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

Table No. : MN 01 **State : MANIPUR** **SENAPATI**

Wall / Roof		Census Houses		Level of Risk under								Flood Prone Area
		No. of Houses	%	EQ Zone				Wind Velocity m/s				
				V	IV	III	II	55 & 50	47	44 & 39	33	
				Area in %				Area in %				Area in %
				100				.6		99.4		.0
WALL												
A1 - Mud &	Rural	23,813	60.2									
Unburnt Brick Wall	Urban	696	1.8									
	Total	**24,509**	**62.0**	VH				VH		M		VH
A2 - Stone Wall	Rural	1,139	2.9									
not packed with mortar	Urban	10	-									
	Total	**1,149**	**2.9**	VH				H		L		VH
Total - Category - A		**25,658**	**64.9**									
B - Burnt Bricks Wall	Rural	1,547	3.9									
& Stone wall packed	Urban	430	1.1									
with mortar	*Total*	**1,977**	**5.0**	H				H		L		H/M
Total - Category - B		**1,977**	**5.0**									
C1 - Concrete Wall	Rural	44	0.1									
	Urban	17	-									
	Total	**61**	**0.1**	M				L		VL		L/VL
C2 - Wood wall	Rural	2,905	7.3									
	Urban	409	1.0									
	Total	**3,314**	**8.3**	M				VH		M		H
Total - Category - C		**3,375**	**8.5**									
X - Other Materials	Rural	8,289	21.0									
	Urban	228	0.6									
	Total	**8,517**	**21.6**	M				VH		M		VH
Total - Category - X		**8,517**	**21.5**									
TOTAL HOUSES*		**39,527**										
ROOF												
R1 - Light Weight	Rural	36,747	93.0									
Sloping Roof	Urban	1,599	4.0									
	Total	**38,346**	**97.0**	M				VH		H		VH
R2 - Heavy Weight	Rural	705	1.8									
Sloping Roof	Urban	10	-									
	Total	**715**	**1.8**	H				H		L		H
R3 - Flat Roof	Rural	285	0.7									
	Urban	181	0.5									
	Total	**466**	**1.2**	*Damage Risk as per that for the Wall supporting it*								
TOTAL HOUSES*		**39,527**										

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 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