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

HARYANA

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 %				
STATE - HARYANA					39.4	40.9	19.7	36.6	62.4	1.0		26.8
WALL												
A1 - Mud &	Rural	191,640	3.0									
Unburnt Brick Wall	Urban	75,905	1.2									
	Total	**267,545**	**4.2**		H	M	L	VH	H	M		VH
A2 - Stone Wall	Rural	53,756	0.8									
not packed with mortar	Urban	45,299	0.7									
	Total	**99,055**	**1.5**		H	M	L	H	M	L		VH
Total - Category - A		**366,600**	**5.7**									
B - Burnt Bricks Wall	Rural	3,769,849	58.6									
& Stone wall packed	Urban	2,099,457	32.6									
with mortar	*Total*	**5,869,306**	**91.2**		M	L	VL	H	M	L		H/M
Total - Category - B		**5,869,306**	**91.2**									
C1 - Concrete Wall	Rural	42,989	0.7									
	Urban	72,553	1.1									
	Total	**115,542**	**1.8**		L	VL	VL	L	VL	VL		L/VL
C2 - Wood wall	Rural	4,165	0.1									
	Urban	3,821	0.1									
	Total	**7,986**	**0.2**		L	VL	VL	VH	H	M		H
Total - Category - C		**123,528**	**1.9**									
X - Other Materials	Rural	45,939	0.7									
	Urban	29,713	0.5									
	Total	**75,652**	**1.2**		VL	VL	VL	VH	H	M		VH
Total - Category - X		**75,652**	**1.2**									
TOTAL HOUSES*		**6,435,086**										
ROOF												
R1 - Light Weight	Rural	1,311,448	20.4									
Sloping Roof	Urban	298,094	4.6									
	Total	**1,609,542**	**25.0**		M	L	VL	VH	VH	H		VH
R2 - Heavy Weight	Rural	1,352,032	21.0									
Sloping Roof	Urban	486,988	7.6									
	Total	**1,839,020**	**28.6**		M	L	VL	H	M	L		H
R3 - Flat Roof	Rural	1,444,858	22.5									
	Urban	1,541,666	24.0									
	Total	**2,986,524**	**46.5**		*Damage Risk as per that for the Wall supporting it*							
TOTAL HOUSES*		**6,435,086**										

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