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

Table No. : PN 10 **State : PUNJAB** **MUKTSAR**

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 %				
						77.8	22.2		100			37.8
WALL												
A1 - Mud &	Rural	11,622	5.5									
Unburnt Brick Wall	Urban	1,952	0.9									
	Total	13,574	6.4			M	L		H			VH
A2 - Stone Wall	Rural	1,208	0.6									
not packed with mortar	Urban	733	0.3									
	Total	1,941	0.9			M	L		M			VH
Total - Category - A		15,515	7.3									
B - Burnt Bricks Wall	Rural	127,121	60.1									
& Stone wall packed	Urban	60,613	28.7									
with mortar	Total	187,734	88.8			L	VL		M			H/M
Total - Category - B		187,734	88.8									
C1 - Concrete Wall	Rural	2,031	1.0									
	Urban	2,860	1.4									
	Total	4,891	2.4			VL	VL		VL			L/VL
C2 - Wood wall	Rural	75	-									
	Urban	43	-									
	Total	118	-			VL	VL		H			H
Total - Category - C		5,009	2.4									
X - Other Materials	Rural	2,445	1.2									
	Urban	753	0.4									
	Total	3,198	1.6			VL	VL		H			VH
Total - Category - X		3,198	1.5									
TOTAL HOUSES*		211,456										
ROOF												
R1 - Light Weight	Rural	28,212	13.3									
Sloping Roof	Urban	4,616	2.2									
	Total	32,828	15.5			L	VL		VH			VH
R2 - Heavy Weight	Rural	26,188	12.4									
Sloping Roof	Urban	8,792	4.2									
	Total	34,980	16.6			L	VL		M			H
R3 - Flat Roof	Rural	90,102	42.6									
	Urban	53,546	25.3									
	Total	143,648	67.9	*Damage Risk as per that for the Wall supporting it*								
TOTAL HOUSES*		211,456										

Probable Maximum Precipitation at a Station of the district in 24 hrs is 320 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