

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

Table No. : KL 08

State : KERALA

ERNAKULAM

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		26.3
WALL												
A1 - Mud & Unburnt Brick Wall	Rural	18,067	1.8									
	Urban	18,086	1.8									
	Total	36,153	3.6			M				M		VH
A2 - Stone Wall not packed with mortar	Rural	49,232	4.8									
	Urban	46,132	4.5									
	Total	95,364	9.3			M				L		VH
Total - Category - A		131,517	12.8									
B - Burnt Bricks Wall & Stone wall packed with mortar	Rural	243,172	23.7									
	Urban	582,193	56.7									
	Total	825,365	80.4			L				L		H/M
Total - Category - B		825,365	80.3									
C1 - Concrete Wall	Rural	10,705	1.0									
	Urban	31,947	3.1									
	Total	42,652	4.1			VL				VL		L/VL
C2 - Wood wall	Rural	1,663	0.2									
	Urban	3,174	0.3									
	Total	4,837	0.5			VL				M		H
Total - Category - C		47,489	4.6									
X - Other Materials	Rural	9,216	0.9									
	Urban	13,674	1.3									
	Total	22,890	2.2			VL				M		VH
Total - Category - X		22,890	2.2									
TOTAL HOUSES*		1,027,261										

ROOF												
R1 - Light Weight Sloping Roof	Rural	23,661	2.3									
	Urban	39,611	3.9									
	Total	63,272	6.2			L				H		VH
R2 - Heavy Weight Sloping Roof	Rural	124,363	12.1									
	Urban	180,911	17.6									
	Total	305,274	29.7			L				L		H
R3 - Flat Roof	Rural	184,031	17.9									
	Urban	474,684	46.2									
	Total	658,715	64.1	Damage Risk as per that for the Wall supporting it								
TOTAL HOUSES*		1,027,261										

Probable Maximum Precipitation at a Station of the district in one day for arial extent of 1000 sqm. **448 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