

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

Table No. : BH 17

State : BIHAR

SARAN

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 %						
				100				100				12.6		
WALL														
A1 - Mud & Unburnt Brick Wall	Rural	116,501	15.5											
	Urban	8,696	1.2											
	Total	125,197	16.7		H				H			VH		
A2 - Stone Wall not packed with mortar	Rural	9,766	1.3											
	Urban	868	0.1											
	Total	10,634	1.4		H				M			VH		
Total - Category - A		135,831	18.1											
B - Burnt Bricks Wall & Stone wall packed with mortar	Rural	452,888	60.2											
	Urban	54,463	7.2											
	Total	507,351	67.4		M				M			H/M		
Total - Category - B		507,351	67.4											
C1 - Concrete Wall	Rural	5,008	0.7											
	Urban	1,046	0.1											
	Total	6,054	0.8		L				VL			L/ VL		
C2 - Wood wall	Rural	5,180	0.7											
	Urban	649	0.1											
	Total	5,829	0.8		L				H			H		
Total - Category - C		11,883	1.6											
X - Other Materials	Rural	92,092	12.2											
	Urban	5,163	0.7											
	Total	97,255	12.9		VL				H			VH		
Total - Category - X		97,255	12.9											
TOTAL HOUSES*		752,320												

ROOF												
R1 - Light Weight Sloping Roof	Rural	240,791	32.0									
	Urban	18,495	2.5									
	Total	259,286	34.5		M				VH			VH
R2 - Heavy Weight Sloping Roof	Rural	113,148	15.0									
	Urban	9,032	1.2									
	Total	122,180	16.2		M				M			H
R3 - Flat Roof	Rural	327,496	43.5									
	Urban	43,358	5.8									
	Total	370,854	49.3		Damage Risk as per that for the Wall supporting it							
TOTAL HOUSES*		752,320										

Probable Maximum Precipitation at a Station of the district in one day for arial extent of 1000 sqm. 523 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