The availability of building materials is very significant from the viewpoint of the house-types of a region. Building materials are of many kinds - wall's materials, roofs' materials, floors' materials, ceiling materials, doors' and window materials etc. The building materials are grasses, leaves, reeds, bamboos, mud, jutesticks, unburnt bricks, woods, G.I. sheets, other metal sheets, stones, cements, Ekras, thatch, tiles, slates, shingles, corrugated iron sheets, zinc sheets, asbestos cement sheet, burnt bricks, limes, planks, loges, mosaics, iron rods, asbestos-cement sheets, plywood sheets, damp proof materials, different paints, lighting materials etc.

4.1. SOURCE OF MATERIALS:

These materials are collected from different sources. Because all these materials are not available within Nalbari district. Only some traditional materials and some modern materials are present in the district. These materials are also decreasing in the district due to the increased population. People have settled down in the source places of housing materials, for which materials have decreased. For example grasses, leaves, reeds, thatchs, woods, bamboos, canes are grown up mostly in the northern foothill zone or Baska and Tamulpur blocks. But after 1897 and 1950 due to devastating earthquake, people
in the riverine tracks and charland zone had been shifted to this Baska-Tamulpur blocks where the forest resources are available. Thus the source of housing materials were replaced by the new settlements. The other sources of traditional materials like thatches reeds, ekras, khagaris are to be found in riverine char-lands and highland of river banks. But after 1971, due to Bangladesh War, many immigrant Muslims and Hindus came to this zone and settled down there. So this zone, which is rich in traditional house building materials are covered by these people.

The materials like jute sticks are used as wall materials in the charland areas where the immigrant Muslim people live. Jute sticks are collected from jute cultivation. The sources of jute sticks are riverine charland and the low-lying river bank of the Brahmaputra. Though it is used as good materials it is very soft in quality.

The materials like stone, brick and sands are also going to be decreased due to endless exploitation of these materials. Stones and sands are brought from the Bhabar zone of north and the others hills of Kamrup, Bongaigaon, Darrang districts and the state of Meghalaya. Sands are also exploited from the Beki river of Barpeta district and the Digaru river of kamrup district. There are 8 brick industries where 96 labourers are working in the district of Nalbari. Yet some bricks are brought from the Bajali sub-division of the Barpeta district and the
Rangia sub-division of Kamrup district.

The materials like wood and plywood are collected from different places in Assam, Palasbari. Mizra, Rani, Boko of Kamrup district are the main sources of woods. Others are Bhairabkunda, Sariduar of Darrang district, Gauripur, Sapatgram, Basugaon from Dhubri and Kokrajhar district are another source of wood's materials. Plywoods are imported mainly from Upper Assam, Karbi-Anglong and some regions from the Meghalaya state.

G.I. sheets or other metal sheets are imported mainly from iron and steel industries located in Bihar and West Bengal through Calcutta market. The iron rods for pucca building are also imported from Calcutta. Only a very little quantities are collected from Guwahati market.

The cement factories are located outside Nalbari district. So cement is procured mainly from karbi-Anglong, Meghalaya, Bhutan, West-Bengal, Bihar etc. But the quality of cement in West Bengal and Bhutan is better than that of other places.

The mosaic, tiles materials and marble chips are brought mainly from Rajasthan. For finishing work, different colours are procured from Calcutta or Mumbai. Damp-proof powder is also brought from Calcutta and Mumbai markets.

Asbestos sheets are cheaper than other metal sheets. It is the direct protector of heat. So poor people
purchase asbestos sheets. It is brought mainly from Guwahati and Culcutta. The different qualities of asbestos are available in the market. But asbestos have some drawbacks for the use. It does not last long, as it is softer than other metal sheets. It is also bulky. So to use asbestos, the plinth's structure should be very strong.

Though cowdung is the most essential material for house construction. It is used like cement in the walls as well as floor plastering. The walls made up of ekras or bamboo sticks are plastered by mud, mixed with cowdung, very nicely. But there is a lack of cattle and Bengali people use cowdung as fuel. For these reasons cowdung is decreasing. So, many people have to purchase cowdung from other families having cattle. In some areas cowdung is mixed with mud and debries of paddies (tuss) for plastering walls.

