

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

Table No. : HP 05

State : HIMACHAL PRADESH

MANDI

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 %					
				93.6	6.4						100		
WALL													
A1 - Mud & Unburnt Brick Wall	Rural	57,119	13.6										
	Urban	1,856	0.4										
	Total	58,975	14.0	VH	H						M		
A2 - Stone Wall not packed with mortar	Rural	88,521	21.1										
	Urban	904	0.2										
	Total	89,425	21.3	VH	H						L		
Total - Category - A		148,400	35.4										
B - Burnt Bricks Wall & Stone wall packed with mortar	Rural	235,665	56.3										
	Urban	22,383	5.3										
	Total	258,048	61.6	H	M						L		
Total - Category - B		258,048	61.6										
C1 - Concrete Wall	Rural	3,292	0.8										
	Urban	326	0.1										
	Total	3,618	0.9	M	L						VL		
C2 - Wood wall	Rural	4,902	1.2										
	Urban	159	-										
	Total	5,061	1.2	M	L						M		
Total - Category - C		8,679	2.1										
X - Other Materials	Rural	3,221	0.8										
	Urban	491	0.1										
	Total	3,712	0.9	M	VL						M		
Total - Category - X		3,712	0.9										
TOTAL HOUSES*		418,839											

ROOF												
R1 - Light Weight Sloping Roof	Rural	30,190	7.2									
	Urban	4,087	1.0									
	Total	34,277	8.2	M	M					H		
R2 - Heavy Weight Sloping Roof	Rural	249,588	59.6									
	Urban	3,283	0.8									
	Total	252,871	60.4	H	M					L		
R3 - Flat Roof	Rural	112,942	27.0									
	Urban	18,749	4.5									
	Total	131,691	31.5	<i>Damage Risk as per that for the Wall supporting it</i>								
TOTAL HOUSES*		418,839										

Probable Maximum Precipitation at a Station of the district in 24 hrs is 600 mm

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