

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

### PUNJAB

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 %				
STATE - PUNJAB				.9	48.1	46.0	5.0	68.1	27.8	4.1		72.3
WALL												
A1 - Mud & Unburnt Brick Wall	Rural	250,891	3.5									
	Urban	65,070	0.9									
	Total	315,961	4.4	VH	H	M	L	VH	H	M		VH
A2 - Stone Wall not packed with mortar	Rural	39,840	0.6									
	Urban	23,036	0.3									
	Total	62,876	0.9	VH	H	M	L	H	M	L		VH
Total - Category - A		378,837	5.3									
B - Burnt Bricks Wall & Stone wall packed with mortar	Rural	3,804,171	53.3									
	Urban	2,509,639	35.2									
	Total	6,313,810	88.5	H	M	L	VL	H	M	L		H/M
Total - Category - B		6,313,810	88.4									
C1 - Concrete Wall	Rural	173,252	2.4									
	Urban	185,463	2.6									
	Total	358,715	5.0	M	L	VL	VL	L	VL	VL		L/VL
C2 - Wood wall	Rural	3,204	-									
	Urban	3,590	0.1									
	Total	6,794	0.1	M	L	VL	VL	VH	H	M		H
Total - Category - C		365,509	5.1									
X - Other Materials	Rural	54,619	0.8									
	Urban	26,992	0.4									
	Total	81,611	1.2	M	VL	VL	VL	VH	H	M		VH
Total - Category - X		81,611	1.1									
TOTAL HOUSES*		7,139,767										

<b>ROOF</b>												
<b>R1 - Light Weight Sloping Roof</b>	Rural	592,099	8.3									
	Urban	205,980	2.9									
	<b>Total</b>	<b>798,079</b>	<b>11.2</b>	M	M	L	VL	VH	VH	H		VH
<b>R2 - Heavy Weight Sloping Roof</b>	Rural	893,953	12.5									
	Urban	171,975	2.4									
	<b>Total</b>	<b>1,065,928</b>	<b>14.9</b>	H	M	L	VL	H	M	L		H
<b>R3 - Flat Roof</b>	Rural	2,839,925	39.8									
	Urban	2,435,835	34.1									
	<b>Total</b>	<b>5,275,760</b>	<b>73.9</b>	Damage Risk as per that for the Wall supporting it								
<b>TOTAL HOUSES*</b>		<b>7,139,767</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