Paddy stems or straw are one of the most widely used roof materials among the poor people in rural areas. These people cannot afford to purchase thatches or other roof materials. So they collect straw or paddy stems from the paddy field without spending money. But these paddy stems do not last long. According to the thickness of the roofs it lasts one to two years only.

4.2 HOUSE TYPES:

House type has good correlation with building materials. House type indicates what kind of materials are
used in the houses. Changes of house types indicate the changes in materials. Generally, houses have been classified on the basis of a number of factors such as materials used, for house construction, climate which is the main supplier of building materials, various minerals, culture, economic factor and architecture etc. Climatic factors also influence the house types indirectly. Climate is the mixture of temperature, rainfall and pressure. So climate is the main factor of growing vegetation like bamboos, woods, thatches, reeds, canes, ekras, jute etc. All these materials are used in house construction. Besides, various minerals like lime, asbestos, iron, boulders, sands, rods etc. are main materials for house construction.

According to the census of India 1991, there are five types of houses in Nalbari district which is given below:

(1) Pucca
(2) Semi-Pucca
(3) Katcha
(4) Serviceable katcha
(5) Non-Serviceable katcha

The table 4.1 shows the total number and percentage of households occupying pucca, semi-pucca, katcha, serviceable katcha and non-serviceable katcha houses in Nalbari district, (Fig.4.1).
TABLE 4.1: Number of Households and Percentage of Households occupying Pucca, Semi-Pucca and Katcha, Serviceable Katcha, Non-serviceable Katcha Houses in Nalbari District.

<table>
<thead>
<tr>
<th>Area</th>
<th>Total No. of Households</th>
<th>Type of Census Houses Occupied</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Pucca %</td>
</tr>
<tr>
<td>Rural</td>
<td>160680</td>
<td>8.44</td>
</tr>
<tr>
<td>Urban</td>
<td>4240</td>
<td>50.50</td>
</tr>
<tr>
<td>Total</td>
<td>164920</td>
<td>9.52</td>
</tr>
</tbody>
</table>

Source: Census of India, 1991.

Where rural and urban houses and their different types and percentage are also shown in the same table. From this table it is seen that, total number of rural household in Nalbari district is 160680 where the percentage of pucca, semi-pucca, katcha, serviceable katcha and non-serviceable katcha households in rural areas are 8.44, 14.56, 71.00, 4.38 and 72.62 respectively. In the same table the total number of urban households are 4240 where percentage of pucca, semi-pucca, katcha, serviceable katcha and non-serviceable katcha households are 50.50, 27.16, 22.34, 2.06 and 20.28 per cent respectively (Table 4.1).
NALBARI DISTRICT
TYPE OF HOUSES
(IN PERCENTAGE)

PERCENTAGE OF HOUSES IN CM.

RURAL

URBAN

PERCENTAGE OF HOUSES IN CM.

SCALE 1 CM = 10 PERCENT HOUSES

FIG. 4.1
If one compares the same data with Assam, the total number of household is 3,798,360, where rural household is 3,326,700 and urban household is 4,71,550. In the state, the percentage of rural household occupying pucca houses are 10.53, semi-pucca 13.37, kutcha 76.09, serviceable kutcha 8.79 and non-serviceable kutcha 67.00. In urban area of Assam, the percentage of pucca houses occupying 43.43, semi-pucca 27.79, kutcha 28.80, serviceable kutcha 3.38 and non-serviceable kutcha is 25.42 (Table 4.2) (Fig. 4.2).

There are two types of pucca houses in Nalbari district, made by bricks, timbers, sands, cements, corrugated iron sheets, asbestos, rods etc. i.e. one is R.C.C. or RCC and the other is Assam type pucca houses. Inhabitants belonging to the richer classes in all social groups, either in villages or towns, have pucca houses. This type of house shows the impact of urbanization as well as the development of transportation. Because, almost, all materials of pucca houses are brought from outside the making place at a high cost.
TABLE 4.2: Assam: Number of Households and Percentage of households Occupying Pucca, Semi-pucca, Katcha, Serviceable Katcha and non-Serviceable Katcha Houses in 1991.

