

Dimensions of Housing Problem in Rural Areas - A Study in the Undivided Sonitpur District of Assam

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Abstract: Shelter is considered as one of the essential needs of mankind after food and clothing. Housing is one of the basic requirements for the survival of human beings and ownership of house provides significant economic and social security, rural housing is one of the basic components of rural development. The problem of adequate housing is indeed a global issue. As per United Nation Statistics (2016), about one quarter of the world's population do not have adequate shelter. In our country as well, the scenario of housing assumes a very deplorable condition. Among the states of India, Assam is severely lacking in adequate housing facility. In the undivided district of Sonitpur of Assam, the problem of adequate housing is more acute in rural areas as the census figure of 2011 speaks that around 10.15 percent of total rural population are living in a dilapidated dwellings compared to 4.53 percent in urban areas. The region is also lagging behind in minimum essential amenities of living such as proper sanitation facilities, access to safe drinking water and electricity more particularly in rural areas. However, a significant variation in the availability of essential amenities of living and housing conditions is noticed across social and economic groups from the research study. The research study is done on the basis of primary survey conducted in 300 households of the district. The simple random sampling technique is used for this purpose. The sampled households are selected purposively so that they represent different income groups in order to understand the dimension of problem. The entire study aims to focus on rural development by means of providing the rural poor with better housing and living conditions ever since.

Index Term - Housing shortage, basic amenities, income groups and rural development.

I. INTRODUCTION

The very existence of man depends upon the fulfillment of his three basic or fundamental needs i.e., food, clothing and shelter. Adequate shelter or in other words a house is a fundamental pre-requisite for each and every human being in terms of safety, security, self-esteem, social status, cultural identity, satisfaction and achievement. In fact, access to shelter and hygienic living conditions are crucial to human well-being as they directly determine the quality of life. Suitable home with adequate living rooms, access to sanitation, drinking water and electricity is important to every family of both rural and as well as urban areas. But most of the families cannot construct such a house with their own resources and thus are being deprived of minimum basic amenities of living. The physical, economic and cultural factors have forcefully determined the site, size, growth, pattern and spatial distribution of houses in a region. Among the physical factors climate, topography, relief, drainage, soil characteristics and vegetation have profound effects on house types. Besides, economic, religious and cultural factors play a great role in determining the types and distribution of houses in a region more particularly in rural areas. The rural dwellings of different parts of the world are in fact a replica or outcomes of different culture and traits evolved through time. Apart from that access to adequate transport and market facilities, availability of building materials, prices of building materials, technology, Government policies, rules and regulations also significantly determines the pattern and distribution of houses.

Among the states of India, Assam is severely lacking in adequate housing facility. However, the shortages of dwelling units are more acute in rural areas compared to the urban counterparts, as expected. In fact one out of the three rural households belongs to the BPL category. The total shortage of the urban housing according to Twelfth Five Year Plan (2012-2017) estimated to be 18.78 million units and 43.67 million units in rural areas respectively.

In the district of Sonitpur of Assam the problem of adequate housing is more acute in rural areas. According to Census 2011, around 10.15 percent of the total rural population is living in a dilapidated dwellings compared to 4.53 percent in urban areas. Majority of the households in both rural and urban areas are seen to accommodate more people than their capacity or in other words are living in congested dwellings. The problem of housing shortages and lack of minimum basic amenities is more acute in rural areas

compared to the urban households resulting in rural-urban disparity in social development. Interestingly, the houses vary in sizes and shapes from a large building to a single room. There are houses which are in a dilapidated or in non-livable conditions but even then these are occupied as dwelling units by the economically downtrodden and weaker sections. Most of the poor households lack minimum basic amenities such as sanitary toilet, safe drinking water and electricity. Thus, the possession of a shelter with all necessary amenities cannot be a dream of a poor man in the wake of the rising prices of the building materials, scarcity of land, financial crisis and the rapidly growing population. Although Government has implemented various housing schemes in rural areas for solving housing problem it has made very limited progress. In fact there is miles to go ahead to solve and understand the needs and demands of the rural folks. The concept of housing is indeed multi-dimensional. It is not merely a roof over head but rather it comprises of integrated issues like health, sanitation, access to safe drinking water, household amenities, access to transport network, employment, education and so on. All these aspects related to housing creates the scope for an in depth investigation.

