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

BIHAR

Wall / Roof		Census Houses		Level of Risk under								
				EQ Zone				Wind Velocity m/s				Flood Prone Area in %
		No. of Houses	%	V	IV	III	II	55 & 50	47	44 & 39	33	
				Area in %				Area in %				
STATE - BIHAR				15.0	59.5	25.5			84.7	15.3		27.5
WALL												
A1 - Mud &	Rural	3,787,703	16.6									
Unburnt Brick Wall	Urban	277,887	1.2									
	Total	*4,065,590*	*17.8*	VH	H	M			H	M		VH
A2 - Stone Wall	Rural	162,569	0.7									
not packed with mortar	Urban	35,329	0.2									
	Total	*197,898*	*0.9*	VH	H	M			M	L		VH
Total - Category - A		*4,263,488*	*18.7*									
B - Burnt Bricks Wall	Rural	9,213,231	40.4									
& Stone wall packed	Urban	1,864,548	8.2									
with mortar	*Total*	*11,077,779*	*48.6*	H	M	L			M	L		H/M
Total - Category - B		*11,077,779*	*48.6*									
C1 - Concrete Wall	Rural	126,899	0.6									
	Urban	50,984	0.2									
	Total	*177,883*	*0.8*	M	L	VL			VL	VL		L/VL
C2 - Wood wall	Rural	86,371	0.4									
	Urban	13,486	0.1									
	Total	*99,857*	*0.5*	M	L	VL			H	M		H
Total - Category - C		*277,740*	*1.2*									
X - Other Materials	Rural	6,887,682	30.2									
	Urban	276,378	1.2									
	Total	*7,164,060*	*31.4*	M	VL	VL			H	M		VH
Total - Category - X		*7,164,060*	*31.4*									
TOTAL HOUSES*		**22,783,067**										
ROOF												
R1 - Light Weight	Rural	9,865,019	43.3									
Sloping Roof	Urban	589,329	2.6									
	Total	*10,454,348*	*45.9*	M	M	L			VH	H		VH
R2 - Heavy Weight	Rural	5,038,389	22.1									
Sloping Roof	Urban	440,555	1.9									
	Total	*5,478,944*	*24.0*	H	M	L			M	L		H
R3 - Flat Roof	Rural	5,361,047	23.5									
	Urban	1,488,728	6.5									
	Total	*6,849,775*	*30.0*	*Damage Risk as per that for the Wall supporting it*								
TOTAL HOUSES*		**22,783,067**										

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