<table>
<thead>
<tr>
<th>Areas</th>
<th>Total No. of census houses</th>
<th>Total Census Houses Occupies, with P.C.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Pucca %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>3,326,700</td>
<td>10.53</td>
</tr>
<tr>
<td>Urban</td>
<td>471,660</td>
<td>43.43</td>
</tr>
<tr>
<td>Total</td>
<td>3,798,360</td>
<td>14.62</td>
</tr>
</tbody>
</table>

Source: Census of India, 1991.

The semi-pucca houses are made up mainly of bricks, sands, cement, corrugated iron sheets or asbestos sheets, timbers, thatches, bamboos, mud, cowdung, ekra, reeds, canes etc. These houses are mainly found in the rural areas as well as the most offices or schools buildings. Some semi-pucca houses are made concrete up to half-walls or up to plinth level, having wooden post and the walls are made by ekra or reeds or bamboo sticks, plastered by mud and cowdung mixture. Finishing work is done by white-washing with lime-water. Most of the old official buildings and schools are made pucca half-wall and the remaining portion katcha, made by mud.
plustering.

The katcha houses are divided into two types e.g., serviceable katcha and non-serviceable katcha. These serviceable katcha houses are rectangular in shape and mainly made up of thatches roofs within a definite area. The walls are made up of bamboo sticks or reeds or Ekras and plastered with mud and cowdung. In the back of these houses kitchen are placed. The granaries and cowsheds are made in front of the main houses. In the middle of these houses a courtyard is seen where agricultural work and other social function are performed. The most of the upper caste Hindu people, make a temple in front of the courtyard.

The economically backward people in the rural as well as in urban areas, build houses which are really non-serviceable katcha. These types of houses are made up of very poor materials like jute stick, paddy stems, grasses, leaves etc. These houses are not practically usable. But due to economic backwardness they are bound to make these houses by above mentioned poor, local materials. They collect paddy stems from field without spending money as well as jute sticks in a low rate or without any money. Grasses. leaves, are collected from the forest or jungle without any cost. But in the rainy seasons people or dwellers suffer a lot from rain or wind in these houses. So these types of houses are called non-serviceable katcha houses. The dweller of these houses are mostly agricultural laboures, rickshaw pullers, daily laboures. thela pullers, fishermen etc.
The immigrant Muslim people residing in the char land and the river banks of the river Brahmaputra and its tributaries live under a miserable condition. Most of them are living in non-serviceable katcha houses with thatched roofs. The walls are made up of jute sticks, which are very temporary. In the rainy season rain water and wind can easily pass through these walls. So these types of houses do not serve well to the dwellers.

4.3 ROOF MATERIALS:

Roof is the most important part of houses. According to the economic standard people make houses in different types of roofing. Though in the past, people construct houses mostly in thatched roofing, due to lack of good transportation, presently the roof is made up of various types of materials. The census of India, in their enumeration work grouped the roofing materials into eight categories. These are:

(1) Grass and leaves or reeds or thatch or wood or Mud or unburnt bricks or bamboo
(2) Tiles or slate or shingles
(3) Corrugated iron or zinc or other metal sheets
(4) Asbestos cement sheets
(5) Brick or stone and lime
(6) Stone
(7) Concrete RBC or RCC
(8) All other materials and materials not stated
(1) **Grass and Leaves or Reeds or Thatch of Wood or Mud or Unburnt Bricks or Bamboo:**

These types of materials are commonly used by the people in rural as well as urban areas in Nalbari district. In the rural areas, the above mentioned first category roof materials are widely used. But in the urban areas those roof materials do not have so much importance. In the rural areas of the district these vegetable-materials also are grown mostly in their own land. Grass, leaves, reeds, thatch, wood, bamboo are predominant roofing materials in Baska, Tamulpur, Pachim-Nalbari, Barkhetri and Borigog-Banbhag blocks.