The shortage of adequate housing and non-availability of various amenities emerges as a major problem and public issue because of dissatisfaction with the prevailing conditions particularly in rural areas.

The shortages of dwelling units or crisis of housing are created due to population movement from rural areas to urban centers due to industrial development, exploitation of resources which flourishes urbanization process.

A building or a house stands on a suitable plot of land or build up area. But the land is a scarce resource. The ever increasing population is creating immense pressure on the existing land resources which is limited. To add to this, due to the prevalence of the system of the hereditary ownership of land, the father's land is fragmented among sons which resulted small cultural land-holding sizes.

The rising prices and non-availability of building materials such as thatches, woods, grasses, leaves, reeds, bamboos, bricks, stones, sand, cement, tiles, corrugated metal sheets, iron rods, asbestos and all other usable the housing problem is turning to be a major social issue. The building materials to construct concrete houses are not easily accessible by rural people due to the poor transportation network in the remote parts of the districts of Assam and Sonitpur is no exception.

With the development of industries, urbanization there is a spurt in population explosion, as men are bound to migrate from one place to another, to accommodate the increasing number of population. Before 1947, in the case of Assam, there was no major housing problem. Due to Indo-Pak partition in 1947 the country and as well as the state received a bulk of immigrants and refugees. The same migration pattern was repeated after 1971 due to partition of erstwhile East Pakistan (present Bangladesh) from erstwhile West Pakistan (present Pakistan). Due to the partition, many Bengali Muslims and Hindus entered into Assam and consequently into Sonitpur district which is burdened with neo-settlers. The continuity of illegal infiltration of immigrants specially Bengali Muslims from Bangladesh since partition occupying the low lying river banks or char land in the district is posing a serious threat to the demographic set up of the district and is imposing pressure on the existing civic amenities. At the same time, the flow of migrants has been going on from Nepal, Sikkim and Darjeeling district of West Bengal. These Nepali immigrants have settled in the foot hill zones of the district bordering the Arunachal Pradesh and the plain areas particularly on the alluvial tracts where enough grazing land is available for their cattle.

The inter-state migration from Rajasthan, West Bengal, Orissa, Bihar and Punjab is also a common picture. These immigrant people contributed towards high population growth in the Sonitpur district. So, the issue of providing shelter to this ever growing population has become critical. This will consequently result a demand-supply gap in housing units in rural and urban areas particularly for the economically weaker section and lower income groups. These groups of population growth in the district may lead to the congested settlement as they have to be accommodated within limited land.

As the district is industrially backward, the housing policy and economic growth solely depends upon agricultural products. The modern housing materials (iron, cement, tiles) and technology (design and planning) are to be purchased from outside the district, so, the cost of transportation is too high for the needy population.

Thus, the study on housing problem in general with special emphasis on the rural areas of the district will go a long way to throw fresh light in all related issues. The study will also help the geographers, the academicians, planners, and various Government wings for economic planning, policy framing and developmental work.

II. OBJECTIVES

- (i) To study the problems of housing in general.
- (ii) To examine the accessibility of other basic household amenities related to housing like- electricity, drinking water sources, sanitation and existing bottlenecks.
- (iii) To find future needs and suggest measure for effective planning so that better housing and habitable environment can be developed, which will result in all round development of the area as a whole.

