

## 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							Flood Prone Area in %		
		No. of Houses	%	EQ Zone				Wind Velocity m/s					
				V	IV	III	II	55 & 50	47	44 & 39		33	
				Area in %				Area in %					
<b>State - HIMACHAL PRADESH 02</b>				<b>44.2</b>	<b>55.8</b>					<b>.1</b>	<b>8.7</b>	<b>91.2</b>	
<b>WALL</b>													
<b>A1 - Mud &amp; Unburnt Brick Wall</b>	Rural	640,847	26.6										
	Urban	20,946	0.9										
	<b>Total</b>	<b>661,793</b>	<b>27.5</b>	VH	H				VH	H	M		
<b>A2 - Stone Wall</b>	Rural	982,235	40.8										
	Urban	30,368	1.3										
	<b>Total</b>	<b>1,012,603</b>	<b>42.1</b>	VH	H				H	M	L		
<b>Total - Category - A</b>		<b>1,674,396</b>	<b>69.5</b>										
<b>B - Burnt Bricks Wall</b>	Rural	455,886	18.9										
	Urban	168,730	7.0										
	<b>Total</b>	<b>624,616</b>	<b>25.9</b>	H	M				H	M	L		
<b>Total - Category - B</b>		<b>624,616</b>	<b>25.9</b>										
<b>C1 - Concrete Wall</b>	Rural	10,230	0.4										
	Urban	8,193	0.3										
	<b>Total</b>	<b>18,423</b>	<b>0.7</b>	M	L				L	VL	VL		
<b>C2 - Wood wall</b>	Rural	43,416	1.8										
	Urban	5,218	0.2										
	<b>Total</b>	<b>48,634</b>	<b>2.0</b>	M	L				VH	H	M		
<b>Total - Category - C</b>		<b>67,057</b>	<b>2.8</b>										
<b>X - Other Materials</b>	Rural	35,725	1.5										
	Urban	7,128	0.3										
	<b>Total</b>	<b>42,853</b>	<b>1.8</b>	M	VL				VH	H	M		
<b>Total - Category - X</b>		<b>42,853</b>	<b>1.8</b>										
<b>TOTAL BUILDINGS</b>		<b>2,408,922</b>											

<b>ROOF</b>													
<b>R1 - Light Weight Sloping Roof</b>	Rural	534,297	22.2										
	Urban	64,512	2.7										
	<b>Total</b>	<b>598,809</b>	<b>24.9</b>	M	M				VH	VH	H		
<b>R2 - Heavy Weight Sloping Roof</b>	Rural	1,076,451	44.7										
	Urban	22,355	0.9										
	<b>Total</b>	<b>1,098,806</b>	<b>45.6</b>	H	M				H	M	L		
<b>R3 - Flat Roof</b>	Rural	557,591	23.1										
	Urban	153,716	6.4										
	<b>Total</b>	<b>711,307</b>	<b>29.5</b>	<i>Damage Risk as per that for the Wall supporting it</i>									
<b>TOTAL BUILDINGS</b>		<b>2,408,922</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, 2001

#### 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, Slate)

**Category - R3** - Flat Roof (Brick, Stone, 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