragarh, Chamoli, and Nainital. Out of total scheduled tribes population, 94% has been recorded to

have been living in rural areas whereas the remaining about 6% has been witnessed to be concentrated in urban areas of the state. There are different views about their origin and history. One view about their history is that they migrated from Rajasthan during prosecution of and settled in Tarai areas. There is another view that Buxas come from Monogoloid stock and have nothing in common with people of up or Rajasthan. The tribe of Uttarakhand is well known for its distinctive culture and has been an interested issue among the researchers, demographers and sociologist and economists. The tribes of Uttarakhand comprise five groups namely; Buxas, Bhotias, Tharus Jaunsaries and Raji which were scheduled as tribes in constitution of India in 1967. Among all these tribes, the Jaunsaries constitute the largest share of tribal population while the lowest share is comprised by Raji tribe. The district Udham Singh Nagar has the maximum tribal population which is 1, 23,037 people as per census of 2011 but Rudraprayag by comprising 386 persons has been recorded to be the lowest having the minimum tribal population. The Uttarakhand state has been found very much concerned considering the socio-economic development of scheduled tribe population since it has been declared a state. As result The Uttarakhand government by launching a provision through constitution has made the reservations by guaranteeing four percent reservations for scheduled tribes in administrative services, educational institutions, public sectors, municipal and autonomous organizations. This is reason that the quality of life of scheduled tribe population is much better than the national average as well other state's ST.

Table 3: Availability of Housing, Household Amenities and Modern Facilities to Scheduled Tribe Population in districts of Uttarakhand

Category	Percentage	No. of Districts	Percent of total	Name of Districts
High	Above 0.18	5	38.46	Hardwar, Almora, Dehradun, Rudraprayag, Chamoli
Medium	0.18 to -0.18	6	46.15	Nainital, Bageshwar, Pithoragarh, Garhwal, Tehri-Garhwal, Uttarkashi
Low	Below -0.18	2	15.38	Champawat, Udham Singh Nagar
Total		13	100	

Source: Based on table No. 1.

An analysis of the table-3 reveals that the five districts of Uttarakhand which comprise nearly 38 percent of all districts namely Hardwar, Almora, Dehradun, Rudraprayag, Chamoli fall in high category of housing, household amenities and modern assets. These districts form two distinct regions. The one contiguous region is made by Rudraprayag, Chamoli and Almora which extends from the north to the central part of the state. The second region formed by the districts of Dehradun and Hardwar that lies in the west of Uttarakhand. The six districts of Uttarakhand records the medium level of housing, household amenities and modern assets. They are Nainital, Bageshwar, Pithoragarh, Garhwal, Tehri Garhwal,

Spatial Analysis of Housing, availability of amenities and modern facilities

Table-2 shows the composite mean z score of housing, household amenities and availability of modern assets in state Uttarakhand. An assessment of table-2 reveals that there is wide range of variations in level of development in respect of housing, household amenities and modern assets in districts of Uttarakhand. It varies from - 0.81 score in district of Champawat to 0.51 score in district of Hardwar.

