

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

## HIMACHAL 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		
<b>STATE - HIMACHAL PRADESH</b>				35.3	64.7			1.1		98.9			
<b>WALL</b>													
<b>A1 - Mud &amp; Unburnt Brick Wall</b>	Rural	518,775	20.1										
	Urban	12,709	0.5										
	<b>Total</b>	<b>531,484</b>	<b>20.6</b>	VH	H			VH		M			
<b>A2 - Stone Wall not packed with mortar</b>	Rural	275,229	10.7										
	Urban	5,362	0.2										
	<b>Total</b>	<b>280,591</b>	<b>10.9</b>	VH	H			H		L			
<b>Total - Category - A</b>				<b>812,075</b>	<b>31.5</b>								
<b>B - Burnt Bricks Wall &amp; Stone wall packed with mortar</b>	Rural	1,430,444	55.5										
	Urban	229,507	8.9										
	<b>Total</b>	<b>1,659,951</b>	<b>64.4</b>	H	M			H		L			
<b>Total - Category - B</b>				<b>1,659,951</b>	<b>64.4</b>								
<b>C1 - Concrete Wall</b>	Rural	18,189	0.7										
	Urban	4,130	0.2										
	<b>Total</b>	<b>22,319</b>	<b>0.9</b>	M	L			L		VL			
<b>C2 - Wood wall</b>	Rural	37,745	1.5										
	Urban	2,911	0.1										
	<b>Total</b>	<b>40,656</b>	<b>1.6</b>	M	L			VH		M			
<b>Total - Category - C</b>				<b>62,975</b>	<b>2.4</b>								
<b>X - Other Materials</b>	Rural	34,780	1.4										
	Urban	6,166	0.2										
	<b>Total</b>	<b>40,946</b>	<b>1.6</b>	M	VL			VH		M			
<b>Total - Category - X</b>				<b>40,946</b>	<b>1.6</b>								
<b>TOTAL HOUSES*</b>		<b>2,575,947</b>											

ROOF												
<b>R1 - Light Weight Sloping Roof</b>	Rural	459,928	17.9									
	Urban	72,940	2.8									
	<b>Total</b>	<b>532,868</b>	<b>20.7</b>	M	M			VH		H		
<b>R2 - Heavy Weight Sloping Roof</b>	Rural	1,032,745	40.1									
	Urban	19,199	0.7									
	<b>Total</b>	<b>1,051,944</b>	<b>40.8</b>	H	M			H		L		
<b>R3 - Flat Roof</b>	Rural	822,489	31.9									
	Urban	168,646	6.5									
	<b>Total</b>	<b>991,135</b>	<b>38.4</b>	Damage Risk as per that for the Wall supporting it								
<b>TOTAL HOUSES*</b>		<b>2,575,947</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