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

Table No. : HP 02   **State : HIMACHAL PRADESH**   **KANGRA**

Wall / Roof		Census Houses – No. of Houses	Census Houses – %	EQ Zone V	EQ Zone IV	EQ Zone III	EQ Zone II	Wind 55 & 50	Wind 47	Wind 44 & 39	Wind 33	Flood Prone Area in %
				96.9	3.1					100		
WALL												
A1 - Mud &	Rural	238,911	42.9									
Unburnt Brick Wall	Urban	3,484	0.6									
	Total	**242,395**	**43.5**	VH	H					M		
A2 - Stone Wall	Rural	8,829	1.6									
not packed with mortar	Urban	735	0.1									
	Total	**9,564**	**1.7**	VH	H					L		
Total - Category - A		**251,959**	**45.2**									
B - Burnt Bricks Wall	Rural	266,729	47.9									
& Stone wall packed	Urban	27,421	4.9									
with mortar	*Total*	**294,150**	**52.8**	H	M					L		
Total - Category - B		**294,150**	**52.8**									
C1 - Concrete Wall	Rural	1,578	0.3									
	Urban	273	-									
	Total	**1,851**	**0.3**	M	L					VL		
C2 - Wood wall	Rural	1,551	0.3									
	Urban	227	-									
	Total	**1,778**	**0.3**	M	L					M		
Total - Category - C		**3,629**	**0.7**									
X - Other Materials	Rural	6,209	1.1									
	Urban	912	0.2									
	Total	**7,121**	**1.3**	M	VL					M		
Total - Category - X		**7,121**	**1.3**									
TOTAL HOUSES*		**556,859**										
ROOF												
R1 - Light Weight	Rural	31,558	5.7									
Sloping Roof	Urban	6,243	1.1									
	Total	**37,801**	**6.8**	M	M					H		
R2 - Heavy Weight	Rural	283,848	51.0									
Sloping Roof	Urban	5,063	0.9									
	Total	**288,911**	**51.9**	H	M					L		
R3 - Flat Roof	Rural	208,401	37.4									
	Urban	21,746	3.9									
	Total	**230,147**	**41.3**	*Damage Risk as per that for the Wall supporting it*								
TOTAL HOUSES*		**556,859**										

Probable Maximum Precipitation at a Station of the district in 24 hrs is 680 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 chocked 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