

CHAPTER VII: HOUSING AND LIVING ARRANGEMENTS

The age and quality of the housing stock, together with living conditions and availability of amenities such as safe drinking water, clean fuels for cooking, lighting etc. are the focus of this part of the census enquiry. Housing quality is one of the first and important means of determining levels of poverty within a country. Housing conditions are linked to the seventh Millennium Development Goal, that is, on the environment. The analysis that follows will use measures of overcrowding, housing stocks and other indicators to show what the country must attain to meet this goal of the MDGs. Sex of household headship is also an indicator used, together with poverty data, to determine gender disparities within a country and the level of 'feminization of poverty' there.

7.1 Household Headship

Table 7.1 shows the distribution of households by the gender of their head for the ten administrative regions of the country for 1991 and 2002. This table shows that the number of households has increased from 154,153 in 1991 to 182,609 in 2002 - an 18.5 percent increment. This change means that the number of households increased at the rate of 1.6 percent per annum or about 2,500 newly-formed households each year. Approximately, 43 percent of all households are in Region 4, 17 percent in Region 6 and 14 percent in Region 3. These regions in the same rank order were also the most populous regions in 1991, except that the proportions increased slightly in 2002.

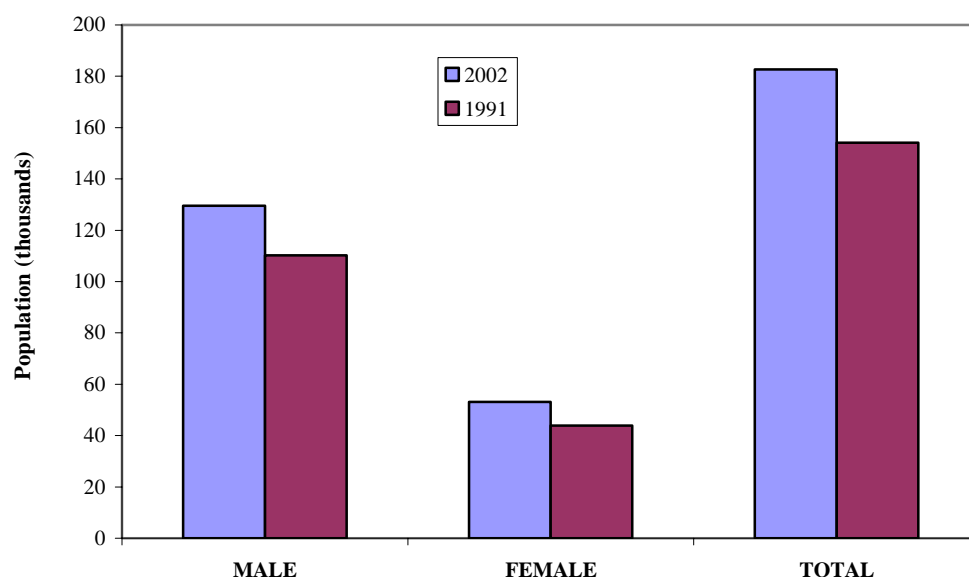
**Table 7.1: Distribution of Heads of Household by Region and Sex,
Guyana: 1991 and 2002**

Region	2002			1991		
	Male	Female	Total	Male	Female	Total
Region 1	2.6	1.4	2.3	2.4	1.4	2.1
Region 2	6.8	4.5	6.1	6.4	4.8	6.0
Region 3	15.3	11.8	14.3	14.8	11.5	13.9
Region 4	38.8	52.0	42.6	37.7	50.6	41.4
Region 5	7.4	6.1	7.0	7.6	6.5	7.3
Region 6	18.1	15.2	17.3	20.4	16.7	19.3
Region 7	2.2	1.5	2.0	2.3	1.6	2.1
Region 8	1.2	0.4	1.0	0.7	0.3	0.6
Region 9	2.4	0.8	1.9	2.2	0.7	1.8
Region 10	5.3	6.1	5.5	5.4	6.1	5.6
Total	100	100	100	100	100	100
Proportion	70.9	29.1	100	71.5	28.5	100
Number	129,389	53,220	182,609	110,212	43,941	154,153

The majority of all households (71 percent) are headed by a male. This figure was slightly smaller than that of 1991 (Figure 7.1). Nevertheless, the level of male participation in the lives of children augurs well for the society, when globally there is an increase in single parent and female headed households. Male headship, of course, does not mean that there is gender equality within households. As a matter of fact, the reverse

may be true if males control the resources of the household. This situation provides opportunity for further research by interest groups to determine the level of empowerment of women within male-headed households.

**Fig. 7.1: Distribution of Population by Head of Households
Guyana: 1991-2002**



Also, Table 7.1 shows the percentage distribution of the household heads by sex for the regions. Consistent with the regional population distribution, the highest proportion of both male and female households are recorded in Region 4. In the case of female headed households, the censuses of 1991 and 2002 have revealed that in excess of 50 percent of female heads reside in Region 4, a possible correlation between responsibility for the households and job availability. Male heads are spread somewhat more evenly with the highest proportion, 39 percent residing in Region 4, another 18 percent in Region 6 and 15 percent in Region 3.

Also, preponderance of male heads over females is clearly shown, when view the sex ratios of household headship for each region as indicated in Table 7.2. Overall, male heads outnumbered females by 251 males to every 100 females in 1991. This ratio has declined to 244 in 2002. In some regions, for example, Region 9, the ratio is more than 7 to 1, and it is almost 4 to 1 in Regions 2 and 7. Only in Region 4, where females outnumbered males, is the ratio less than 2 to 1. In fact, in no region at all does the ratio favour female heads.

Table 7.2: Number of Household Heads by Sex and Region and Sex Ratio, Guyana: 1991 and 2002

Region	Number				Sex Ratio	
	2002		1991		2002	1991
	Male	Female	Male	Female	(m/f) x 100	
Region 1	3,402	764	2,665	606	445	440
Region 2	8,787	2,420	7,106	2,093	363	340
Region 3	19,743	6,304	16,356	5,060	313	323
Region 4	50,190	27,677	41,543	22,222	181	187
Region 5	9,533	3,273	8,416	2,839	291	296
Region 6	23,416	8,104	22,439	7,331	289	306
Region 7	2,860	777	2,540	710	368	358
Region 8	1,536	227	811	110	677	737
Region 9	3,114	432	2,401	302	721	795
Region 10	6,808	3,242	5,935	2,668	210	222
Total	129,389	53,220	110,212	43,941	243	251

7.2 Household Overcrowding

7.2.1 Household size

Household size is another poverty indicator which can be determined from the census data by using average household size as a proxy. In general, average household size for 2002 is 4.1, down from 4.7 in 1991. The average coincides with the highest percentage of persons (19 percent) living in the four-person household indicated in Table 7.4.

Table 7.3: Average Household Size by Region, Guyana: 1991 and 2002

Region	Number of Households		Population Size		Average Household Size	
	2002	1991	2002	1991	2002	1991
Region 1	4,145	3,271	24,275	18,428	5.9	5.6
Region 2	11,220	9,199	49,253	43,455	4.4	4.7
Region 3	25,957	21,416	103,061	95,975	4.0	4.5
Region 4	77,937	63,765	310,320	296,924	4.0	4.7
Region 5	12,774	11,255	52,428	51,280	4.1	4.6
Region 6	31,469	29,770	123,695	142,541	3.9	4.8
Region 7	3,641	3,250	17,597	14,790	4.8	4.6
Region 8	1,871	921	10,095	5,615	5.4	6.1
Region 9	3,543	2,703	19,387	15,057	5.5	5.6
Region 10	10,052	8,603	41,112	39,608	4.1	4.6
Total	182,609	154,153	751,223	723,673	4.1	4.7

Whereas, the percentages of persons living in household from four persons upward were still high in 1991, the contrast prevailed in 2002 when most families seemed to have moved from the communal extended family to nuclear type; thus raising the proportions of family living in below four person households (Figure 7.2). On its own, household size per se is difficult to interpret, as no conclusions can be derived concerning individual privacy arrangements especially for sleeping within a dwelling unit. Nevertheless, it is a guide.

At the regional level, Regions 2, 3, 4, 5, 6 and 10 are almost at the national average. In Regions 1, 8 and 9 however, average household size is above the national average, nearly 6 persons. This is an indicator of where some of the poorest households may be located. In the case of Region 8, it is possible that there is makeshift housing that is below optimum conditions for persons entering into that mining community.

