

## Distribution of Houses by Predominant Materials of Roof and Wall and Level of Damage Risk

### ANDHRA PRADESH

Wall / Roof		Census Houses		Level of Risk under										
		No. of Houses	%	EQ Zone				Wind Velocity m/s				Flood Prone Area in %		
				V	IV	III	II	55 & 50	47	44 & 39	33			
				Area in %				Area in %						
<b>WALL</b>								35.3	64.7	30.1	8.2	46.9	14.9	9.9
<b>A1 - Mud &amp; Unburnt Brick Wall</b>	Rural	1,420,062	10.0											
	Urban	227,015	1.6											
	<b>Total</b>	<b>1,647,077</b>	<b>11.6</b>					<i>M</i>	<i>L</i>	<i>VH</i>	<i>H</i>	<i>M</i>	<i>L</i>	<i>VH</i>
<b>A2 - Stone Wall not packed with mortar</b>	Rural	473,780	3.3											
	Urban	151,495	1.1											
	<b>Total</b>	<b>625,275</b>	<b>4.4</b>					<i>M</i>	<i>L</i>	<i>H</i>	<i>M</i>	<i>L</i>	<i>VL</i>	<i>VH</i>
<b>Total - Category - A</b>		<b>2,272,352</b>	<b>16.0</b>											
<b>B - Burnt Bricks Wall &amp; Stone wall packed with mortar</b>	Rural	6,973,104	49.0											
	Urban	3,478,467	24.5											
	<b>Total</b>	<b>10,451,571</b>	<b>73.5</b>					<i>L</i>	<i>VL</i>	<i>H</i>	<i>M</i>	<i>L</i>	<i>VL</i>	<i>H/M</i>
<b>Total - Category - B</b>		<b>10,451,571</b>	<b>73.5</b>											
<b>C1 - Concrete Wall</b>	Rural	114,705	0.8											
	Urban	126,292	0.9											
	<b>Total</b>	<b>240,997</b>	<b>1.7</b>					<i>VL</i>	<i>VL</i>	<i>L</i>	<i>VL</i>	<i>VL</i>	<i>VL</i>	<i>L/VL</i>
<b>C2 - Wood Wall</b>	Rural	108,667	0.8											
	Urban	14,975	0.1											
	<b>Total</b>	<b>123,642</b>	<b>0.9</b>					<i>VL</i>	<i>VL</i>	<i>VH</i>	<i>H</i>	<i>M</i>	<i>L</i>	<i>H</i>
<b>Total - Category - C</b>		<b>364,639</b>	<b>2.6</b>											
<b>X - Other Materials</b>	Rural	992,759	7.0											
	Urban	139,931	1.0											
	<b>Total</b>	<b>1,132,690</b>	<b>8.0</b>					<i>VL</i>	<i>VL</i>	<i>VH</i>	<i>H</i>	<i>M</i>	<i>L</i>	<i>VH</i>
<b>Total - Category - X</b>		<b>1,132,690</b>	<b>8.0</b>											
<b>TOTAL HOUSES*</b>														

<b>ROOF</b>														
<b>R1 - Light Weight Sloping Roof</b>	Rural	3,481,149	24.5											
	Urban	953,728	6.7											
	<b>Total</b>	<b>4,434,877</b>	<b>31.2</b>					<i>L</i>	<i>VL</i>	<i>VH</i>	<i>VH</i>	<i>H</i>	<i>M</i>	<i>VH</i>
<b>R2 - Heavy Weight Sloping Roof</b>	Rural	2,034,889	14.3											
	Urban	407,105	2.9											
	<b>Total</b>	<b>2,441,994</b>	<b>17.2</b>					<i>L</i>	<i>VL</i>	<i>H</i>	<i>M</i>	<i>L</i>	<i>VL</i>	<i>H</i>
<b>R3 - Flat Roof</b>	Rural	4,567,039	32.1											
	Urban	2,777,342	19.5											
	<b>Total</b>	<b>7,344,381</b>	<b>51.6</b>					<i>Damage Risk as per that for the Wall supporting it</i>						
<b>TOTAL HOUSES*</b>														

#### Housing Category : Wall Types

**Category - A** : Buildings in field-stone, rural structures,

unburnt brick houses, clay houses

**Category - B** : Ordinary brick building; buildings of the large block & prefabricated type, half-timbered structures, building in natural hewn stone

**Category - C** : Reinforced building, well built wooden structures

**Category - X** : Other materials not covered in A,B,C. These are generally light.

**Notes** : 1. Flood prone area includes that protected area which may have more severe damage under failure of protection works. In some other areas the local damage may be severe under heavy rains and choked drainage.

2. Damage Risk for wall types is indicated assuming heavy flat roof in categories A, B and C (Reinforced Concrete) building

3. Source of Housing Data : Census of Housing, GOI, 2011

#### Housing Category : Roof Type

**Category - R1** - Light Weight (Grass, Thatch,

Bamboo, Wood, Mud, Plastic, Polythene,

GI Metal, Asbestos Sheets, Other Materials)

**Category - R2** - Heavy Weight (Tiles, Stone/Slate)

**Category - R3** - Flat Roof (Brick, Concrete)

EQ Zone V : Very High Damage Risk Zone (MSK > IX)

EQ Zone IV : High Damage Risk Zone (MSK VIII)

EQ Zone III : Moderate Damage Risk Zone (MSK VII)

EQ Zone II : Low Damage Risk Zone (MSK < VI)

**Level of Risk** : VH = Very High; H = High;

M = Moderate; L = Low; VL = Very Low

\* Total No.of Houses excluding Vacant/Locked Houses