III. RESEARCH METHODOLOGY

The study has emphasized mainly on the socio-economic status of the rural population considering their housing conditions and access to basic amenities and sanitary conditions. For this purpose, data is obtained from both primary and secondary sources to supplement in making general observations. Primary data is collected at the village level with the help of questionnaires, interviews of village headmen and door-to-door household survey. The simple random sampling technique is used for the purpose of household survey. The sample size is taken as 30.00 percent so that it represents adequately the Universe of the district. For the study, the three sub-divisions of the district i.e., Tezpur, Biswanath and Gohpur are properly represented. Of these three sub divisions two blocks from each sub-division i.e., all together six blocks has been selected out of total 14 blocks for a detailed study. The Naduar and Rangapara blocks under Tezpur sub-division, the Biswanath and Sakomatha blocks under Biswanath sub-division and the Pub-Chaiduar and Chaiduar blocks under Gohpur sub- division have been considered for the comprehensive study. A total of 300 households are surveyed from 30 villages from all of these six blocks having 5 villages from each block. These villages are considered purposively to represent different income groups of the district. Housing is considered to be a broad term which includes not only the dwelling structure but also the available basic amenities for living. Considering this, the problems of housing and its related issues are studied from the perspective of certain parameters like type and quality of dwelling units, provisions of water supply, sanitary conditions and availability of electricity within the households. The data collected from field has been classified and tabulated into simple and cross tables, showing percentages and are graphically represented in the form of bar diagram and pie chart with the help of MS excel. For statistical analysis of all shots of information collected from field SPSS software package (version 9.05) is used.

IV. STUDY AREA

The Sonitpur district is located on the North bank of Brahmaputra River; within longitudes $92^{\circ} 16' E - 93^{\circ} 43' E$ and latitudes $26^{\circ} 30' N - 27^{\circ} 01' N$. The district is bounded by Arunachal Pradesh in the North, river Brahmaputra in the South, Lakhimpur district in the east and Darrang district in the west. The total Geographical area of the Sonitpur district is 5324 sq. km. The district headquarters is Tezpur and there are three sub-divisions i.e. Tezpur, Biswanath Chariali and Gohpur. From the developmental angle, Sonitpur district is divided into 14 Development Blocks. Below the Block level set-up, there are Gaon Panchayats, each comprising a number

of villages and governed by local-self bodies. The district comprises of 10 statutory towns and 4 major townships. The number of villages in the district has gone up to 1876 from 1798 in number as per Census 2011.

The Sonitpur district is located between the Mighty Brahmaputra and Himalayan foothills of Arunachal Pradesh. The district is largely comprised up of plains with some hills. There are number of River Island in Brahmaputra River locally known as Chars or Chaporis. The district falls in the sub-tropical climatic region and enjoys monsoon type of climate.

According to 2011 census, Sonitpur has the population of 19, 25,975, while according to 2001, total population was 16, 77,874, which indicates a growth rate of 15.67 percent over the decade. The population density is 365 inhabitants per sq. km. The sex-ratio is estimated as 946 females for every 1000 males. While the literacy rate of the district is 67.34 percent according to census 2011.

V. FINDINGS OF STUDY

5.1- Recent scenario of rural housing from socio-economic perspective:

5.1.1 Housing Conditions:

As the first measure of quality and durability, the houses can also be classified on the basis of the type of structure and the building materials used for the construction. Based on the building materials the houses can be classified as Pucca house (building materials used for the construction are brick and mortar and other concrete materials), Semi-Pucca house (building materials used for part of the construction of either roof or the walls are mud or thatch while rest is constructed using concrete materials) and Kutcha house (materials used for the construction are mud, thatch, of wood etc.). The durability of the houses constructed with the concrete building materials is indeed more than the rest two types of housing. But every household cannot afford to own such type of dwelling structure due to low income level.

For better understanding of the rural population of the study area, they can be divided into three economic categories on the basis of their monthly income like the *High income group* (HIG) whose monthly income is more than Rs. 10000, the *Medium income group* (MIG) whose monthly income range between Rs. 5001-10000 and the *Low income group* (LIG) whose monthly income is below Rs. 5000.

