

**Table 1.4 Predominant Roof Materials of Buildings/Structures with Households: Urban/Rural, 1998 and 2008**

Roof Materials	Number of Buildings/Structures					
	1998			2008		
	Total	Urban	Rural	Total	Urban	Rural
<b>Cambodia Total</b>	1,989,828	295,148	1,694,680	2,637,654	450,345	2,187,309
Hard/Permanent	967,429	229,384	738,045	2,052,535	422,902	1,629,633
Tiles	502,491	51,389	451,102	689,012	59,692	629,320
Wood/Plywood	7,992	2,196	5,796	19,847	4,643	15,204
Concrete/Brick/Stone	30,369	27,798	2,571	97,218	85,176	12,042
Galvanised Iron/Aluminium/Other metal sheets	393,061	133,321	259,740	1,107,517	247,666	859,851
Asbestos Cement sheets	33,516	14,680	18,836	138,941	25,725	113,216
Soft/Temporary	1,019,188	64,742	954,446	575,433	24,131	551,302
Bamboo/Thatch/Grass/Reeds	1,017,328	64,059	953,269	573,377	23,315	550,062
Plastic/Synthetic Sheets	1,860	683	1,177	2,056	816	1,240
Other Materials	3,211	1,022	2,189	9,686	3,312	6,374
	Percentage					
	1998			2008		
	Total	Urban	Rural	Total	Urban	Rural
<b>Cambodia Total</b>	100.0	100.0	100.0	100.0	100.0	100.0
Hard/Permanent	48.6	77.7	43.6	77.8	93.9	74.5
Tiles	25.3	17.4	26.6	26.1	13.3	28.8
Wood/Plywood	0.4	0.7	0.3	0.8	1.0	0.7
Concrete/Brick/Stone	1.5	9.4	0.2	3.7	18.9	0.6
Galvanised Iron/Aluminium/Other metal sheets	19.8	45.2	15.3	42.0	55.0	39.3
Asbestos Cement sheets	1.7	5.0	1.1	5.3	5.7	5.2
Soft/Temporary	51.2	21.9	56.3	21.8	5.4	25.2
Bamboo/Thatch/Grass/Reeds	51.1	21.7	56.3	21.7	5.2	25.1
Plastic/Synthetic Sheets	0.1	0.2	0.1	0.1	0.2	0.1
Other Materials	0.2	0.3	0.1	0.4	0.7	0.3

The proportion of buildings with permanent roof materials has greatly increased. More than 50 percent of buildings had temporary material roofs in 1998, but in 2008, over three quarters of buildings have permanent material roof. The most used material of roof in 2008 is ‘Galvanised Iron/Aluminium /Other metal sheets’ (42.0 percent).

Table 1.4 shows that in urban areas, the proportion of ‘Concrete/Bricks/Stones’ roof in 2008 has doubled from 1998 (18.9 percent and 9.4 percent respectively). Over half of roofs of buildings have ‘Galvanised Iron/Aluminium /Other metal sheets’ (55.0 percent). The percentage of Tiles in 2008 has decreased from 1998 (from 17.4 to 13.3 percent).

In rural areas, the proportion of ‘Galvanised iron/Aluminium/Other metal sheets’ roof has remarkably increased (from 15.3 percent in 1998 to 39.3 percent in 2008) and become the top instead of ‘Bamboo/Thatch/Grass/Reeds’.