Fig. 7.2: Household Distribution by Number of Persons, Guyana: (1991-2002)

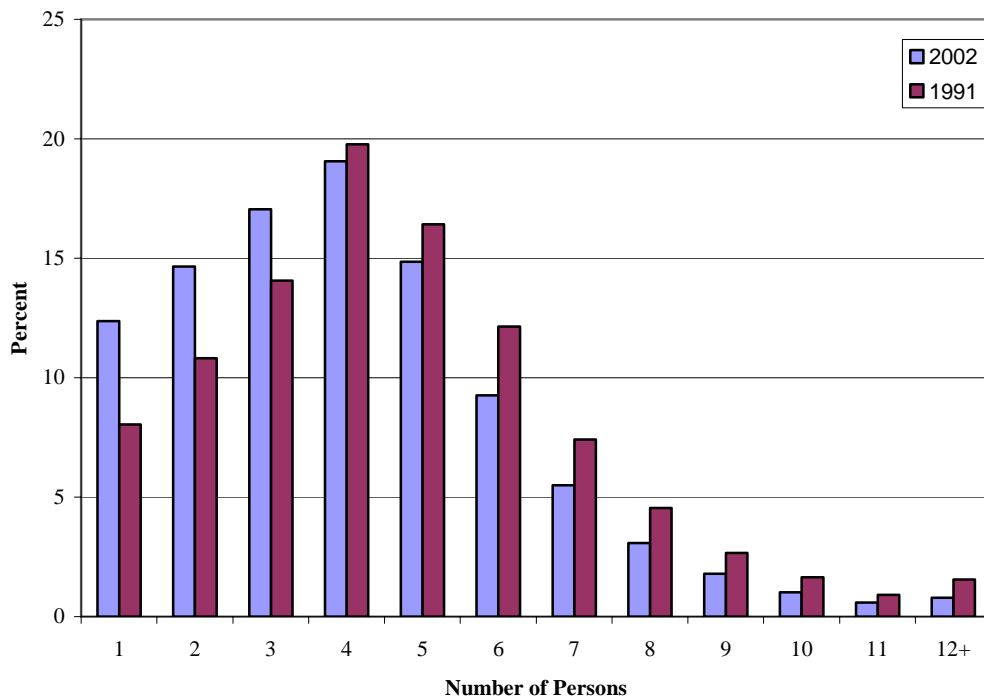


Table 7.4: Distribution of Households by Size of Persons in the Household, Guyana: 2002

Household Size	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10	Total
1 Person	312	1,155	2,769	10,378	1,403	3,712	485	204	239	1,905	22,562
2 Persons	382	1,445	3,695	12,376	1,736	4,816	429	173	321	1,368	26,741
3 Persons	462	1,749	4,607	13,934	2,119	5,545	539	240	423	1,480	31,098
4 Persons	516	2,083	5,531	14,731	2,552	6,610	561	233	439	1,524	34,780
5 Persons	543	1,899	4,098	10,939	2,091	4,953	512	240	496	1,328	27,099
6 Persons	481	1,217	2,401	6,678	1,249	2,788	389	226	466	989	16,884
7 Persons	443	760	1,293	3,873	710	1,465	282	183	411	621	10,041
8 Persons	347	369	637	2,123	369	771	189	143	303	358	5,609
9 Persons	255	262	369	1,163	240	355	105	80	205	232	3,266
10 Persons	156	116	220	672	124	210	71	66	116	102	1,853
11 Persons	80	77	129	408	79	96	45	26	60	69	1,069
12+ Persons	168	88	181	578	81	119	33	56	64	66	1,434
Not stated	0	0	27	84	21	29	1	1	0	10	173
Total	4,145	11,220	25,957	77,937	12,774	31,469	3,641	1,871	3,543	10,052	182,609

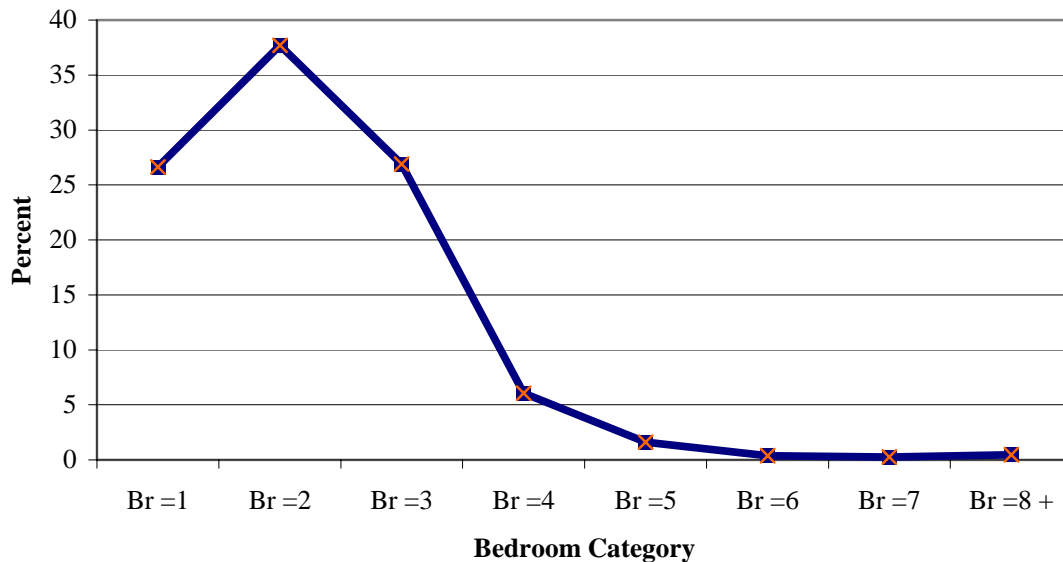
	Percentage										
1 Person	7.5	10.3	10.7	13.3	11.0	11.8	13.3	10.9	6.7	19.0	12.4
2 Persons	9.2	12.9	14.2	15.9	13.6	15.3	11.8	9.2	9.1	13.6	14.6
3 Persons	11.1	15.6	17.7	17.9	16.6	17.6	14.8	12.8	11.9	14.7	17.0
4 Persons	12.4	18.6	21.3	18.9	20.0	21.0	15.4	12.5	12.4	15.2	19.0
5 Persons	13.1	16.9	15.8	14.0	16.4	15.7	14.1	12.8	14.0	13.2	14.8
6 Persons	11.6	10.8	9.2	8.6	9.8	8.9	10.7	12.1	13.2	9.8	9.2
7 Persons	10.7	6.8	5.0	5.0	5.6	4.7	7.7	9.8	11.6	6.2	5.5
8 Persons	8.4	3.3	2.5	2.7	2.9	2.5	5.2	7.6	8.6	3.6	3.1
9 Persons	6.2	2.3	1.4	1.5	1.9	1.1	2.9	4.3	5.8	2.3	1.8
10 Persons	3.8	1.0	0.8	0.9	1.0	0.7	2.0	3.5	3.3	1.0	1.0
11 Persons	1.9	0.7	0.5	0.5	0.6	0.3	1.2	1.4	1.7	0.7	0.6
12+ Persons	4.1	0.8	0.7	0.7	0.6	0.4	0.9	3.0	1.8	0.7	0.8
Not stated	0.0	0.0	0.1	0.1	0.2	0.1	0.0	0.1	0.0	0.1	0.1
Total	100	100	100	100	100	100	100	100	100	100	100

7.2.2 Overcrowded Households

Household size per se as given in Table 7.4 is limited and does not show well individual sleeping privacy arrangement. To some extent, it shares idea on how households spend their income on dependant children and family members; as such, the incidence of overcrowding among households usually looks at number of bedrooms occupied by a family unit. However, the index itself is a difficult concept to measure and depends on many factors, such as, the dimension of the room, arrangements of sleeping bedroom to family members by age and sex, among others. Even in the case where respondent admits to have many bedrooms, single adult family members or either sex may occupy separate rooms, leaving children in desperate condition. These being literally difficult to ascertain, a maximum of two persons per bedroom is accepted as standard on a face value for Guyana; anything above that is considered overcrowding.

Cross-classification of the number of persons giving the effect of variation in spatial bedroom congestion can be studied from Table 7.5. In general, majority of the enumerated households live in two bedrooms, and followed in equal proportions, those who owned three and one bedrooms dwelling respectively (see Table 7.5 row total and Figure 7.3).

Fig. 7.3: Percent of Persons Per Bedroom, Guyana: 2002



Apart from “one bedroom-category”, however, using the maximum of two persons per bedroom to determine sleeping discomfort is not a simple factor. For instance, information on how sleeping arrangements are made among household family members is required. Bedroom overcrowding, therefore, is measured here on the basis of mere aggregate number, based on arithmetic series, with a constant multiple factor of two plus any addition. For example, overcrowding in one bedroom is any addition after the second persons, in two bedrooms, any addition after the fourth persons, in three bedrooms, any addition after the sixth persons, etc.