Table 1: House Types based on pre dominant materials used across income groups

Income Groups	House Types		
	Pucca	Semi- pucca	Kutcha
HIG	70 (86.41%)	8 (7.14%)	0
MIG	11 (13.58%)	48(42.85%)	5(4.67%)
LIG	0	56(50%)	102 (95.32%)
Average	81 (27%)	112(37.33%)	107(35.66%)

Source: Field survey 2016-17

The type of dwelling based on pre-dominant materials used in construction determines standard of living and exhibits the income level among the sampled households. Pucca or concrete houses resemble stability or permanency and better housing conditions compared to the Kutcha and Semi-pucca dwellings. The table 1 shows that the percentages of pucca dwellings are found to be highest amongst High income group population compared to the next two income groups. Owing a house is an asset and is considered as a luxury possession in urban areas. But in rural areas for economically weaker sections of the society it is merely a roof

over head to protect oneself from the wrath or vagaries of nature. After food and clothing, housing is considered to be an essential need of life. Almost every rural family in Assam has some type of dwelling structure of their own. But it does not mean that they have better quality of life. The quality of dwelling structure and size as per the members of the households in real sense can determine the living standard of rural dwellers.

Table 2: Average size of dwelling homes among the economic groups

Economic groups	Size of dwelling house			
	Length	Breadth	Height	Total floor space
HIG	21.25m	5.19m	3.5 m	810 sq. ft
MIG	14m	4m	2.3m	486 sq. ft
LIG	5.27m	2.79m	1.7 m	216 sq. m

Source: Field survey 2016-17

From the table 2, it is seen that the average length, breadth and height of houses belonging to the HIG is 50 ft, 40 ft and 15 ft respectively. The average area of the main house is 2000 sq ft. In the same way, in case of MIG, the average length, breadth and height of the houses is 40 ft, 30 ft and 12 ft respectively. The average size of the main house among the people belonging to this income group is 1200 sq ft. Likewise, the average length, breadth and height of the houses belonging to LIG is 20 ft, 12 ft and 10 ft respectively. The average size of the main house is 240 sq ft. Thus, from the figure 3 it is revealed that income determines the house size. The higher the income, larger is the house size and lower the income, smaller is the house size. In simple words, a 'House' is considered as a luxury asset among the higher and medium income groups but for the lower income group it is just a basic need for living after food and clothing.

The table 3 depicts the percentage of households in good, bad and dilapidated conditions among different socio-economic groups. Higher the percentage of households in good conditions better is the socio-economic status of the social groups. On the other hand, higher is the percentage of households in dilapidated conditions; lower is the socio-economic status of the social groups residing in a particular region. In fact, the quality of housing units and their living conditions are the measuring criteria to assess the regional development and socio-economic status.

Table 3: Quality of dwelling units across income groups

Income Group	Good	Bad	Dilapidated
HIG	105(78.94%)	9(8.03%)	0
MIG	15(11.27%)	49(43.75%)	8(14.54%)
LIG	13(9.77%)	54(48.21%)	47(85.45%)
Average	133(44.33%)	112(37.33%)	55(18.33%)

Source: Field survey 2016-17

Apart from that, the quality of housing units can be measured in respect of the type of materials used in construction of wall, roof and floor and the age of housing units equivalently. The age of housing units will definitely help to forecast the lifespan or durability of housing units and will help to estimate the demand of housing units in next coming years. It will also help to understand the needs of the local people and will help to make future plans and policies to eradicate the shortages of adequate dwelling units.

5.2.1 Provisions of water supply:

Table 4: Distribution of households according to the type of water source across income groups

Income groups	Tap water	Protected well	Unprotected bore Well	Hand pump	Public water points/community well	River/pond/tank
HIG	37 (74%)	26(44.06%)	3(5.55%)	10(20.40%)	14(21.87%)	0
MIG	13(26%)	28(47.45%)	10(18.51%)	26(53.06%)	19(29.68%)	8 (33.33%)
LIG	0	5(8.47%)	41(75.92%)	13(26.53%)	31(48.43%)	16 (66.66%)
Average	50(16.66%)	59(19.66%)	54(18%)	49(16.33%)	64(21.33%)	24(8%)