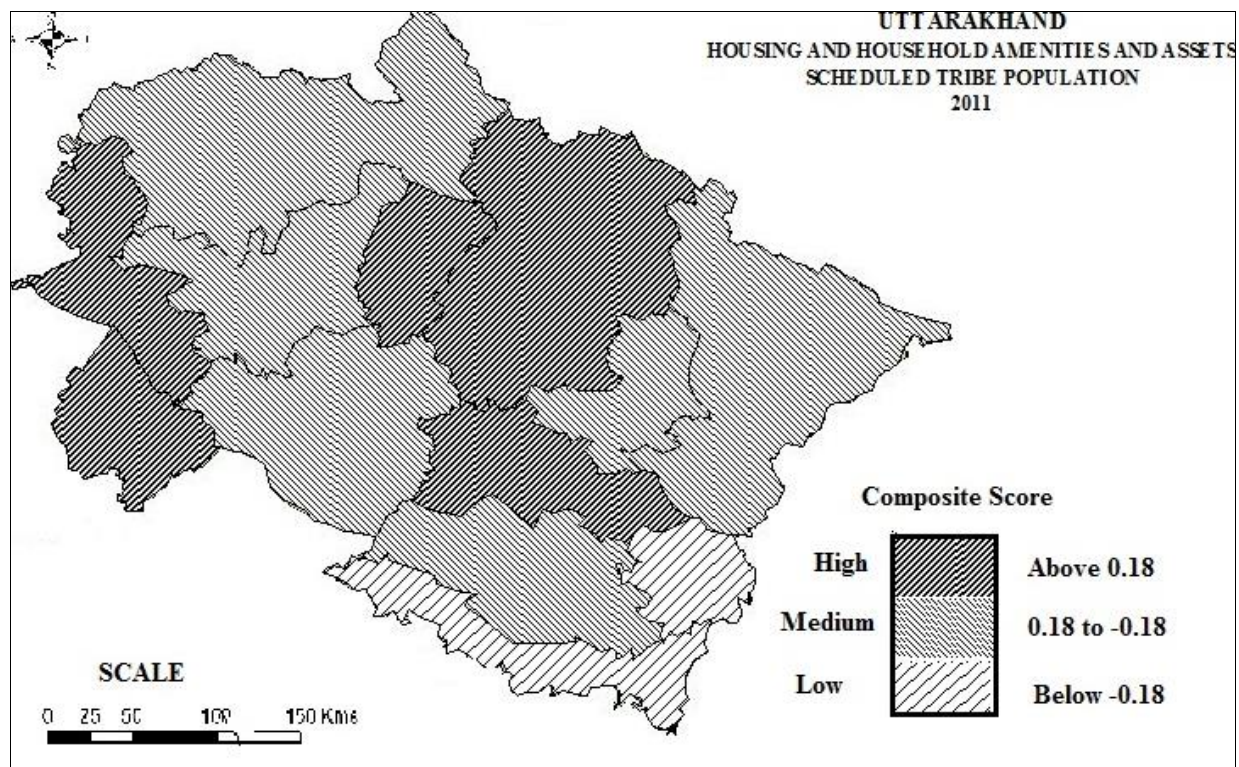
Table 2: Distribution of Housing, household amenities and modern facilities in Scheduled Tribe Population in State Uttarakhand, 2011

Sr. No.	Districts	Composite mean Z score of housing, amenities and facilities
1	Uttarkashi	0.16
2	Chamoli	0.22
3	Rudraprayag	0.24
4	Tehri-Garhwal	0.01
5	Dehradun	0.24
6	Garhwal	-0.13
7	Pithoragarh	0.04
8	Bageshwar	-0.07
9	Almora	0.51
10	Champawat	-0.81
11	Nainital	0.07
12	Udham Singh Nagar	-0.69
13	Hardwar	0.20

The entire range of variations in respect of housing, household amenities and facilities may be arranged into three grades high (above 0.18), medium (0.18 to -0.18) and low below (-0.18).

and Uttarkashi. Two districts namely Bageshwar and Pithoragarh constitute a distinct region in the east of Uttarakhand while the four districts such as Uttarkashi, Tehri Garhwal and Pauri Garhwal and make a comparatively larger region extending from the north to the southern part of the state.

There are only two districts which witnessed the low level of development in respect of housing, availability of household amenities and modern facilities. These are Champawat and Udham Singh Nagar. The both districts make, thing smaller but a well recognizable region in the south-east of Uttarakhand.



Source: Based on Table no. 3.

Fig 2

Conclusion

The overall analysis of the study shows the considerable regional variations in state Uttarakhand in terms of availability of housing and household amenities and modern facilities. The result indicates that the level of development is high in north, central and western part of the state while the north-east, north, south and western part of state extending from the district Uttarkashi in the north to the district Nainital in the south have medium level of development. The southern part of Uttarakhand has experienced the low level of development.

It Recommendations

The following suggestions may be followed to eliminate the inter-district and regional variations in the housing condition and availability of household amenities and facilities in Uttarakhand state-

The study demonstrates that housing, availability of household amenities and facilities are unevenly distributed among the districts of state Uttarakhand. Therefore, in order to bring the equity in amenities on district level in state, It may be recommended that the areas having the poor accessibility of amenities be prioritized and thus more effective policies focusing mainly on the scheduled tribe population particularly living in rural areas should be implemented as the most of the STs are confined to rural areas. There is also an urgent need of more sustained and rigorous campaign to be launched on towards the 'Right to Sanitation'. Besides, a mechanism should to be introduced for monitoring the progress and performance of sanitation programmes at the district level. Most of tribal areas having the habitants in terrain and hardly reachable areas remain deprived of beneficiaries' schemes launched by government therefore; a special emphasis needs

to be given on providing the connectivity to far-flung, scattered and hilly areas of the state.

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