By this standard, only 9.0 percent (17,777) out of 196,631 households, who occupied one bedroom, had no sleeping discomfort, that is, they had a maximum of two persons per bedroom, while 5.3 percent was reported to have been single in a bedroom. Also, about 43.1 and 73 percent of those who occupied two and three bedroom units respectively, had no overcrowding in the bedrooms (see Table 7.5).

As expected, the number of persons per bedroom decreases proportionally as the size of bedroom increases, but rationally, the percent overcrowded is significant, and need to deal with, in that, sustainability of healthier life does not only require the cleaning of environmental surrounding, but equally, entails being free from air pollution resulting from overcrowdings.

Table 7.5: Distribution of Population in the Households Classified by Number of Persons Per Bedroom, Guyana: 2002

Household Size	Bedrooms By Number of Persons								Total
	Br =1	Br =2	Br =3	Br =4	Br =5	Br =6	Br =7	Br =8 +	
1 person	10,390	6,970	3,927	820	192	44	44	65	22,452
2 persons	17,777	20,108	12,261	2,328	497	118	122	192	53,403
3 persons	27,642	37,269	22,793	3,973	869	171	249	387	93,352
4 persons	36,900	55,564	37,716	6,523	1,424	316	296	548	139,287
5 persons	32,660	53,460	38,601	7,914	1,901	365	315	630	135,845
6 persons	23,898	38,327	29,573	6,786	1,828	390	186	480	101,468
7 persons	17,194	25,642	20,150	5,098	1,612	315	182	308	70,501
8 persons	11,819	15,593	12,322	3,598	925	240	192	288	44,977
9 persons	7,523	10,272	7,988	2,533	679	234	81	180	29,490
10 persons	4,623	6,129	5,261	1,713	513	180	60	90	18,568
11 persons	2,614	3,636	3,490	1,267	476	154	33	88	11,758
12+ persons	3,589	5,353	4,578	2,200	857	312	132	192	17,213
Total	196,631	278,323	198,661	44,753	11,773	2,837	1,891	3,446	738,315

Percent of Persons in Each Bedroom Category									
1 person	5.3	2.5	2.0	1.8	1.6	1.5	2.3	1.9	3.0
2 persons	9.0	7.2	6.2	5.2	4.2	4.2	6.4	5.6	7.2
3 persons	14.1	13.4	11.5	8.9	7.4	6.0	13.2	11.2	12.6
4 persons	18.8	20.0	19.0	14.6	12.1	11.1	15.6	15.9	18.9
5 persons	16.6	19.2	19.4	17.7	16.1	12.9	16.6	18.3	18.4
6 persons	12.2	13.8	14.9	15.2	15.5	13.7	9.8	13.9	13.7
7 persons	8.7	9.2	10.1	11.4	13.7	11.1	9.6	8.9	9.5
8 persons	6.0	5.6	6.2	8.0	7.9	8.5	10.1	8.4	6.1
9 persons	3.8	3.7	4.0	5.7	5.8	8.2	4.3	5.2	4.0
10 persons	2.4	2.2	2.6	3.8	4.4	6.3	3.2	2.6	2.5
11 persons	1.3	1.3	1.8	2.8	4.0	5.4	1.7	2.6	1.6
12+ persons	1.8	1.9	2.3	4.9	7.3	11.0	7.0	5.6	2.3
Total	100	100	100	100	100	100	100	100	100
Row total %	26.6	37.7	26.9	6.1	1.6	0.4	0.3	0.5	100

Note: Derived from **Appendix B.7.1**. Number of persons in each "bedroom category" was derived by multiplying household size by the corresponding number in each cell of Appendix B.71. Later, it was adjusted to agree with the total numerated 738,315 household population.

7.3 Housing and Sanitation Facilities

Three of the eight Millennium Development Goals (MDGs) involve health, household access to safe drinking water, improved sanitation conditions including toilet facilities, garbage disposal, etc. These are used as indicators to monitor and evaluate the achievement of goal seven, that is, environmental sustainability. The population and housing census has always been an effective tool for monitoring of the provision of these basic social services and the 2002 census was no exception.

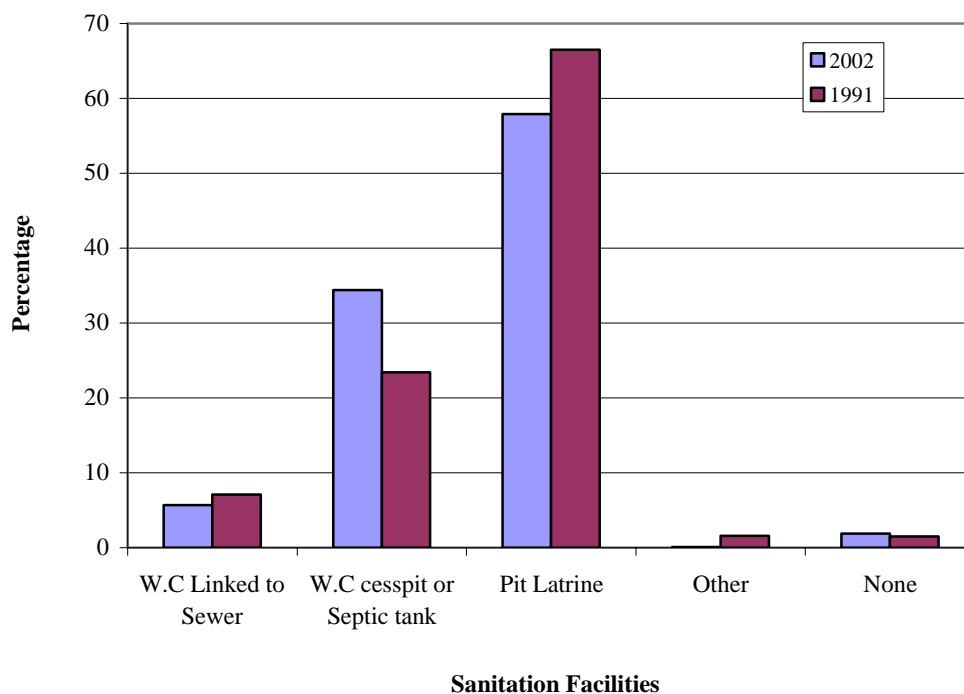
7.3.1 Toilet Facilities

The distribution of the households by types of toilet facility is presented in Table 7.6 and Figure 7.4. This table shows that a little over one-half of the households still use pit latrines, declining from two thirds in 1991. Concomitant with the decline in the use of pit latrines has been the increased use of water closet (W.C.) with cesspit or septic tank. More than one-third of the population now uses this type of toilet as compared with a little more than one-fifth in 1991.

Table 7.6: Households by Type of Sanitation Facility, Guyana: 1991-2002

Facility	2002		1991	
	Number	Percent	Number	Percent
W.C. Linked to Sewer	9,358	5.1	10,930	7.1
W.C. Cesspit or Septic tank	66,495	36.4	36,043	23.4
Pit Latrine	103,182	56.5	102,437	66.5
Other	282	0.2	2,408	1.6
None	3,292	1.8	2,335	1.5
Total	182,609	100	154,153	100

**Fig. 7.4: Changes in Households Sanitation Facilities
Guyana: 1991-2002**



Notable however, has been the decline in the proportion of households using the modern method of water closet linked to sewer line. The reason is that, this system was constructed more than sixty years ago only in Region 4, the capital city region, and has not extended, because it requires substantial capital investment, if it is to be extended beyond the city limits. Additionally, about two-thirds of the households are in the remaining nine administrative regions where this system does not exist.

Consequently, the only available means to households wanting to modernize the toilet waste disposal in the suburbs or rural areas is by connecting the sewer line to a septic tank, reflected in Table 7.7 for the ten administrative regions. This type of sewage disposal system will probably continue to increase in the future, as it will be the only means by which suburban and rural households can modernize their disposal systems.

The percentage of households without any toilet facilities has also declined from 3.1 percent in 1991 to 2.0 percent in 2002 (see Table 7.6).