These house-roofs of rural areas in Nalbari district are by and large constructed of bamboo lattice covered with thatch. The roofs are made in sloping position for quick running off rain water. These categories of roof-houses are 1,31,100 in number in Nalbari district in rural areas. The percentage is 73.34 and in urban areas percentage is 18.12. In Nalbari district, the percentage of rural roofing of these materials is more than the State's percentage (71.79%) where the first category roofing materials is less than State's percentage (24.72%). The total first category rural census houses in Nalbari district and Assam as a whole are 1,31,100 and 2664400 respectively. In the sametime the total first category urban census houses in Nalbari district and Assam are 1180 and 157085 respectively. Thus, 131100 census houses are made up of grass or leaves or reeds or thatch.
or wood or mud or unburnt brick or bamboo, out of total 178765 census houses in Nalbari district (Fig. 4.3).

(2) **Tiles or Slate or Shingles:**

The next category of roof materials are tiles or slate or shingle. Houses having roofs of these materials are negligible in Nalbari district. Only 210 rural houses are constructed by tiles or slate or bamboos, whereas total rural houses in Nalbari district are 178765. The percentage of these materials is only 0.11. In the same time in urban areas in Nalbari district, this category covers only 15 houses out of total 6515 houses. The percentage is only 0.24.

(3) **Corrugated Iron or Zinc or Other Metal Sheets:**

Corrugated iron or zinc or other metal sheets are brought from the Calcutta market to Nalbari district after the good transportation was grown up. Though these types of roofing materials are not comfortable than thatches. In Nalbari district this type of roof material covers 21040 rural houses out of 178765 total census houses. The percentage of such houses is 11.77%. In the urban areas this type of roof materials covers 2780 houses out of total census houses. The percentage is 42.69. This is the highest percentage of roof materials in urban areas.

(4) **Asbestos Cement Sheets:**

Asbestos cement sheet occupies the second position as roof materials in Nalbari district. Thatches
NALBARI DISTRICT
PRE-DOMINANT MATERIALS OF ROOFS
(IN PERCENTAGE)

RURAL

URAL

SCALE 1 cm = 5 PERCENT

FIG. 4.3
PLATE VIII: Corrugated Iron House of a Nepali Family
and corrugated iron sheets have some demerits to use as roof materials. Thatches are diminishing due to increase of cultivable land. So supply of thatch is decreased day by day. Besides thatch is very weak to use. Any kind of insect can easily destroy thatch. Corrugated iron sheets are also damaged within a few years. But asbestos cement sheets last long if may do not get damaged by other outer elements of outside pressure. So people largely use asbestos cement sheets as roof materials. Asbestos-sheets cover 2025 out of 6515 total census houses in urban areas in Nalbari district. The percentage is 31.09. But in rural areas it takes a very important role among the poor people. They construct houses by asbestos sheets as shade manner or flat manner. Out of total 178765 census houses in rural areas it covers 24160 where the percentage is 13.51.

(5) **Brick or Stone or Lime:**

The next materials of roof are brick, stone and lime. These are very negligible in comparison to the other materials in Nalbari district. There are 220 houses and 65 houses in rural and urban areas respectively. The percentage of these materials are 0.13 per cent and 0.92 per cent respectively.

(6) **Stone:**

The number of roofs which are made up of stone in Nalbari district in rural and urban areas is 0.23 per cent and 0.93 per cent respectively.
(7) **Concrete RBC or RCC:**

The concrete RBC or RCC roofing is very negligible in rural areas. Because housing land in rural areas are very wide, people prefer to construct houses covering vast areas. So horizontal expansion is spreading all over rural areas. Only a few houses are made concrete. But in urban areas men intend to construct houses in vertical expansion, due to the non-availability of housing land. So R.C.C. or R.B.C. roofing are unavoidable and common in the urban areas. The percentage of R.C.C. or R.B.C. housing in rural as well as urban areas is 0.16 and 4.08 respectively, in Nalbari district.

(8) **All Other Materials and Materials not Stated:**

All the other materials not stated in the above categories in rural and urban areas are 0.75 per cent and 1.93 per cent respectively (Table 4.3). The location of houses also determine the materials of roofs. The flood-affected zone is widely influenced by thatched-roofing. Because thatch is available as grass-type vegetable material in the river banks in the Nalbari district.

