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

Table No. : MH 23   **State : MAHARASHTRA**   **MUMBAI**

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 %					in %
						100				100			
WALL													
A1 - Mud &	Rural		-										
Unburnt Brick Wall	Urban	19,408	2.0										
	Total	19,408	2.0			M				M			
A2 - Stone Wall	Rural		-										
not packed with mortar	Urban	20,379	2.1										
	Total	20,379	2.1			M				L			
Total - Category - A		39,787	4.1										
B - Burnt Bricks Wall	Rural		-										
& Stone wall packed	Urban	676,598	69.2										
with mortar	Total	676,598	69.2			L				L			
Total - Category - B		676,598	69.2										
C1 - Concrete Wall	Rural		-										
	Urban	216,717	22.2										
	Total	216,717	22.2			VL				VL			
C2 - Wood wall	Rural		-										
	Urban	9,695	1.0										
	Total	9,695	1.0			VL				M			
Total - Category - C		226,412	23.2										
X - Other Materials	Rural		-										
	Urban	34,643	3.5										
	Total	34,643	3.5			VL				M			
Total - Category - X		34,643	3.5										
TOTAL HOUSES*		977,440											
ROOF													
R1 - Light Weight	Rural		-										
Sloping Roof	Urban	253,708	26.0										
	Total	253,708	26.0			L				H			
R2 - Heavy Weight	Rural		-										
Sloping Roof	Urban	117,030	12.0										
	Total	117,030	12.0			L				L			
R3 - Flat Roof	Rural		-										
	Urban	606,702	62.1										
	Total	606,702	62.1	Damage Risk as per that for the Wall supporting it									
TOTAL HOUSES*		977,440											

Probable Maximum Precipitation at a Station of the district in one day for arial extent of 1000 sqm.   1010 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