Source: Field survey

Note: Figures in bracket indicates percentage

Life on earth is impossible without water. Water is essential for survival, carrying out daily activities of man and promotion of hygiene. Supply of safe drinking water is one of the essential pre-requisite for maintenance of sound health. Insufficient access to safe water supply may lead to many health problems due to poor hygiene and consumption of contaminated water. The availability of water for drinking, maintenance of personal hygiene, performing household chores and satisfying needs of livestock is the minimum basic requirement of every household. But surprisingly, even today there are some remote villages in the district where some poor households are facing the crisis of adequate access to safe drinking water and the women members of these households have to walk a few miles every day for collecting water either from a pond, river, public tap water points, community well or hand pump which is a painstaking task and results a colossal waste of their valuable time. It is seen from the table 4 that the percentage of households having tap water source is found to be highest among the high income group households (74%) and by MIG (26%) households respectively. No tap water source is found among the low income group households. While interrogating with the members of sampled households it is found that those households who do not have tap water within their household premises, are found to be also depended on alternate sources like ponds or rivers if available nearby as more water is required for laundry, livestock and other household chores.

5.3.1 Provision of Sanitary facilities:

Sanitation is considered as the yardstick to measure the quality of life and to assess the socio-cultural and economic progress of any region. The word 'sanitation' generally refers to the provision of facilities and services for the safe disposal of human excreta and household waste either in the form of liquid or solid in order to make the nation and as well as every community free from diseases and to provide a healthier environment for all. But even today some parts of the country are facing an acute crisis of adequate sanitation in both rural and urban areas. In urban areas the problem of sanitation is due to congestion or limited space but in rural areas the problem of sanitation is mainly due to lack of financial affordability and awareness.

The availability of a sanitary toilet at home is the one of the essential basic amenity for every household from the point of view of health and hygiene. Open defecation or absence of proper sanitary toilets at home endangers every member of households to various types of diseases. Absence of sanitary toilets compels the households to practice open defecation, an undignified and unhygienic activity which poses a problem especially for women and young girls and harms one's self respect. In rural areas the

magnitude of problem is large as 34 percent of the rural population in the district defecates in the open compared to 18 percent in urban areas. The absence of toilet within the household premises is affecting the lives of women and they are risking themselves to various communicable diseases like malaria, dengue etc and non-communicable diseases like gastro-intestinal infections, water borne diseases etc. Apart from the point of view of maintaining sanitation and hygiene, the presence of toilet at home is very essential with regard to the dignity and self respect of women. Inadequate sanitation facilities even endanger the safety of women as they have to go out to relieve themselves in the wee hours of the day either during dusk or dawn for the fear of being seen by any male. Thus, daily response to nature's call in absence of toilet at home forces women to defecate in open and thereby they sometimes unfortunately becomes victims of lewd remarks, molestation, rape as well as faces risks of bites from snakes and scorpion. Apart from that, women and girls do have periodical occurrences of menstruation as well as pregnancies, child birth and other health related problem for which presence of toilet at home is indispensable. The number of households having toilet facilities at their home also varies caste wise. In this regard the culture, traditional practices and individual concepts regarding maintenance of sanitation determines the availability of toilet facilities within the households of different social groups. From table 5, it is found that the number of households having toilet facilities is found to be highest amongst high income group households (100 percent) followed by Medium income group households (73.33 percent) respectively. However, the number of households having toilet facilities is found to be lowest amongst low income group households i.e. 33.33 percent only. More than half of the surveyed households in the district belonging to low income group households do not have access to toilet facilities. The Mishing villages such as Chakala, Rajabari, Batamari etc. under Pub-Chaiduar and Chaiduar blocks was found to have lowest ownership of toilet. It was also found in the survey that compared to ST dominated villages, the habits of using toilets for defecation is found to be better among minority dominated villages. In this regard the strict Islamic principles on maintaining personal hygiene and cleanliness for purity to some extent influences a section of minority community to inculcate their habits of using some form of toilet at homes. Apart from this, the practice of *Purdah* system among Muslim women restricts them to move to the open field for defecation during day light which insists to own at least a katcha

Table 5: Toilet facilities available within households across income groups

Income Groups	Have toilet facility (Percent)	Do not have toilet facility (Percent)
HIG	100	0
MIG	73.33	26.66
LIG	33.33	66.67