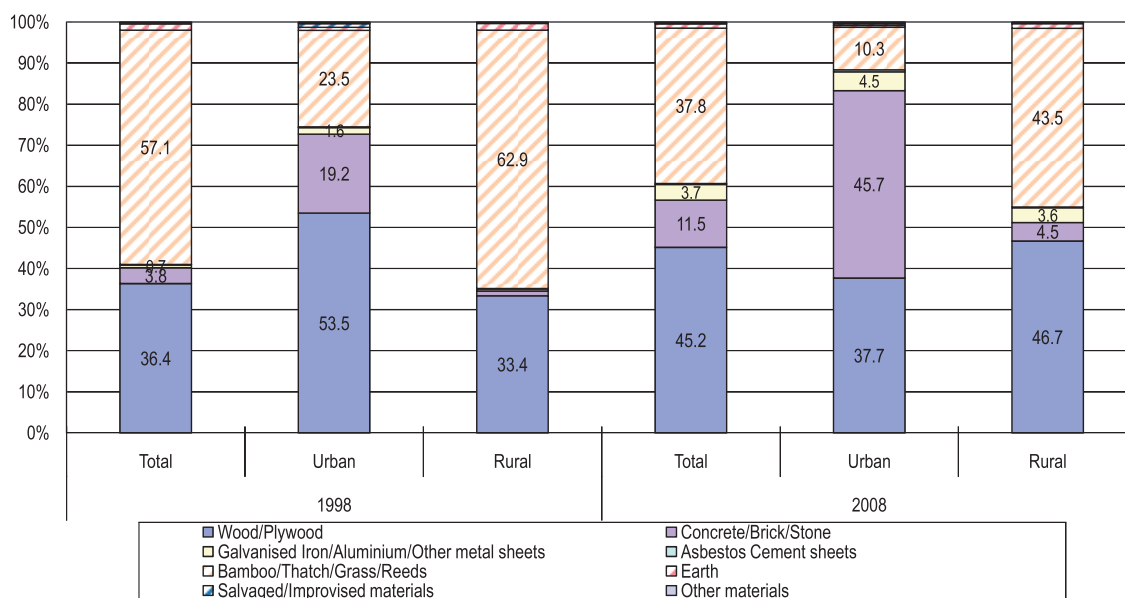
The soft/ temporary roof is declining drastically in urban and rural areas in the decade of 1998-2008 and this trend is more notable in urban areas (from 21.9 percent in 1998 to 5.4 percent in 2008).

### 1.3.2 Materials of Wall

The GPCC 1998 and 2008 classified the materials of Wall to Hard/Permanent and Soft/Temporary. Walls made of any of the following materials are considered as permanent: Wood/Plywood, Concrete/Brick/Stone, Galvanised Iron/Aluminium/Other metal sheets and Asbestos Cement sheets. Walls made of Bamboo/Thatch/ Grass /Reeds, Earth and Salvaged/Improvised materials are considered as temporary. Other materials of Wall which are not mentioned above and should have been specified during the census operation are generally considered as Soft/Temporary materials.

Table 1.5 and Figure 1.3 provide the distribution of the wall materials in regional difference and time series comparison. The striped parts in Figure 1.3 indicate the materials of buildings/structures are 'non-Permanent'.

Figure 1.3 Predominant Wall Materials of Buildings/Structures with Households:  
Urban/Rural, 1998 and 2008



Although it was not as much increase in the permanence of roof, the permanence of wall has also increased greatly and the proportion of permanent wall has exceeded temporary wall (60.7 percent and 39.1 percent respectively).

**Table 1.5 Predominant Wall Materials of Buildings/Structures with Households: Urban/Rural, 1998 and 2008**

Wall Materials	Number of Buildings/Structures					
	1998			2008		
	Total	Urban	Rural	Total	Urban	Rural
<b>Cambodia Total</b>	1,989,828	295,148	1,694,680	2,637,654	450,345	2,187,309
Hard/Permanent	815,520	219,904	595,616	1,600,854	398,044	1,202,810
Wood/Plywood	724,219	157,974	566,245	1,192,021	169,718	1,022,303
Concrete/Brick/Stone	75,738	56,810	18,928	303,590	205,694	97,896
Galvanised Iron/Aluminium/Other metal sheets	14,730	4,659	10,071	98,902	20,397	78,505
Asbestos Cement sheets	833	461	372	6,341	2,235	4,106
Soft/Temporary	1,169,965	74,245	1,095,720	1,031,732	50,615	981,117
Bamboo/Thatch/Grass/Reeds	1,135,497	69,325	1,066,172	998,345	46,571	951,774
Earth	29,872	2,147	27,725	27,263	2,186	25,077
Salvaged/Improvised materials	4,596	2,773	1,823	6,124	1,858	4,266
Other materials	4,343	999	3,344	5,068	1,686	3,382
	Percentage					
	1998			2008		
	Total	Urban	Rural	Total	Urban	Rural
<b>Cambodia Total</b>	100.0	100.0	100.0	100.0	100.0	100.0
Hard/Permanent	41.0	74.5	35.1	60.7	88.4	55.0
Wood/Plywood	36.4	53.5	33.4	45.2	37.7	46.7
Concrete/Brick/Stone	3.8	19.2	1.1	11.5	45.7	4.5
Galvanised Iron/Aluminium/Other metal sheets	0.7	1.6	0.6	3.7	4.5	3.6
Asbestos Cement sheets	0.0	0.2	0.0	0.2	0.5	0.2
Soft/Temporary	58.8	25.2	64.7	39.1	11.2	44.9
Bamboo/Thatch/Grass/Reeds	57.1	23.5	62.9	37.8	10.3	43.5
Earth	1.5	0.7	1.6	1.0	0.5	1.1
Salvaged/Improvised materials	0.2	0.9	0.1	0.2	0.4	0.2
Other materials	0.2	0.3	0.2	0.2	0.4	0.2