**Table 7.7: Households Distribution by Type of Sanitation Facilities
by Region, Guyana: 2002**

W.C Linked to:						
Region	Sewer line	Septic tank	Pit - Ltrine	Other	None	Total
Region 1	0	480	3,553	38	74	4,145
Region 2	0	4,666	6,518	13	23	11,220
Region 3	0	7,432	18,240	93	192	25,957
Region 4	9,358	36,768	31,131	42	638	77,937
Region 5	0	2,582	10,051	2	139	12,774
Region 6	0	8,756	22,456	15	242	31,469
Region 7	0	780	2,290	7	564	3,641
Region 8	0	113	1,246	65	447	1,871
Region 9	0	163	2,549	2	829	3,543
Region 10	0	4,755	5,148	5	144	10,052
Total	9,358	66,495	103,182	282	3,292	182,609
Percentage						
Region	W.C. linked to		Pit -			Total
	Sewer line	Septic tank	Latrine	Other	None	
Region 1	0.0	11.6	85.7	0.9	1.8	100
Region 2	0.0	41.6	58.1	0.1	0.2	100
Region 3	0.0	28.6	70.3	0.4	0.7	100
Region 4	12.0	47.2	39.9	0.1	0.8	100
Region 5	0.0	20.2	78.7	0.0	1.1	100
Region 6	0.0	27.8	71.4	0.0	0.8	100
Region 7	0.0	21.4	62.9	0.2	15.5	100
Region 8	0.0	6.0	66.6	3.5	23.9	100
Region 9	0.0	4.6	71.9	0.1	23.4	100
Region 10	0.0	47.3	51.2	0.0	1.4	100
Total	5.1	36.4	56.5	0.2	1.8	100

Note: 80 "not stated" in Region 3 was added to "other".

Sharing sanitation facilities: It is important to note that 84 percent (149,717) of the 179,035 who had toilet facilities owned them exclusively and did not share with neighboring households (Table 7.8). The proportion sharing toilet facilities has increased both in number and percentage, 19,270 households, constituting 13 percent in 1991 to as high as one and half times or 16.4 percent in 2002 (Table 7.8). Sharing pit-latrine was common among the households; three times higher than those who have access to water closet facilities either linked to sewer line and cesspit or septic tank combined.

Table 7.8: Changes in Sharing Sanitation Facilities, Guyana: 1991 - 2002

Sanitation Facilities	1991 Sanitation Facilities			2002 Sanitation Facilities			Change	
	Not			Not			Not	
	Shared	Shared	Total	Shared	Shared	Total	Shared	Shared
W.C linked to sewer line	1,252	9,678	10,930	1,357	8,072	9,428	105	-1,606
W.C linked to septic tank	2,567	33,476	36,043	7,753	58,602	66,355	5,186	25,126
Pit latrine	15,451	86,986	102,437	20,208	83,044	103,252	4,757	-3,942
Total	19,270	130,140	149,410	29,318	149,717	179,035	10,048	19,577

	Percentage						% Change	
W.C linked to sewer line	0.8	6.5	7.3	0.8	4.5	5.3	8.4	-16.6
W.C linked to septic tank	1.7	22.4	24.1	4.3	32.7	37.1	202.0	75.1
Pit latrine	10.3	58.2	68.6	11.3	46.4	57.7	30.8	-4.5
Total	12.9	87.1	100	16.4	83.6	100	52.1	15.0

All regions have shown significant proportions of households sharing toilet facilities with other neighbors (Table 7.9). As expected, while the proportion sharing toilet facilities in Regions 7, 8 and 9 exceeded the national average nearly twice, the remaining regions exhibited figures similar to the overall pattern, except in Region 2, where unexpectedly less than 5 percent were engaged in sharing facilities.

Notably, sharing toilet facilities is unhealthy and to have nearly one fifth of the households engaged in such practice, somehow indicates that the proportion of households involved are perhaps living in sub-standard housing conditions (Tables 7.8 and 7.9).

Table 7.9: Distribution of Households by Status of Sharing Sanitation Facilities by Region, Guyana: 2002

Region	Facilities Shared					Facilities Not Shared				
	W.C Linked		Pit -	Total		W.C Linked		Pit -	Total	
	Sewerl	Septic		Percent	Number	Sewerl	Septic		Percent	Number
	ine	tank	Latrine			ine	tank	Latrine		
Region 1	0.0	0.8	16.2	17.0	685	0.0	11.6	71.4	83.0	3,348
Region 2	0.0	1.3	3.2	4.5	503	0.0	40.5	55.0	95.5	10,681
Region 3	0.0	4.2	11.2	15.4	3,948	0.0	24.8	59.9	84.6	21,724
Region 4	1.8	6.7	10.7	19.1	14,791	10.4	40.7	29.7	80.9	62,466
Region 5	0.0	1.2	12.4	13.5	1,711	0.0	19.2	67.2	86.5	10,922
Region 6	0.0	1.6	10.4	12.0	3,745	0.0	26.4	61.6	88.0	27,467
Region 7	0.0	2.5	24.5	27.0	830	0.0	23.0	50.0	73.0	2,240
Region 8	0.0	2.3	31.3	33.5	456	0.0	6.2	60.3	66.5	903
Region 9	0.0	0.8	25.0	25.8	699	0.0	5.2	69.0	74.2	2,013
Region 10	0.0	5.4	14.3	19.7	1,950	0.0	42.5	37.8	80.3	7,953
Total %	0.8	4.3	11.3	16.4	x	4.5	32.7	46.4	83.6	x
Number	1,357	7,753	20,208	x	29,318	8,072	58,602	83,044	x	149,717

7.3.2 Garbage Waste Disposal

Toilet waste disposal as in the preceding section though necessary, but not sufficient in the sense that, it is a supplement and needs to be accompanied with appropriate garbage disposal system to ensure environmental sustainability. Improper garbage disposal serves as a catalyst for breeding grounds of many hazards including air pollution.

In 2002, more than two-thirds of the households used burning garbage as a main source of controlling the surrounding, 22 percent used the modern method of city-wise garbage collection, and 8 percent dump garbage on the land or in the sea, river and pond (Table 7.10). Burying and composting garbage is healthier, but small proportion of the households controls their environment using these methods (3.6 percent). As the case might be, garbage collection system is mainly in place in Region 4, (45 percent) and to lesser extent in Regions 10 and 6; in contrast to the use of dumping either on the land, in river or sea as common method practiced in the main hinterland regions of the country.

In all, the comparison of garbage disposal system cannot be made with 1991 because the relevant data is unavailable. However, at this rate of improvement where the percentage of households without toilet facilities has declined along with just small number involved in the crude garbage dumping method, Guyana is expected to meet the MDG target for improved sanitation.

Table 7.10: Distribution of Households by Method of Garbage Disposal , Guyana: 200

Region	Dump on land	Compost	Burning	Dump river/sea/pond	Burying	Garbage collection service	Other	Total
Region 1	891	22	2,789	303	132	7	1	4,145
Region 2	738	1,787	8,157	339	140	17	41	11,220
Region 3	886	33	21,959	2,350	310	253	166	25,957
Region 4	1,748	122	38,021	1,296	1,544	34,759	447	77,937
Region 5	416	67	11,790	154	233	66	47	12,774
Region 6	1,153	145	25,422	764	395	3,485	106	31,469
Region 7	588	93	2,167	37	415	319	22	3,641
Region 8	519	36	1,124	13	161	1	17	1,871
Region 9	614	39	2,607	13	221	40	10	3,543
Region 10	995	27	6,689	175	672	1,491	3	10,052
Total	8,549	2,370	120,725	5,443	4,225	40,437	861	182,609
Percent								
Region 1	21.5	0.5	67.3	7.3	3.2	0.2	0.0	100
Region 2	6.6	15.9	72.7	3.0	1.3	0.1	0.4	100
Region 3	3.4	0.1	84.6	9.1	1.2	1.0	0.6	100
Region 4	2.2	0.2	48.8	1.7	2.0	44.6	0.6	100
Region 5	3.3	0.5	92.3	1.2	1.8	0.5	0.4	100
Region 6	3.7	0.5	80.8	2.4	1.3	11.1	0.3	100
Region 7	16.2	2.5	59.5	1.0	11.4	8.8	0.6	100
Region 8	27.7	1.9	60.1	0.7	8.6	0.1	0.9	100
Region 9	17.3	1.1	73.6	0.4	6.2	1.1	0.3	100
Region 10	9.9	0.3	66.5	1.7	6.7	14.8	0.0	100
Total	4.7	1.3	66.1	3.0	2.3	22.1	0.5	100

7.3.3 Households Water Facilities

Two questions posed to household heads to investigate the condition of water in the households include,

- The main source of water supply; and
- Main source of drinking water.

The main intention of the census module was to examine the accessibility of water as well as the availability of safe drinking water to the households. Unfortunately, the data for both is only available in 2002, while in 1991 we have sources of water supply; thus making our comparison impossible. Hence, the analysis that follows treats this topic as availability of safe drinking water. In our view, access to water in any form that can not be used in household chores is of less importance in Guyana.

Sources of Drinking Water: Another MDG is the provision of improved water. In 2002, more than three quarters of the population has access to piped water. Equal proportions have water piped into their dwelling houses or into their yards. Ten percent receive their water from a river pond or stream and 3 percent through a public stand-pipe. This distribution means that nearly 80 percent of the population has access to improved water as defined in the MDGs.