Source: Field data, 2016-17

(temporary) toilet or some arrangements for toilet within household premise. Similarly, the type of toilet facility available within the households is also important from the view point of health and hygiene. Table 6 shows the type of toilet facilities available in the households of different social groups. From the table 6, it is found that the number of households having katcha toilet is found to be highest among the minority (73.33 percent) followed by SC (55 percent), ST and tea tribe (35 percent) households respectively. However, the percentage of households having katcha toilet is found to be lowest among general caste households i.e. (41.66 percent). On the other hand, the number of households having sanitary toilet is found to be highest amongst general caste (58.33 percent) and ST (36.66 percent) households respectively. The number of households having sanitary toilet facilities is found to be lowest among minority (5 percent) households.

Thus, from the above table it is clear that the status of sanitation is far better among general caste population compared to the other caste population in the district. However, the status of sanitation among SC and minority households is found to be slightly better than ST and tea tribe households in the district.

For those who do not have any sort of provision of toilet at home prefer to go for open defecation in the backyard of their houses or in paddy fields as tradition goes. The idea of building some sort of facility for defecation in or near the house unfortunately does not attain priority among some population of different socio-economic groups in rural Assam. There is no doubt that under the influence of tribal culture, women are treated equally and do not face any kind of subjugation from males and thus they are permitted to defecate in open fields like males. Thus the society seems to be quite indifferent regarding the problems associated with the health of women resulting from open defecation. In fact, open defecation in paddy fields or in household backyards makes both men and women vulnerable to mosquito bites carrying viruses of JE and malaria, dengue etc. Besides those who are weak, anemic and under-nutrition bear maximum risks in such conditions. It is even noticed from the survey that in some tribal villages, the attempts of both Government and non-government organizations to make them defecation free could not work successfully under the influence of strong and deep rooted tribal traditions of practicing open defecation. In fact, the lack of awareness regarding the probable health impacts from open defecation is the main cause behind such unhealthy practices. Likewise, a worst picture of sanitary condition is also witnessed in the minority dominated char land areas of the district. Most of the households of the minority population do have pit

Table 6: Type of toilet facilities available in households across social groups

Caste	Katcha/ temporary toilet (in Percent)	Sanitary toilet (in Percent)	No toilet (in Percent)
General	41.66	58.33	
ST	35	36.66	28.33
SC	55	28.33	16.66
Tea Tribe(OBC)	35	15	50
Minority	73.33	5	21.66
All groups	48	28.66	23.33

Source: Field survey, 2016-17

toilet with bamboo or plastic enclosures without roofs at home specially meant only for women members. But these katcha toilets do not have any doors and are in very unhygienic conditions. During rainy season, the situation becomes worse as the char land areas are annually inundated by floods. However, from the survey it is found that they showed their desire towards maintenance of hygiene by using sanitary toilets. But due to lack of finance they are unable to construct a sanitary toilet at home and moreover the char land areas are deprived of any Government schemes which provide publicly funded toilets. Similarly, open defecation is a common practice among the tea tribes despite of certain households being facilitated by the tea garden authority or government organizations. As the district is largely covered with tea gardens so the problem of defecation acts as a big challenge. It is found in the survey that hundreds of publicly funded toilets are left unused because of their mindset to defecate in open fields. Thus, the need of the hour is to spread awareness regarding health and hygiene among different backward and downtrodden sections in the district.

5.4.1 Availability of electricity:

Electricity is one of the greatest blessings of science to mankind. One cannot think of modern world without electricity. The availability of electricity to every household is their right. Even today there are millions of households in India which are not connected with power lines.

