

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

### MAHARASHTRA

Wall / Roof		Census Houses		Level of Risk under									
		No. of Houses	%	EQ Zone				Wind Velocity m/s			Flood Prone Area		
				V	IV	III	II	55 & 50	47	44 & 39			
				Area in %				Area in %					
<b>STATE - MAHARASHTRA</b>											<b>94.4</b>	<b>5.6</b>	
<b>WALL</b>													
<b>A1 - Mud &amp; Unburnt Brick Wall</b>	Rural	4,726,424	16.0										
	Urbar	1,061,904	3.6										
	<b>Total</b>	<b>5,788,328</b>	<b>19.6</b>		<i>H</i>	<i>M</i>	<i>L</i>			<i>M</i>	<i>L</i>		
<b>A2 - Stone Wall not packed with mortar</b>	Rural	683,207	2.3										
	Urbar	297,353	1.0										
	<b>Total</b>	<b>980,560</b>	<b>3.3</b>		<i>H</i>	<i>M</i>	<i>L</i>			<i>L</i>	<i>VL</i>		
<b>Total - Category - A</b>		<b>6,768,888</b>	<b>22.9</b>										
<b>B - Burnt Bricks Wall &amp; Stone wall packed with mortar</b>	Rural	7,369,334	24.9										
	Urbar	9,193,798	31.1										
	<b>Total</b>	<b>16,563,132</b>	<b>56.0</b>		<i>M</i>	<i>L</i>	<i>VL</i>			<i>L</i>	<i>VL</i>		
<b>Total - Category - B</b>		<b>16,563,132</b>	<b>56.0</b>										
<b>C1 - Concrete Wall</b>	Rural	845,425	2.9										
	Urbar	2,348,762	7.9										
	<b>Total</b>	<b>3,194,187</b>	<b>10.8</b>		<i>L</i>	<i>VL</i>	<i>VL</i>			<i>VL</i>	<i>VL</i>		
<b>C2 - Wood wall</b>	Rural	187,899	0.6										
	Urbar	136,595	0.5										
	<b>Total</b>	<b>324,494</b>	<b>1.1</b>		<i>L</i>	<i>VL</i>	<i>VL</i>			<i>M</i>	<i>L</i>		
<b>Total - Category - C</b>		<b>3,518,681</b>	<b>11.9</b>										
<b>X - Other Materials</b>	Rural	1,984,261	6.7										
	Urbar	761,144	2.6										
	<b>Total</b>	<b>2,745,405</b>	<b>9.3</b>		<i>VL</i>	<i>VL</i>	<i>VL</i>			<i>M</i>	<i>L</i>		
<b>Total - Category - X</b>		<b>2,745,405</b>	<b>9.3</b>										
<b>TOTAL HOUSES*</b>		<b>29,596,106</b>											

<b>ROOF</b>												
<b>R1 - Light Weight Sloping Roof</b>	Rural	8,426,867	28.5									
	Urbar	4,710,284	15.9									
	<b>Total</b>	<b>13,137,151</b>	<b>44.4</b>		<i>M</i>	<i>L</i>	<i>VL</i>			<i>H</i>	<i>M</i>	
<b>R2 - Heavy Weight Sloping Roof</b>	Rural	5,199,720	17.6									
	Urbar	1,625,240	5.5									
	<b>Total</b>	<b>6,824,960</b>	<b>23.1</b>		<i>M</i>	<i>L</i>	<i>VL</i>			<i>L</i>	<i>VL</i>	
<b>R3 - Flat Roof</b>	Rural	2,169,963	7.3									
	Urbar	7,464,032	25.2									
	<b>Total</b>	<b>9,633,995</b>	<b>32.5</b>		<i>Damage Risk as per that for the Wall supporting it</i>							
<b>TOTAL HOUSES*</b>		<b>29,596,106</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