Table 7.11: Households by Sources of Water Supply, Guyana: 1991-2002

Sources of water supply	2002		1991	
	Number	Percent	Number	Percent
Private, Piped into Dwelling	16,912	9.3	12,741	8.3
Private Catchments/Rainwater	8,829	4.8	7,869	5.1
Private Piped into Yard	11,175	6.1	n/a	n/a
Public, Piped into Dwelling	52,956	29.0	30,984	20.1
Public, Piped into Yard	59,642	32.7	49,965	32.4
Public Standpipe or Hand Pump	5,949	3.3	16,321	10.6
Public Well	1,796	1.0	12,207	7.9
River/Stream/Creek/Pond/Spring	19,390	10.6	*	*
Other	5,960	3.3	24,067	15.6
Total	182,609	100	154,153	100

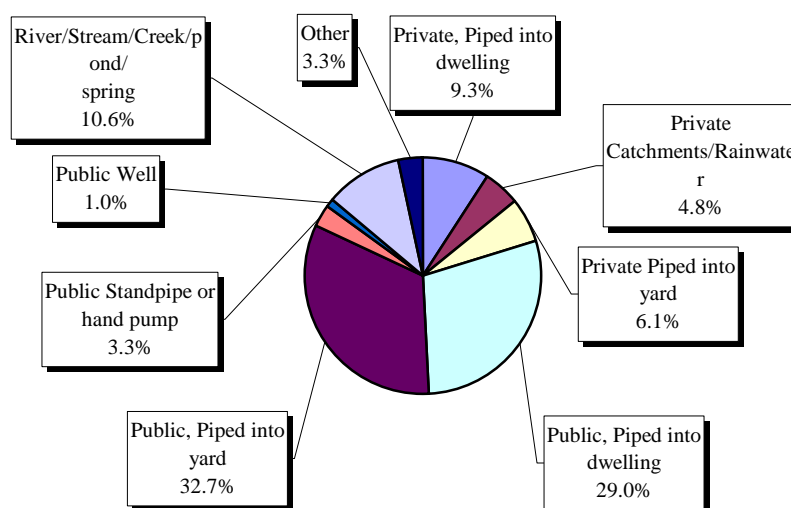
Note

* included with other category in 1991

n/a - data not available

These results mean that slightly more households have water piped into their dwellings and, the percentage receiving water from a stand-pipe has declined. The decline in access to water through public stand pipe has declined percentage wise from 10.6 percent in 1991 to 3.3 percent in 2002 and in absolute term from 16,321 households in 1991 to 5,949 in 2002. This is a significant improvement in this sector (Table 7.11 and Figure 7.5).

**Fig. 7.5: Distribution of Households by Sources of Water Supply
Guyana: 2002**



Regionally, safe drinking water supply is a major concern in Regions 1, 7, 8 and 9 as more than one-third in Region 7, and a little over half in Regions 1 and 9 drink from unprotected dug well and spring, and pond/river or stream (Table 7.12). The proportion drinking from such water supply is quite substantial in Region 8, up to three-quarters of the households, and in addition to some 19 percent households in Region 10 who reported to have obtained drinking water supply from like sources. The main source of drinking water in Regions 1, 7 and 8 is rain water collection, and accounted for 23, 53 and 19 percent respectively, while protected dug well serve as a major source of drinking water (26 percent) in Region 9. Safe drinking water supplied by pipe into dwelling and yard or plot being capital intensive project, is mainly availability in the coastal belt regions of 2, 3, 4, 5 and 6, and the inland Region 10. Approximately, three-quarters of the households in these regions enjoy piped-borne water facility in their homes. As mentioned earlier, the prevalence of safe drinking water on the whole is fairly good in Guyana, as substantial proportion of the households is reported to have obtained safe drinking water from standardized sources (Table 7.12).

Table 7.12: Distribution of Households by Main Source of Drinking Water, by Region: Guyana: 2002

Sources of drinking water	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10	Total
Pipe Into Dwelling	145	706	7,571	20,351	3,617	9,794	118	4	86	4,592	46,984
Pipe into Yard or Plot	535	6,381	6,715	23,926	6,351	16,131	163	64	96	1,276	61,638
Public Standpipe	129	225	1,059	3,907	720	1,432	15	24	163	657	8,331
Tube Well/Borhole with pump	96	831	167	480	4	13	51	0	214	12	1,868
Protected Dug well	69	37	15	220	12	125	17	5	911	23	1,434
Protected Spring	31	4	14	290	9	24	11	35	18	351	787
Bottle Water	32	44	818	11,955	337	779	58	5	19	309	14,356
Rain water Collection	933	2,623	8,576	8,891	626	1,792	1,922	361	15	843	26,582
Unprotected Dug well	45	6	8	41	2	49	1	19	1,292	27	1,490
Unprotected Spring	121	4	3	32	3	1	2	293	41	582	1,082
Pond/River/Stream	1,979	181	513	754	425	363	1,250	1,037	641	1,249	8,392
Vendor/Pvte Supplier	22	43	87	5,156	63	106	5	18	10	39	5,549
Other	8	135	411	1,934	605	860	28	6	37	92	4,116
Total	4,145	11,220	25,957	77,937	12,774	31,469	3,641	1,871	3,543	10,052	182,609

	Percent										
Pipe Into Dwelling	3.5	6.3	29.2	26.1	28.3	31.1	3.2	0.2	2.4	45.7	25.7
Pipe into Yard or Plot	12.9	56.9	25.9	30.7	49.7	51.3	4.5	3.4	2.7	12.7	33.8
Public Standpipe	3.1	2.0	4.1	5.0	5.6	4.6	0.4	1.3	4.6	6.5	4.6
Tube Well/Borhole with pump	2.3	7.4	0.6	0.6	0.0	0.0	1.4	0.0	6.0	0.1	1.0
Protected Dug well	1.7	0.3	0.1	0.3	0.1	0.4	0.5	0.3	25.7	0.2	0.8
Protected Spring	0.7	0.0	0.1	0.4	0.1	0.1	0.3	1.9	0.5	3.5	0.4
Bottle Water	0.8	0.4	3.2	15.3	2.6	2.5	1.6	0.3	0.5	3.1	7.9
Rain water Collection	22.5	23.4	33.0	11.4	4.9	5.7	52.8	19.3	0.4	8.4	14.6
Unprotected Dug well	1.1	0.1	0.0	0.1	0.0	0.2	0.0	1.0	36.5	0.3	0.8
Unprotected Spring	2.9	0.0	0.0	0.0	0.0	0.0	0.1	15.7	1.2	5.8	0.6
Pond/River/Stream	47.7	1.6	2.0	1.0	3.3	1.2	34.3	55.4	18.1	12.4	4.6
Vendor/Pvte Supplier	0.5	0.4	0.3	6.6	0.5	0.3	0.1	1.0	0.3	0.4	3.0
Other	0.2	1.2	1.6	2.5	4.7	2.7	0.8	0.3	1.0	0.9	2.3
Total	100	100	100	100	100	100	100	100	100	100	100

7.3.4 Households Fuel Facilities

Types of fuel used for domestic consumption are indicators of standard of living. In 2002, cooking gas and kerosene accounted for more than four-fifths of total domestic fuel consumption in Guyana, as compared to less than 2 percent who used electricity for cooking. This is indicative of good standard, where such fuel for cooking is an essential part of modern households (Table 7.13). The use of wood, which often produces carbon-monoxide and intense heat, is a traditional method, and largely in place in the hinterland regions (1, 7, 8 and 9). More than half of the households there used wood for cooking, as their access to modern fuel facilities, such as, electricity and cooking gas are limited. Charcoal is better source of fuel for local communities, since Guyana has dense tropical rainforest, but very insignificant proportion (less than 1 percent) of the households used this, and mostly in Regions 2 and 4.

**Table 7.13: Distribution of Households by Type of Fuel Used for Cooking,
Guyana: 2002**

Region	Coal	Wood	Gas	Kerosene	Electricity	Other	Total
Region 1	77	2,453	406	1,192	17	0	4,145
Region 2	422	7,094	1,451	2,108	115	29	11,220
Region 3	44	2,106	10,659	12,873	138	138	25,957
Region 4	301	1,820	42,498	32,264	482	572	77,937
Region 5	22	1,032	3,415	8,194	62	49	12,774
Region 6	44	4,013	8,789	18,437	81	105	31,469
Region 7	66	1,160	959	1,430	5	21	3,641
Region 8	50	1,323	136	346	5	11	1,871
Region 9	3	2,635	842	57	1	5	3,543
Region 10	114	366	2,547	5,309	1,695	21	10,052
Total	1,144	24,002	71,702	82,209	2,601	951	182,609
Percentage							
Region 1	1.9	59.2	9.8	28.8	0.4	0.0	100
Region 2	3.8	63.2	12.9	18.8	1.0	0.3	100
Region 3	0.2	8.1	41.1	49.6	0.5	0.5	100
Region 4	0.4	2.3	54.5	41.4	0.6	0.7	100
Region 5	0.2	8.1	26.7	64.1	0.5	0.4	100
Region 6	0.1	12.8	27.9	58.6	0.3	0.3	100
Region 7	1.8	31.9	26.3	39.3	0.1	0.6	100
Region 8	2.7	70.7	7.3	18.5	0.3	0.6	100
Region 9	0.1	74.4	23.8	1.6	0.0	0.1	100
Region 10	1.1	3.6	25.3	52.8	16.9	0.2	100
Total	0.6	13.1	39.3	45.0	1.4	0.5	100

Note: 110 "not stated" cases of type of fuel was prorated.

