

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

Table No. : BH 28

State : BIHAR

PATNA

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 %					
				87.2	12.8				100			55.2	
WALL													
A1 - Mud & Unburnt Brick Wall	Rural	182,767	16.0										
	Urban	40,155	3.5										
	Total	222,922	19.5		<i>H</i>	<i>M</i>			<i>H</i>			<i>VH</i>	
A2 - Stone Wall not packed with mortar	Rural	10,893	1.0										
	Urban	7,661	0.7										
	Total	18,554	1.7		<i>H</i>	<i>M</i>			<i>M</i>			<i>VH</i>	
Total - Category - A		241,476	21.2										
B - Burnt Bricks Wall & Stone wall packed with mortar	Rural	384,909	33.7										
	Urban	423,078	37.1										
	Total	807,987	70.8		<i>M</i>	<i>L</i>			<i>M</i>			<i>H/M</i>	
Total - Category - B		807,987	70.8										
C1 - Concrete Wall	Rural	6,910	0.6										
	Urban	18,144	1.6										
	Total	25,054	2.2		<i>L</i>	<i>VL</i>			<i>VL</i>			<i>L/ VL</i>	
C2 - Wood wall	Rural	1,218	0.1										
	Urban	1,176	0.1										
	Total	2,394	0.2		<i>L</i>	<i>VL</i>			<i>H</i>			<i>H</i>	
Total - Category - C		27,448	2.4										
X - Other Materials	Rural	46,535	4.1										
	Urban	17,936	1.6										
	Total	64,471	5.7		<i>VL</i>	<i>VL</i>			<i>H</i>			<i>VH</i>	
Total - Category - X		64,471	5.6										
TOTAL HOUSES*		1,141,382											

ROOF													
R1 - Light Weight Sloping Roof	Rural	192,531	16.9										
	Urban	79,223	6.9										
	Total	271,754	23.8		<i>M</i>	<i>L</i>			<i>VH</i>			<i>VH</i>	
R2 - Heavy Weight Sloping Roof	Rural	148,488	13.0										
	Urban	50,736	4.4										
	Total	199,224	17.4		<i>M</i>	<i>L</i>			<i>M</i>			<i>H</i>	
R3 - Flat Roof	Rural	292,213	25.6										
	Urban	378,191	33.1										
	Total	670,404	58.7		Damage Risk as per that for the Wall supporting it								
TOTAL HOUSES*		1,141,382											

Probable Maximum Precipitation at a Station of the district in one day for arial extent of 1000 sqm. 550 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