

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

Table No. : BH 14

State : BIHAR

MUZAFFARPUR

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 %					
				2.7	97.3				100			23.9	
WALL													
A1 - Mud & Unburnt Brick Wall	Rural	105,131	9.6										
	Urban	6,639	0.6										
	Total	111,770	10.2	VH	H					H		VH	
A2 - Stone Wall not packed with mortar	Rural	7,405	0.7										
	Urban	1,696	0.2										
	Total	9,101	0.9	VH	H					M		VH	
Total - Category - A		120,871	11.1										
B - Burnt Bricks Wall & Stone wall packed with mortar	Rural	471,713	43.2										
	Urban	87,391	8.0										
	Total	559,104	51.2	H	M					M		H/M	
Total - Category - B		559,104	51.2										
C1 - Concrete Wall	Rural	6,309	0.6										
	Urban	2,071	0.2										
	Total	8,380	0.8	M	L					VL		L/VL	
C2 - Wood wall	Rural	5,252	0.5										
	Urban	1,439	0.1										
	Total	6,691	0.6	M	L					H		H	
Total - Category - C		15,071	1.4										
X - Other Materials	Rural	384,398	35.2										
	Urban	13,586	1.2										
	Total	397,984	36.4	M	VL					H		VH	
Total - Category - X		397,984	36.4										
TOTAL HOUSES*		1,093,030											

ROOF												
R1 - Light Weight Sloping Roof	Rural	538,908	49.3									
	Urban	32,637	3.0									
	Total	571,545	52.3	M	M					VH		VH
R2 - Heavy Weight Sloping Roof	Rural	206,085	18.9									
	Urban	13,278	1.2									
	Total	219,363	20.1	H	M					M		H
R3 - Flat Roof	Rural	235,215	21.5									
	Urban	66,907	6.1									
	Total	302,122	27.6	Damage Risk as per that for the Wall supporting it								
TOTAL HOUSES*		1,093,030										

Probable Maximum Precipitation at a Station of the district in one day for arial extent of 1000 sqm. 576 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