7.4 Households' Housing Stock

7.4.1 Ownership Status of Dwellings

A significant proportion of households (63.8 percent) owned the dwellings where they live, and between 1991 and 2002, although the proportional share remained constant, owner-occupied dwellings increased by 19.6 percent or to 116,503. The number of rented dwellings, both government and private individual rented premises dropped by 21.6 percent- from 34,393 to 26,977. The decline has been compensated for mainly by the rise in the share of rent-free households, either residing on family or inherited property and to lesser extent in the share of squatted and leased property (Table 7.14).

Private households renting premises constituted about 9 times as much as the government in 1991, and by 2002 the gap had widened to more than 30 times between the two sectors (Figures 7.7 and 7.8).

Nearly all regions had shown highest proportion of owner-occupied dwellings, either in 1991 or 2002 except Regions 4 and 10, which accordingly had the proportion in the category below the 64 percent national average (Figure 7.6). This result is undisputable,

as these two regions were migrant destination areas (see Table 3.8); and presumably the presence of lifetime in-migrant households could decrease the proportional share of owner-occupied dwellings, and in reverse, increase the proportion of those who rent or living free-rent.

Table 7.14: Percent Distribution of Households by Ownership Status of Dwelling and Region, Guyana: 1991 -2002

Region	Ownership Status 2002								Total
	Owned	Squatted	Rented - Pvte	Rented Govt	Leased	Rent Free	Other	Not stated	
Region 1	85.8	1.9	2.4	0.3	1.4	7.3	0.0	0.9	4,145
Region 2	80.1	0.7	6.3	1.0	0.9	10.8	0.0	0.2	11,220
Region 3	67.4	2.9	10.8	0.1	0.8	16.8	0.2	1.0	25,957
Region 4	55.5	3.5	21.1	0.4	0.5	17.3	0.3	1.3	77,937
Region 5	73.9	0.4	7.4	0.7	0.3	17.2	0.0	0.2	12,774
Region 6	66.0	0.9	9.9	0.3	0.2	22.2	0.1	0.5	31,469
Region 7	61.8	0.9	12.7	0.9	1.2	21.7	0.4	0.5	3,641
Region 8	81.8	1.7	4.7	0.6	1.0	8.3	1.4	0.4	1,871
Region 9	89.6	0.6	1.6	0.5	0.6	6.5	0.2	0.3	3,543
Region 10	60.1	1.3	14.5	0.7	0.4	20.9	0.2	1.9	10,052
Total %	63.8	2.3	14.3	0.4	0.5	17.4	0.2	1.0	(100)
Number	116,503	4,218	26,172	805	965	31,797	386	1,763	182,609

Region	Ownership Status 1991								Total
	Owned	Squatted	Rented - Pvte	Rented Govt	Leased	Rent Free	Other	Not stated	
Region 1	80.3	3.3	3.8	4.8	0.0	5.8	1.6	0.2	3,271
Region 2	76.5	2.3	8.1	1.5	0.8	8.9	1.7	0.2	9,199
Region 3	68.6	2.0	14.2	0.4	0.3	14.0	0.5	0.0	21,416
Region 4	52.7	1.5	30.9	3.3	0.2	10.8	0.5	0.0	63,765
Region 5	74.7	0.2	9.2	1.0	0.1	14.4	0.4	0.0	11,255
Region 6	70.9	1.2	12.6	0.9	0.2	13.6	0.6	0.0	29,770
Region 7	53.9	1.0	18.5	2.3	0.6	21.7	1.8	0.2	3,250
Region 8	85.6	1.2	4.2	1.0	2.8	3.5	1.7	0.0	921
Region 9	89.8	1.9	1.4	0.2	0.3	5.7	0.6	0.0	2,703
Region 10	57.8	1.5	23.5	4.1	0.3	11.5	0.9	0.3	8,603
Total %	63.2	1.5	20.2	2.2	0.3	12.0	0.7	0.1	(100)
Number	97,411	2,342	31,075	3,318	424	18,445	1,041	97	154,153

Fig. 7.6: Owner-Occupied Dwellings by Region, Guyana: 1991 and 2002

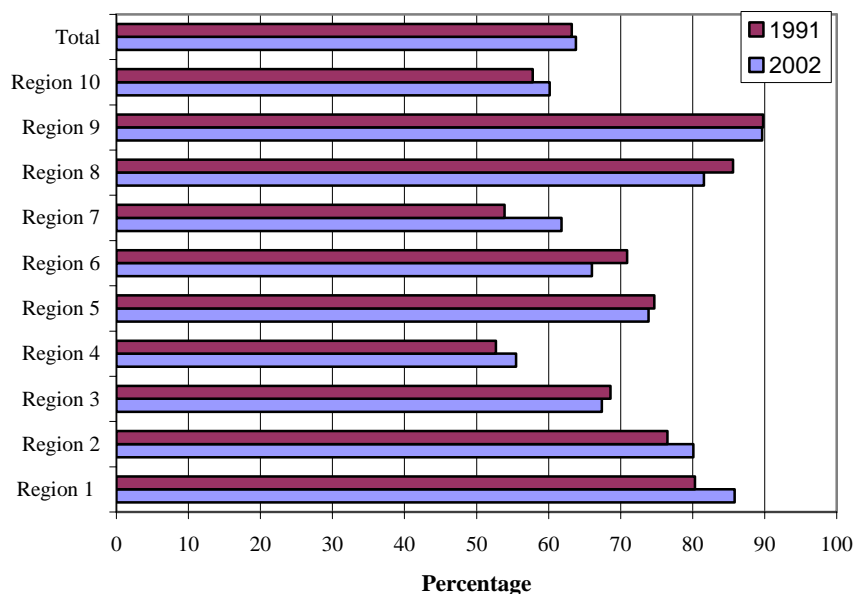


Fig.7.7: Ownership status of dwellings, Guyana: 1991

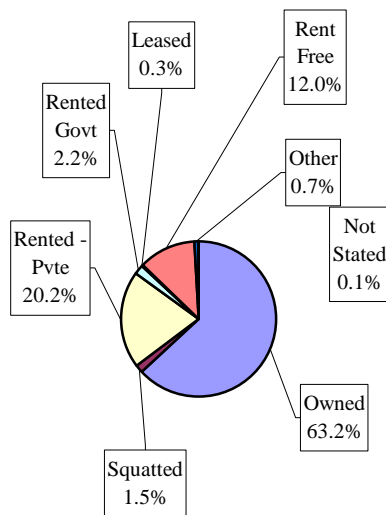
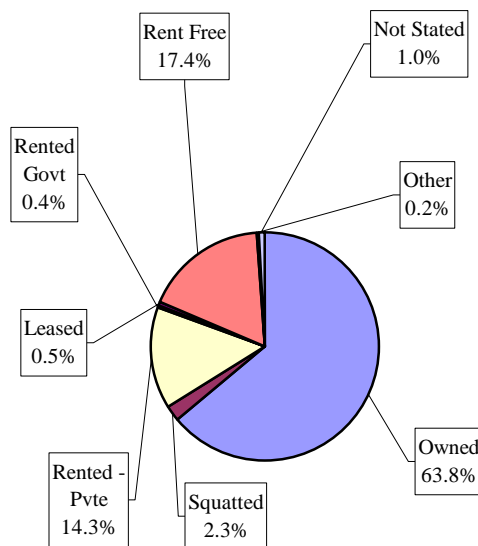


Fig.7.8: Ownership status of dwellings, Guyana: 2002



7.4.2 Year of Construction

Household capability to construct homes is an indicator of a rise in living standard. Table 7.15 and Figure 7.8 show the distribution of households by year since their dwellings were constructed. Accordingly, about one-third of the households in Guyana confirmed to have constructed their dwellings more than thirty years ago or before 1970. The proportion varies from relatively low in regions with predominantly rural settlements, that is, Regions 1, 8 and 9 to higher proportions for those seem to have urban or sub-urban based settlements.