**4.4 WALL MATERIALS:**

Wall is the main structure of a house. It protects man from the natural calamities like wind, rain, cold etc. Properties are also protected by the wall from theft or dacoity. Like roof, wall is also made by many articles. The census of India groups these materials into the following categories. These are -

<table>
<thead>
<tr>
<th>Serial</th>
<th>Item</th>
<th>RURAL</th>
<th>URBAN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>Percentage</td>
</tr>
<tr>
<td>1.</td>
<td>Grass/leaves/reeds/thatch/wood/Mud/unburnt brick/bamboo</td>
<td>131100</td>
<td>73.34</td>
</tr>
<tr>
<td>2.</td>
<td>Tiles/slate/shingle</td>
<td>210</td>
<td>0.11</td>
</tr>
<tr>
<td>3.</td>
<td>Corrugated iron/zine/other metal sheets</td>
<td>21040</td>
<td>11.77</td>
</tr>
<tr>
<td>4.</td>
<td>Asbestos cement sheets</td>
<td>24160</td>
<td>15.51</td>
</tr>
<tr>
<td>5.</td>
<td>Bricks/stone and lime</td>
<td>220</td>
<td>0.13</td>
</tr>
<tr>
<td>6.</td>
<td>Stone</td>
<td>410</td>
<td>0.23</td>
</tr>
<tr>
<td>7.</td>
<td>Concrete RBC/RCC</td>
<td>285</td>
<td>0.16</td>
</tr>
<tr>
<td>8.</td>
<td>All other materials and materials not stated</td>
<td>1340</td>
<td>0.75</td>
</tr>
<tr>
<td></td>
<td>Total Census Houses</td>
<td>178765</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Source: Census of India, 1991
(1) Grass or leaves or reeds or bamboo
(2) Mud
(3) Unburnt brick
(4) Wood
(5) Burnt bricks
(6) G.I. sheet and other metal sheets
(7) Stone
(8) Cement concrete
(9) Ekra
(10) All other materials and materials not stated

(1) **Grass or Leaves or Reeds or Bamboo:**

The vegetable materials like grass, leaves, reeds or bamboo are the most important wall materials in Nalbari district. These are the most preferred as house materials in rural as well as urban areas. Out of total 178765 number of rural census houses in Nalbari district these materials covers 145220 number, which use these materials as wall materials. In urban areas these materials cover 2405 census houses out of total 6515 census houses. The percentage in rural and urban areas are 81.24 and 36.91 respectively.

(2) **Mud:**

Mud is the most important wall material in the rural as well as urban areas in Nalbari district. Wall, which is made of the bamboo stick or **ekras** or jute sticks or plastered by mud, mixed with cowdung is very comfortable to live. Because it can easily protect the
dwellers from wind, heat etc. But in the flood time, to some extent, water can damage these walls. Of the total 178765 census houses, wall of 2960 houses are made by mud in rural areas and of the total 6515 census houses, wall of 75 houses are made by mud in urban areas. The rural and urban percentage of this wall materials is 1.66 and 0.61 respectively.

(3) **Unburnt Bricks:**

Unburnt bricks are relatively unimportant in comparison to the other materials in Nalbari district. Only 640 census houses are covered by unburnt bricks in rural areas. The percentage is 0.36. In urban areas it covers only 40 census houses where the percentage is 0.61.

(4) **Wood:**

Wood is also less important than other wall materials. In the northern foothill zone especially Nepali people use to live in wooden houses. The total number of rural and urban wooden-wall houses in Nalbari district are 9750 and 500 respectively. The percentage are 5.46 in rural and 7.67 in urban areas.

(5) **Burnt Bricks:**

Burnt bricks are the second most important wall materials in rural as well as urban areas. It covers 7.55 per cent in rural areas and 34.38 per cent in urban areas. The total houses in rural and urban areas using burnt bricks as wall materials are 13495 and 2240 respectively. The percentage in rural areas is 7.55 and urban is 34.31.
(6) **G.I. Sheets and Other Metal Sheets:**

This type of wall materials is rare both in rural and urban houses. The percentage of this wall materials in rural as well as urban areas is 0.10 and 1.47 respectively.

(7) **Stone:**

Stone is also rare as wall materials, both in urban and rural housing. The percentage is 0.01 in rural areas and 0.07 in urban areas, in Nalbari district.