Table 7: Source of lighting available within households across social groups

Income groups	Electricity (Percent)	Kerosene (Percent)	Solar energy (Percent)	No lighting (Percent)
HIG	91.66	8.33	0	0
MIG	76.66	31.66	0	0
LIG	48.33	20	3.33	0
All groups	65.33	30.33	3.33	1

Source: Field survey, 2016-17

Like other parts of Assam, the Sonitpur district as well is also lagging behind in rural electrification. Unfortunately around 34 percent of the villages of the district are still not well connected by the electric power grids and depends partially or fully on kerosene and other means for lighting. Only 65 percent of villages in the district are connected with power lines. The source of lighting among the households also varies income wise. It is seen from the survey as shown in table 7 that the percentage of households having electricity connection is found to be highest among high income group households (91.66 percent) and lowest among low income group households (48.33 percent).

VI. DISCUSSION

The problem of adequate housing continues to prevail in the district since long. The problem of housing and its related issues has become more acute due to increasing population pressure. Majority of the rural dwellings of economically weaker sections are either in a barely livable or in dilapidated condition. There is also dearth of basic amenities such as access to electricity and clean drinking water supply, which determines the quality of living. It is found in the study that income is the sole determining factor influencing the quality of housing. High income and medium income group households have however better access electricity and tapped water. Although access to services like rural electrification has been expanding greatly but interior areas are still devoid of any signs of progress in electrification. A remarkably slow progress is also witnessed in the case of availability and accessibility of water supply as well as in the case of sanitation. Results suggest that the status of sanitation is quite dissatisfactory among socially backward communities which are the prime factor responsible for various vector and water borne diseases among adults and children. Although various housing schemes like IAY, PMAY etc. are operational in the district yet it will take time for its successful implementation as the most needy are deprived from the benefits of the schemes due to corruption at the grass root level and political interventions.

VII. RECOMMENDATIONS

The shortage of housing coupled with the problem of overcrowding dwellings is degrading the quality of life into sub-standard nature. Apart from this, the accessibility to minimum basic amenities of living like drinking water, electricity and toilet to the poor households in the district is still negligible. Moreover, the sky rising prices of building materials has made it almost impossible for a poor man to fulfill his dream to have a shelter of his own. All these problems can however be solved by adopting the following measures suggested below:

1. Low cost housing technology must be adopted which is cost effective in nature. It indicates the judicious utilization of locally available building materials along with improved skill and innovative technology which can reduce the construction cost of a house within affordable budget without compromising with the quality, performance, life span, strength of a building or dwelling structures.
2. In case of low cost housing technology emphasis is laid on how to curtail building material costs and labour costs to its maximum extent. As this cost effective technology emphasizes on the use of locally available cheap building materials, so the building material costs gets reduced. Likewise, the time needed for construction of such low cost houses can also be reduced by postponing finishing or decorative works and by making specific time schedule for completion of work. Unlike concrete building, low cost houses do not require much time. So far labour cost is concerned; it can be also reduced by engaging the local

unemployed youths through proper training on skill development and innovative technology for designing low cost houses. This will thereby provide a bigger platform for the unemployed youth in the region by engaging them in the housing sector. Apart from this, it is worth to mention here that Assam is rich in its forest based resources. Bamboo is one of the important building materials which are abundantly found in Assam. Bamboo is known for its flexibility and greater durability which has higher resistance capacity to combat earthquake tremors. But the price of bamboo has gone up in recent years because of high demand from pulp and paper industry. Moreover, expansion of human settlements and encroachments in wet land areas has even decreased the availability of bamboo unlike past. In this regard the forest departments should encourage the plantation programme of bamboos in wastelands and homestead to make it available for the needy. The state governments in this should include bamboo as a construction material in their housing scheme thereby upgrading the status of bamboo houses to 'pucca' house. For longer life span of houses constructed with traditional materials like bamboo preservative treatment of bamboo should be popularized for construction