Comparatively, the urban or sub-urban areas, such like, Vreed-en-Hoop, city of Georgetown, New Amsterdam, Linden, etc. in Regions 3, 4, 6 and 10 respectively, fall under the jurisdictions of the municipalities and households desirous of construction must abide by the building codes and designs acceptable for safety and durability in accordance with the city ordinance. As such, permanent structures with durable features are found in these regions, as compared to the hinterland regions with large rural communities. Besides, some of the country's colonial historical settlements are along the coastal belt regions; hence it is not surprising to see substantial numbers of the dwellings there being built during the early times.

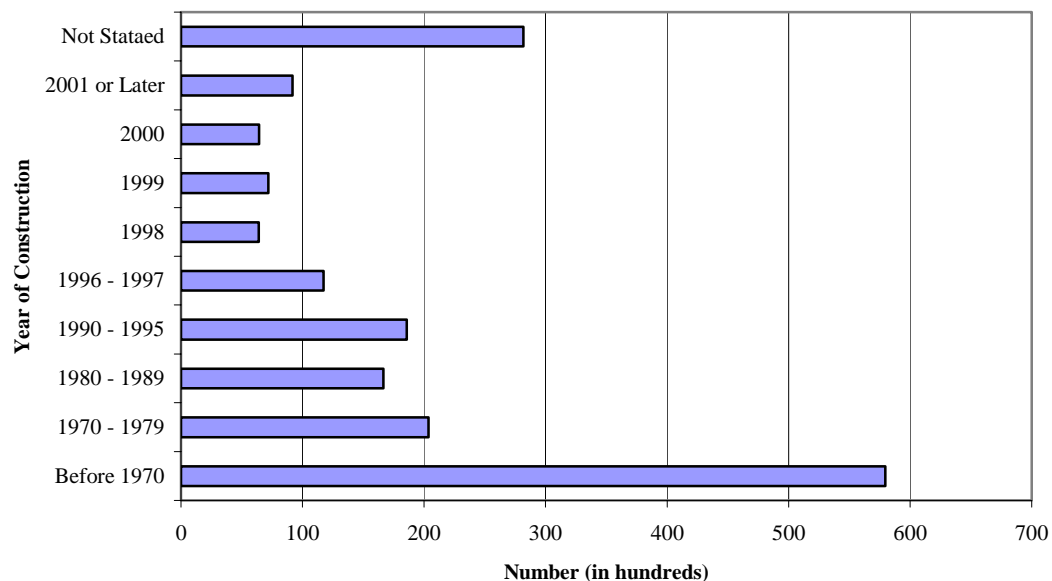
When compared housing development progress in the earliest years and the decades of the 1970's to 1999, it seems more likely that house construction in Guyana peaked in 1999, when 7,180 households, constituting nearly 4 percent of total households confirmed to have completed their dwellings within that single year.

On the whole, there was dramatic increase in construction activities toward the end of the period compared to the previous intervals. For example, between 1998 to September 2002, up to 29,175 households or 16 percent of the total households completed their dwellings, an achievement greater than what was realized in any of the periods indicated in Table 7.15. A sizeable proportion (15.4 percent) of the dwellings had no year of construction (Table 7.15 and Figure 7.9).

Table 7.15: Distribution of Households by Year Since Dwellings Built, by Region, Guyana: 2002

Constructio n Year	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10	Total
Before 1970	502	2,776	8,140	25,764	4,407	12,003	806	113	265	3,168	57,944
1970 - 1979	190	1,163	2,976	8,325	1,642	3,967	281	100	285	1,424	20,353
1980 - 1989	321	1,258	2,494	5,613	1,693	3,266	337	222	573	875	16,652
1990 - 1995	508	1,342	2,942	7,214	1,224	3,041	415	321	659	912	18,578
1996 - 1997	398	865	1,996	4,648	869	1,726	216	245	345	431	11,739
1998	315	423	967	2,363	490	959	167	150	232	329	6,395
1999	502	1,276	891	2,243	371	950	197	166	287	297	7,180
2000	435	410	903	2,163	465	1,038	203	165	264	363	6,409
2001 or Later	780	572	1,379	2,996	650	1,430	355	273	274	482	9,191
Not Stataed	194	1,135	3,269	16,608	963	3,089	664	116	359	1,771	28,168
Total	4,145	11,220	25,957	77,937	12,774	31,469	3,641	1,871	3,543	10,052	182,609

	Percentage										
Before 1970	12.1	24.7	31.4	33.1	34.5	38.1	22.1	6.0	7.5	31.5	31.7
1970 - 1979	4.6	10.4	11.5	10.7	12.9	12.6	7.7	5.3	8.0	14.2	11.1
1980 - 1989	7.7	11.2	9.6	7.2	13.3	10.4	9.3	11.9	16.2	8.7	9.1
1990 - 1995	12.3	12.0	11.3	9.3	9.6	9.7	11.4	17.2	18.6	9.1	10.2
1996 - 1997	9.6	7.7	7.7	6.0	6.8	5.5	5.9	13.1	9.7	4.3	6.4
1998	7.6	3.8	3.7	3.0	3.8	3.0	4.6	8.0	6.5	3.3	3.5
1999	12.1	11.4	3.4	2.9	2.9	3.0	5.4	8.9	8.1	3.0	3.9
2000	10.5	3.7	3.5	2.8	3.6	3.3	5.6	8.8	7.5	3.6	3.5
2001 or Later	18.8	5.1	5.3	3.8	5.1	4.5	9.8	14.6	7.7	4.8	5.0
Not Stataed	4.7	10.1	12.6	21.3	7.5	9.8	18.2	6.2	10.1	17.6	15.4
Total	100	100	100	100	100	100	100	100	100	100	100

Fig. 7.9: Household Distribution by Year Dwellings Built, Guyana: 2002

7.4.3 Types of Dwellings

Types of dwellings built in Guyana had slightly changed over the decades. The **undivided private** housing was the norm even long before the two recent censuses, and currently comprises 71 percent of the dwelling stock in the country- down from 74 percent in 1991 and followed by **part of private dwelling** (14 percent). Between 1991 and 2002 there was expansion in both numerical and percentage of households reported to be in **part of private house, double house/duplex, business and dwelling** combined and **barracks** type of dwellings, except households occupying **town-house** dwellings which declined in both categories, and **flat/ apartment** dwellings which increased in absolute term, but remained relatively stable proportionally (Table 7.16).

The larger proportion of households living in undivided private dwellings and its decline over the recent decade is probably in line with the overall decline in the average family size; which accordingly suggests perhaps that larger sized households had the tendency to occupy **undivided private** houses while smaller households mostly occupy **part private** dwelling unit. Besides, the changes may be a result of demolition and replacements concomitant with new construction during the intercensal period.

**Table 7.16: Distribution of Households by Types of Dwellings,
Guyana; 1991 and 2002**

Types of Dwellings	2002		1991	
	Number	Percent	Number	Percent
Undivided House (Pvte)	129,654	71.0	113,684	73.7
Part of Pvte House	25,950	14.2	20,376	13.2
Flat/Appartment	13,582	7.4	11,932	7.7
Town-House	1,474	0.8	1,675	1.1
Double house/Duplex	5,317	2.9	2,007	1.3
Business & dwellings	4,259	2.3	2,926	1.9
Barracks	446	0.2	238	0.2
Other	1,393	0.8	1,315	0.9
Not stated	534	0.3	0	0.0
Total	182,609	100	154,153	100

In Table 7.17, a significant proportion of households lived in **undivided private** dwellings in all regions, but to lesser extent in Regions 4 and 10. In these two regions, sizeable proportions also live in **part of private** dwellings (19 and 20 percent) and **flat/ apartment** (13 and 7 percent) respectively.

Table 7.17: Distribution of Households by Type of Dwelling Resided and Region, Guyana: 2002

Region	Undivided Pvte House	Part of Pvte House	Flat/Apartm ent	Town- house	Duplex	Business & dwelling	Barracks	Other	Total
Region 1	3,221	164	307	61	152	160	30	50	4,145
Region 2	8,427	734	528	435	447	353	146	152	11,220
Region 3	19,755	3,689	973	118	825	415	28	155	25,957
Region 4	47,140	15,147	9,980	655	2,481	1,711	103	720	77,937
Region 5	11,176	949	146	9	87	365	9	33	12,774
Region 6	26,108	2,715	701	84	1,030	738	16	77	31,469
Region 7	2,794	385	145	5	35	161	37	79	3,641
Region 8	1,502	115	24	3	51	87	23	65	1,871
Region 9	3,253	98	97	0	8	45	5	37	3,543
Region 10	6672	2013	711	115	218	240	52	31	10,052
Total	130,048	26,008	13,612	1,484	5,335	4,274	450	1,398	182,609

	Percentage								
Region 1	77.7	3.9	7.4	1.5	3.7	3.8	0.7	1.2	100
Region 2	75.1	6.5	4.7	3.9	4.0	3.1	1.3	1.4	100
Region 3	76.1	14.2	3.8	0.5	3.2	1.6	0.1	0.6	100
Region 4	60.5	19.4	12.8	0.8	3.2	2.2	0.1	0.9	100
Region 5	87.5	7.4	1.1	0.1	0.7	2.9	0.1	0.3	100
Region 6	83.0	8.6	2.2	0.3	3.3	2.3	0.1	0.2	100
Region 7	76.7	10.6	4.0	0.1	1.0	4.4	1.0	2.2	100
Region 8	80.3	6.2	1.3	0.2	2.7	4.7	1.2	3.5	100
Region 9	91.8	2.8	2.7	0.0	0.2	1.3	0.1	1.0	100
Region 10	66.4	20.0	7.1	1.1	2.2	2.4	0.5	0.3	100
Total	71.2	14.2	7.5	0.8	2.9	2.3	0.2	0.8	100

Note: 540 "not stated" cases was prorated.

