

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

Table No. : MN 04

State : MANIPUR

BISHNUPUR

Wall / Roof		Census Houses		Level of Risk under								Flood Pron e Area
		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		8.7
WALL												
A1 - Mud & Unburnt Brick Wall	Rural	25,094	45.2									
	Urban	13,113	23.6									
	Total	38,207	68.8	VH						M		VH
A2 - Stone Wall not packed with mortar	Rural	118	0.2									
	Urban	152	0.3									
	Total	270	0.5	VH						L		VH
Total - Category - A		38,477	69.4									
B - Burnt Bricks Wall & Stone wall packed with mortar	Rural	1,759	3.2									
	Urban	3,080	5.6									
	Total	4,839	8.8	H						L		H/M
Total - Category - B		4,839	8.7									
C1 - Concrete Wall	Rural	47	0.1									
	Urban	85	0.2									
	Total	132	0.3	M						VL		L/VL
C2 - Wood wall	Rural	223	0.4									
	Urban	310	0.6									
	Total	533	1.0	M						M		H
Total - Category - C		665	1.2									
X - Other Materials	Rural	7,409	13.4									
	Urban	4,077	7.4									
	Total	11,486	20.8	M						M		VH
Total - Category - X		11,486	20.7									
TOTAL HOUSES*		55,467										

ROOF												
R1 - Light Weight Sloping Roof	Rural	32,937	59.4									
	Urban	19,279	34.8									
	Total	52,216	94.2	M						H		VH
R2 - Heavy Weight Sloping Roof	Rural	1,286	2.3									
	Urban	436	0.8									
	Total	1,722	3.1	H						L		H
R3 - Flat Roof	Rural	427	0.8									
	Urban	1,102	2.0									
	Total	1,529	2.8	Damage Risk as per that for the Wall supporting it								
TOTAL HOUSES*		55,467										

Probable Maximum Precipitation at a Station of the district in 24 hrs is **480 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