3. Retrieval of vernacular architecture which is cost efficient in nature can also solve the housing problems of rural poor. Scientific evaluation of traditional building techniques in terms of engineering standards and develop equivalent methods of design and performance assessment can help in resolving the issues of housing shortages.
4. Easy feasibility to cleaner fuels at subsidized rates should be made available to each and every household in rural areas so that the burden of collecting firewood by females and children can be lessened and they can spend their valuable time in doing some productive works.
5. Production industries of cheaper and eco-friendly building materials should be started in rural areas itself as there is no dearth of resources in rural areas. Moreover, such an attempt would help to develop rural economy and at the same time will solve the crisis of building materials.
6. Effective implementation of hygiene programme relies on the exchange of information between the promoting agency and the targeted group. For this it is essential to identify key hygiene problems and thereby to design, implement and monitor the programme that will ensure optimal use of sanitation facilities provided to the targeted group and impact on public health as well.
7. It is the need of the hour to generate information and awareness regarding sanitation and hygiene practices among the downtrodden and backward sections of the society along with the raising of literacy rate. In fact, greater emphasis must be laid on women's education in rural areas for a better society. Such a drive will not only generate awareness regarding sanitation practices but will also ensure good health and healthy environment and will thereby help in Government efforts for successful implementation of sanitation and health programme in rural areas.
8. There is an urgent need to develop infrastructure in rural areas so as to enable rural areas to prosper in economic and social spheres.
9. Promoting accessibility to drinking water to the economically vulnerable sections must be tackled in effective ways so that every household have access to sufficient quantities of water for daily needs. For this public water points should be made accessible in backward villages. The public water points should be located in areas which are accessible to all. At the same time for promoting hygiene and to make villages open defecation free there is a need to provide free low cost toilets to poor households.
10. Mere implementation of policies and programmes meant for the development of rural areas is not sufficient. A close vigil and inspection from decentralized or grass root level is essential to achieve the targeted goal.
11. Subsidized housing loans should be provided to rural poor by Government and public funding agencies if he/she wants to construct or expand building.

VIII. CONCLUSION

House is not merely a roof over one's head; rather it is an indicator of socio-economic development of a region. In order to reduce the housing inadequacies there is a need to facilitate housing finance, create a skilled construction work force and promote cost effective and environment friendly housing technology which is affordable and as well as acceptable by all sections of people. Despite of all drawbacks, there is no doubt that housing policies in recent times have benefitted socially and economically backward communities to some extent. But the real success in implementation of housing policies will be determined by active participation of beneficiaries themselves in the entire process, spread of literacy and information and eliminating the political interventions.

REFERENCES

- [1] Ali A.F (1983), "Social stratification among the Muslims and Hindus in rural settlement in Bangladesh," A PhD thesis, 113-120.
- [2] Abelti, et.al.(2001), " Housing conditions and demand for housing in Urban Ethopia", A research paper published by Institute for Population Research – National Research Council, Italy
- [3] Brunhes, J. (1952), "Human Geography", Translated by E.F Row, George G. Harrap and Co. Ltd, Plate 1, Fig.1
- [4] Bryan, P.W (1933), "Man's adaptation of nature", London, 133-142.
- [5] Bhattacharya, N.N. (2005), "North East India: A Systematic Geography", Rajesh Publications, New Delhi, 73-87.
- [6] Brunhes, J. (ibid) Reference no.1, Ch.2, 33-41.
- [7] Blache, V. (1952), "Principles of Human Geography", Constable Publisher, London, 271-280..
- [8] Chay, Kenneth et.al (2003) "The Impact of Air Pollution on Infant Mortality: Evidence from Geographic Variation in Pollution Shocks Induced by a Recession", Quarterly Journal of Economics, 1121-1167.
- [9] Gist and Eva (1955), "Urban Society", 5th Edition, Thomas Cramwell Co., New York, 548-555.
- [10] Hirway Indira (1989), "Panchayat Raj at crossroads", Economic and Political weekly, Vol. 24, June, 1663-1665
- [11] Heltberg, R., Arndt, T. C., and Sekhar, N. U., Fuel wood Consumption and Fore Degradation: A household Model for Domestic Energy Substitution in Rural India, Land Economics, **76(2)**: 213-232.
- [12] Nguyen H.M (2013), "Cultural Behaviour: Climatic adaptive approaches of traditional housing in Veitnam Northern Lowland Area," A paper presented on ASEAN conference on Environment- Behaviour Studies, Hanoi Architectural University, Veitnam, March 12-13.