(8) **Cement Concrete:**

As the economic condition of people in Nalbari district is improving, the cement concrete walls are spreading up rapidly in rural as well as in urban areas. The percentage of this type of wall materials is 2.72 and 16.80 in rural and urban areas respectively.

(9) **Ekra:**

Ekra are not predominant wall materials in Nalbari district. In rural areas they cover 0.72 percent and in urban areas it covers 0.22 percent (Fig. 4.4).

(10) **All other Materials and Materials Not Stated(Hard Board, Asbestos-Board, Jute-sticks, etc):**

This category covers the percentage 0.18 and 0.69 rural and urban areas respectively as wall materials in Nalbari district(Table 4.4).
PLATE IX: An Assam Type Semi-pucca House is replacing by pucca structure
These categories of wall materials are found in Nalbari district of which the vegetable materials covers the first rank and burnt brick the second position and cement concrete and wood the third position in urban as well as rural areas.

4.5. **FLOOR MATERIALS**: 

Floors are the main structure of a house. Floors divide a building into different levels for the purpose of creating accommodation within a restricted space. The floors are of different kinds. The census of India (1991) indicates seven categories of census houses, on the basis of predominant floor materials.
### Nalbari District

#### Predominant Materials of Walls

<table>
<thead>
<tr>
<th>Material Description</th>
<th>Percentage of Wall Materials in cm²</th>
</tr>
</thead>
<tbody>
<tr>
<td>G.I. Sheets or Others Metal-Sheets</td>
<td>13</td>
</tr>
<tr>
<td>Stone</td>
<td>11</td>
</tr>
<tr>
<td>Grass, Leaves, Reeds, Bamboo</td>
<td>5</td>
</tr>
<tr>
<td>Burnt Brick</td>
<td>3</td>
</tr>
<tr>
<td>Unburnt Brick</td>
<td>2</td>
</tr>
<tr>
<td>All other Materials and Materials Not Stated</td>
<td>1</td>
</tr>
</tbody>
</table>

**Scale**: 1 cm = 7 percent of materials
TABLE 4.4: Nalbari District: distribution of Census Houses by Predominant Materials of Wall in Rural and Urban Areas in 1991

<table>
<thead>
<tr>
<th>SL. NO.</th>
<th>Materials</th>
<th>RURAL</th>
<th></th>
<th>URBAN</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>Percentage</td>
<td>Total</td>
<td>Percentage</td>
</tr>
<tr>
<td>1.</td>
<td>Grass/Leaves/reeds/bamboo</td>
<td>145220</td>
<td>81.24</td>
<td>2405</td>
<td>36.91</td>
</tr>
<tr>
<td>2.</td>
<td>Mud</td>
<td>2960</td>
<td>1.66</td>
<td>75</td>
<td>1.15</td>
</tr>
<tr>
<td>3.</td>
<td>Unburnt brick</td>
<td>640</td>
<td>0.36</td>
<td>40</td>
<td>0.61</td>
</tr>
<tr>
<td>4.</td>
<td>Wood</td>
<td>9750</td>
<td>5.46</td>
<td>500</td>
<td>7.67</td>
</tr>
<tr>
<td>5.</td>
<td>Burnt bricks</td>
<td>13495</td>
<td>7.55</td>
<td>2240</td>
<td>34.31</td>
</tr>
<tr>
<td>6.</td>
<td>G.I. Sheets or other metal</td>
<td>190</td>
<td>0.10</td>
<td>95</td>
<td>1.47</td>
</tr>
<tr>
<td></td>
<td>sheets</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Stone</td>
<td>10</td>
<td>0.10</td>
<td>5</td>
<td>0.07</td>
</tr>
<tr>
<td>8.</td>
<td>Cement concrete</td>
<td>4870</td>
<td>2.72</td>
<td>1095</td>
<td>16.80</td>
</tr>
<tr>
<td>9.</td>
<td>Ekra</td>
<td>1295</td>
<td>0.72</td>
<td>15</td>
<td>0.22</td>
</tr>
<tr>
<td>10.</td>
<td>All other materials and Materials not stated</td>
<td>335</td>
<td>0.11</td>
<td>45</td>
<td>0.69</td>
</tr>
<tr>
<td></td>
<td>All Materials</td>
<td>178765</td>
<td>100.00</td>
<td>6515</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Sources: Census of India, 1991. Housing 2, Part A and B.
There are:-

(1) **Floor mud**

(2) **Floor wood or planks**

(3) **Floor bamboo or log**

(4) **Floor bricks or stone or lime**

(5) **Floor cement**

(6) **Floor Mosaic or Tiles**

(7) Other and materials not stated.