In urban areas, the wall material used most common in 1998 was 'Wood/Plywood' (53.5 percent), however, it has been replaced by 'Concrete/Bricks/Stones' (45.7 percent) in 2008. The soft/ temporary materials of wall are declining drastically in urban areas from 25.2 percent in 1998 to 11.2 percent in 2008.

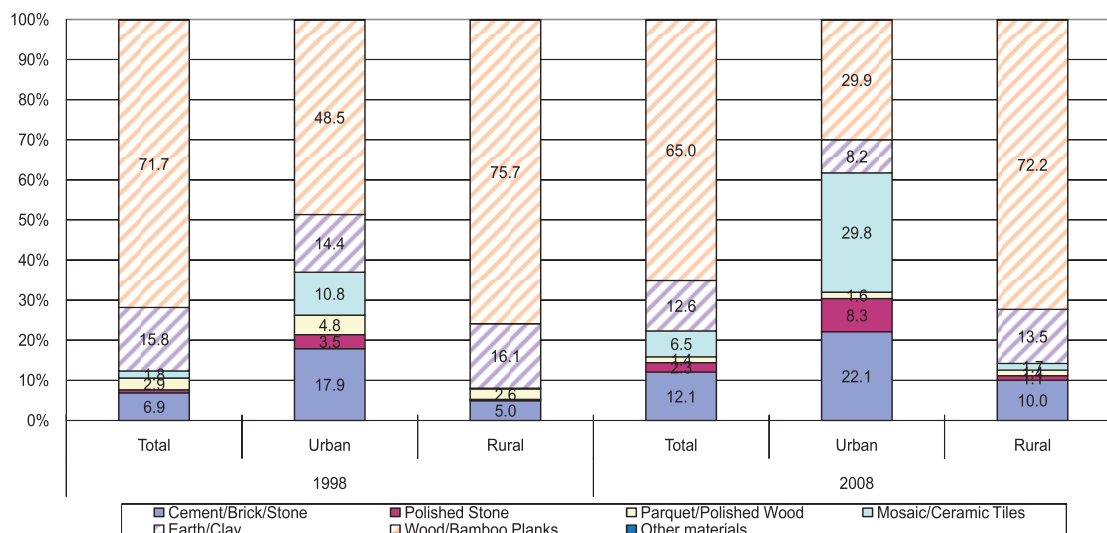
In 2008, 'Wood/Plywood' is used more in rural areas than in urban areas (46.7 percent and 37.7 percent respectively). The Soft/ Temporary wall has also declined in rural areas but 'Bamboo/Thatch/Grass/Reeds' wall occupies 43.5 percent and is still popular in rural areas.

### 1.3.3 Materials of Floor

The predominant materials of Floor adopted in GPCC 1998 and 2008 classified the materials of Floor to Hard/Permanent and Soft/Temporary. Floors made of any of the following materials are considered as permanent: Cement/Brick/Stone, Polished Stone, Parquet/Polished Wood and Mosaic/Ceramic. Floors made of Earth/Clay and Wood/Bamboo Planks are considered as temporary. Other materials of Floor which are not mentioned above and should have been specified during the census operation are generally considered as Soft/Temporary materials.

