

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

KERALA

Wall / Roof		Census Houses		Level of Risk under								
		No. of Houses	%	EQ Zone				Wind Velocity m/s				Flood Prone Area in %
				V	IV	III	II	55 & 50	47	44 & 39	33	
				Area in %				Area in %				
STATE - KERALA						98.1	1.9			91.7	8.3	15.7
WALL												
A1 - Mud & Unburnt Brick Wall	Rural	707,519	7.1									
	Urban	316,646	3.2									
	Total	1,024,165	10.3			M	L			M	L	VH
A2 - Stone Wall not packed with mortar	Rural	584,665	5.9									
	Urban	357,987	3.6									
	Total	942,652	9.5			M	L			L	VL	VH
Total - Category - A		1,966,817	19.8									
B - Burnt Bricks Wall & Stone wall packed with mortar	Rural	3,509,527	35.3									
	Urban	3,729,499	37.5									
	Total	7,239,026	72.8			L	VL			L	VL	H/M
Total - Category - B		7,239,026	72.9									
C1 - Concrete Wall	Rural	147,353	1.5									
	Urban	138,709	1.4									
	Total	286,062	2.9			VL	VL			VL	VL	L/VL
C2 - Wood wall	Rural	55,606	0.6									
	Urban	48,475	0.5									
	Total	104,081	1.1			VL	VL			M	L	H
Total - Category - C		390,143	3.9									
X - Other Materials	Rural	223,565	2.3									
	Urban	115,604	1.2									
	Total	339,169	3.5			VL	VL			M	L	VH
Total - Category - X		339,169	3.4									
TOTAL HOUSES*		9,935,155										

ROOF												
R1 - Light Weight Sloping Roof	Rural	872,193	8.8									
	Urban	429,085	4.3									
	Total	1,301,278	13.1			L	VL			H	M	VH
R2 - Heavy Weight Sloping Roof	Rural	2,239,189	22.5									
	Urban	1,497,262	15.1									
	Total	3,736,451	37.6			L	VL			L	VL	H
R3 - Flat Roof	Rural	2,116,853	21.3									
	Urban	2,780,573	28.0									
	Total	4,897,426	49.3	<i>Damage Risk as per that for the Wall supporting it</i>								
TOTAL HOUSES*		9,935,155										

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