(1) **Floor Mud:**

Relatively poor people live in houses having mud floor. They use cowdung to polish the floors. In rural areas this type of floors covers 93.34 per cent houses. But in urban areas the percentage is 40.67.

(2) **Floor Wood/Planks:**

Most of the Nepali people of the foothill region are using wood or planks as floor materials. In the foothill of Bhutan especially in Baska, Tihu-Barama and Tamulpur blocks there are many Nepali people depending on the dairy farming as their lively hood. Out of 178765 rural census houses 1560 are using these as floor materials. The percentage is 0.87. But in urban areas the percentage is 1.54.

(3) **Floor Bamboo/Logs:**

These materials are negligible as floor materials in Nalbari district. In rural and urban percentage are only 0.16 and 0.46 respectively.
PLATE X: Two Stories Wooden Bungalow of Doonpi Tea Estate's Manager
(4) **Floor Bricks or Stone or Lime:**

These are also less as floor materials having 1.16 per cent and 2.08 per cent in rural and urban areas respectively.

(5) **Floor Cement:**

This material is in the first position in urban areas and is in the second position in rural areas having 54.70 per cent and 4.30 per cent respectively. Urban people are using cement floors as most of their houses are made on pucca structure.

(6) **Floor Mosaic or Tiles:**

It is very negligible in rural as well as in urban areas. The urban percentage of these types of floors are 0.02 and 0.39 respectively. (Fig. 4.5).

(7) **Other Materials Not Stated Above:**

The other materials are 0.03 per cent and 0.16 per cent in rural and urban areas respectively (Table 4.5).

***************
NALBARI DISTRICT

PRE-DOMINANT MATERIALS OF FLOOR
(IN PERCENTAGE)

RURAL

URBAN

MATERIALS USED

SCALE 1Cm = 7 PERCENT OF MATERIALS

FIG. 4.5
### TABLE 4.5: Nalbari District: Distribution of Census Houses and Percentages by Predominant Materials of Floor in Rural and Urban Areas in 1991.

<table>
<thead>
<tr>
<th>SL. NO.</th>
<th>Materials</th>
<th>RURAL</th>
<th>URBAN</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>Percentage</td>
<td>Total</td>
<td>Percentage</td>
</tr>
<tr>
<td>1.</td>
<td>Floor mud</td>
<td>167070</td>
<td>93.46</td>
<td>2650</td>
<td>40.67</td>
</tr>
<tr>
<td>2.</td>
<td>Floor mud or Planks</td>
<td>1560</td>
<td>0.87</td>
<td>100</td>
<td>1.54</td>
</tr>
<tr>
<td>3.</td>
<td>Floor bamboo or logs</td>
<td>270</td>
<td>0.16</td>
<td>30</td>
<td>0.46</td>
</tr>
<tr>
<td>4.</td>
<td>Floor Bricks or Stone or Lime</td>
<td>2080</td>
<td>1.16</td>
<td>135</td>
<td>2.08</td>
</tr>
<tr>
<td>5.</td>
<td>Floor Cement</td>
<td>7690</td>
<td>4.30</td>
<td>3565</td>
<td>54.70</td>
</tr>
<tr>
<td>6.</td>
<td>Floor Mosaic or Tiles</td>
<td>40</td>
<td>0.02</td>
<td>25</td>
<td>0.39</td>
</tr>
<tr>
<td>7.</td>
<td>Floor other and materials not Stated</td>
<td>55</td>
<td>0.03</td>
<td>10</td>
<td>0.16</td>
</tr>
<tr>
<td>8.</td>
<td>All Materials of floor</td>
<td>178765</td>
<td>100.00</td>
<td>6515</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Source: Census of India, 1991, Housing, 2 Part A and B.