Table 1.6 and Figure 1.4 provide the distribution of the floor materials in regional difference in Cambodia and time series comparison. The striped parts in Figure 1.4 indicates the materials of buildings/structures are 'non-Permanent'.

Figure 1.4 Predominant Floor Material of Buildings/Structures with Households: Urban/Rural, 1998 and 2008



Although there has been the remarkable progress in urban areas, as a whole, the increase of permanent floor has progressed only 10 percentage points (from 12.4 percent in 1998 to 22.4 percent in 2008). The difference in the proportion of permanent floor between urban and rural areas has expanded while the regional discrepancies of permanent roof and wall between urban and rural have shrunk (Table 1.4 and 1.5).

Table 1.6 shows that in urban and rural areas, the Hard/Permanent materials of Floor like 'Cement/Brick/Stone', 'Polished Stone' and 'Mosaic/Ceramic Tiles' are more popular in 2008 than in 1998. The exception is 'Parquet/Polished Wood'. The percentage of it has decreased due to the expensive value of the wood at the present time.

Nearly eight out of ten buildings have temporary floor in 2008.

**Table 1.6 Predominant Floor Materials of Buildings/Structures with Households: Urban/Rural 1998 and 2008**

Floor Materials	Number of Buildings/Structures					
	1998			2008		
	Total	Urban	Rural	Total	Urban	Rural
<b>Cambodia Total</b>	1,989,828	295,148	1,694,680	2,637,654	450,345	2,187,309
Hard/Permanent	246,169	109,222	136,947	589,744	278,287	311,457
Cement/Brick/Stone	137,014	52,860	84,154	319,132	99,596	219,536
Polished Stone	15,291	10,444	4,847	61,975	37,329	24,646
Parquet/Polished Wood	58,608	14,140	44,468	38,142	7,090	31,052
Mosaic/Ceramic Tiles	35,256	31,778	3,478	170,495	134,272	36,223
Soft/Temporary	1,741,147	185,538	1,555,609	2,045,327	171,592	1,873,735
Earth/Clay	314,768	42,397	272,371	331,702	36,971	294,731
Wood/Bamboo Planks	1,426,379	143,141	1,283,238	1,713,625	134,621	1,579,004
Other materials	2,512	388	2,124	2,583	466	2,117
	Percentage					
	1998			2008		
	Total	Urban	Rural	Total	Urban	Rural
<b>Cambodia Total</b>	100.0	100.0	100.0	100.0	100.0	100.0
Hard/Permanent	12.4	37.0	8.1	22.4	61.8	14.2
Cement/Brick/Stone	6.9	17.9	5.0	12.1	22.1	10.0
Polished Stone	0.8	3.5	0.3	2.3	8.3	1.1
Parquet/Polished Wood	2.9	4.8	2.6	1.4	1.6	1.4
Mosaic/Ceramic Tiles	1.8	10.8	0.2	6.5	29.8	1.7
Soft/Temporary	87.5	62.9	91.8	77.5	38.1	85.7
Earth/Clay	15.8	14.4	16.1	12.6	8.2	13.5
Wood/Bamboo Planks	71.7	48.5	75.7	65.0	29.9	72.2
Other materials	0.1	0.1	0.1	0.1	0.1	0.1

### 1.3.4 Provincial Differences

Cambodia is divided in twenty three provinces and a municipality which is Phnom Penh, in 2008 according to Royal Decree and Government Sub-decree, each of which is headed by a governor. These are the province of Banteay Meanchey, Battambang, Kampong Cham, Kampong Chhnang, Kampong Speu, Kampong Thom, Kampot, Kandal, Koh Kong, Kratie, Mondul Kiri, Phnom Penh, Preahy Vihear, Prey Veng, Pursat, Siem Reap, Preah Shanouk, Stung Treng, Svay Rieng, Takeo, Otdar Meanchey, Kep and Pailin.

In Table 1.7, we can see the differences between provinces and a municipality about using of Permanent Materials of Wall, Roof and Floor. There are big provincial discrepancies in the proportion of buildings with permanent materials.