7.4.4 Materials Used in House Construction

7.4.4.1 Type of materials for wall

According to the 2002 census, six in every ten households in Guyana used wood to construct the outer wall of their dwellings; down from eight in 1991 census (Table 7.18). The decline in using wood was mainly an outcome of concomitant increase in number of households using concrete and combined use of concrete and wood in construction. Besides, there was increase in number of households using stone, clay brick and adobe; though the proportional shares of these categories to the total households are insignificant.

In reverse, households in makeshift dwellings dropped more than 20 times compared to the existing users in 1991. However, the decline in makeshift dwellings is suspected to be that some makeshift households have been grouped with '**other category**' as evidenced by the sharp increase in this category in 2002 (see Table 7.18).

**Table 7.18: Distribution of Households by Materials
Used to Build Wall of Dwelling, Guyana: 1991 and 2002**

Types of Materials	2002		1991	
	Number	Percent	Number	Percent
Wood	112,563	61.6	118,630	77.0
Concrete	27,067	14.8	9,409	6.1
Wood & Concrete	34,666	19.0	20,407	13.2
Stone	510	0.3	20	0.0
Adobe	3,325	1.8	2,540	1.6
Makeshift	51	0.0	1,053	0.7
Clay brick	761	0.4	361	0.2
Other	3,471	1.9	0	0.0
Not Stated	195	0.1	1,733	1.1
Total	182,609	100	154,153	100

In Table 7.19, about three-quarters of the households in Region 9 used adobe wall along with another 13 percent who uses clay bricks. The low use of wood there can be attributed to savannah grassland which covers most parts of the region; in addition to lack of sufficient road networks, thus creating difficulty in transporting lumber from other evergreen vegetation regions for construction.

**Table 7.19: Distribution of Households by Materials Used to Build Wall of Dwellings, by Region,
Guyana: 2002**

Region	Wood	Concrete	Wood & Concrete	Stone	Adobe	Makes hift	Clay brick	Other	Total
Region 1	3,373	168	191	3	36	17	28	329	4,145
Region 2	6,138	1,952	1,386	0	4	0	19	1,721	11,220
Region 3	15,975	4,333	5,065	182	109	1	25	266	25,957
Region 4	42,379	14,410	20,362	324	8	16	83	355	77,937
Region 5	10,169	1,091	1,442	0	15	0	4	53	12,774
Region 6	25,210	1,834	4,341	0	2	0	5	77	31,469
Region 7	2,809	394	134	1	26	3	3	271	3,641
Region 8	1,015	22	32	1	489	8	33	271	1,871
Region 9	212	193	13	0	2,628	5	464	28	3,543
Region 10	5,392	2,703	1,741	0	8	1	97	110	10,052
Total	112,673	27,100	34,706	511	3,326	51	761	3,481	182,609

Percentage									
Region 1	81.4	4.1	4.6	0.1	0.9	0.4	0.7	7.9	100
Region 2	54.7	17.4	12.4	0.0	0.0	0.0	0.2	15.3	100
Region 3	61.5	16.7	19.5	0.7	0.4	0.0	0.1	1.0	100
Region 4	54.4	18.5	26.1	0.4	0.0	0.0	0.1	0.5	100
Region 5	79.6	8.5	11.3	0.0	0.1	0.0	0.0	0.4	100
Region 6	80.1	5.8	13.8	0.0	0.0	0.0	0.0	0.2	100
Region 7	77.1	10.8	3.7	0.0	0.7	0.1	0.1	7.4	100
Region 8	54.2	1.2	1.7	0.1	26.1	0.4	1.8	14.5	100
Region 9	6.0	5.4	0.4	0.0	74.2	0.1	13.1	0.8	100
Region 10	53.6	26.9	17.3	0.0	0.1	0.0	1.0	1.1	100
Total	61.7	14.8	19.0	0.3	1.8	0.0	0.4	1.9	100

Note: 195 cases of materials used for wall "not stated" was prorated.

Similarly, the inaccessibility due to difficult terrain in Region 8 may explain why households there resorted to using whatever building materials available to them. As such, besides wood, 26 percent use adobe while another 15 percent use other unidentifiable materials to build the wall. The use of “other material” too is prevalent in Region 2 (15 percent). The dominant use of these sub-standard materials in building is associated with poor housing quality.

7.4.4.2 Type of materials for roofing

Dwelling quality does not only rely on type of materials used to construct the wall as in the preceding section, but equally the materials used in roofing. As such, sheet metal being the major roofing material used as shown in Table 7.20 is an indication of durability for dwellings in Guyana. The sheet metal accounted for 93 percent in 1991 and declined slightly (3 percent) in 2002 census.

At the regional level (Table 7.21), higher proportions of households in Regions 3, 4, 5, 6, 7 and 10 use metal sheets in roofing. However, as a major deviation throughout the analysis because of the remoteness, households in the hinterland regions use any available local materials in roofing. For instance, in Regions 1, 2, 8 and 9, the proportion of households using metal sheets which is considered more guaranteed and durable is far below the national average. The situation is greater in Region 9, where only 16 percent of the households used metal sheets with more than three-quarters using thatch or troolie palm leaves to roof their dwellings.

Unlike Region 9, roofing materials in Region 2 are diversified; with about 21 percent using shingles (asphalt, wood and other), 17 percent tiles and 18 percent using some varieties of local materials referred to as makeshift.

The predominant use of these sub-standard materials in roofing indicates in general the regions where the poorest housings are located in the country.

**Table 7.20: Distribution of Households by Types of Materials
Used for Roofing Dwelling, Guyana: 1991 and 2002**

Roofing Materials	2002		1991	
	Number	Percent	Number	Percent
Sheet Metal (Zn, Al, Galv)	164,877	90.3	143,404	93.0
Shingles (Asphalt)	1,104	0.6	346	0.2
Shingles (Wood)	1,755	1.0	1,892	1.2
Shingles (Other)	1,839	1.0	237	0.2
Tile	1,953	1.1	17	0.0
Concrete	325	0.2	30	0.0
Thatched/Troolie Palm	7,016	3.8	0	0.0
Makeshift	2,522	1.4	1,726	1.1
Other	1,193	0.7	6,501	4.2
Not Stated	25	0.0	0	0.0
Total	182,609	100	154,153	100

Table 7.21: Distribution of Households by Type of Roofing Materials Dwelling Was Built and Region, Guyana: 2002

Region	Sheet Metal (Zn, Al)	Shingles (Asphalt)	Shingles (Wood)	Shingles (Other)	Tile	Concrete	Thatched/ Troolie Palm	Makes hft	Other	Total
Region 1	1,987	2	3	3	26	10	2,025	67	22	4,145
Region 2	4,422	316	229	1,761	1,861	195	205	2,036	195	11,220
Region 3	25,420	82	99	8	3	14	173	68	90	25,957
Region 4	75,438	640	772	52	45	65	266	129	530	77,937
Region 5	12,612	8	28	3	1	8	69	10	35	12,774
Region 6	31,067	13	112	2		14	212	10	39	31,469
Region 7	2,887	1	115	1	2	2	468	81	84	3,641
Region 8	866	3	153	3			675	60	111	1,871
Region 9	553	26	167	3	10	2	2,759	15	8	3,543
Region 10	9,625	13	77	3	5	15	164	46	104	10,052
Total	164,877	1,104	1,755	1,839	1,953	325	7,016	2,522	1,218	182,609

Percentage										
Region 1	47.9	0.0	0.1	0.1	0.6	0.2	48.9	1.6	0.5	100
Region 2	39.4	2.8	2.0	15.7	16.6	1.7	1.8	18.1	1.7	100
Region 3	97.9	0.3	0.4	0.0	0.0	0.1	0.7	0.3	0.3	100
Region 4	96.8	0.8	1.0	0.1	0.1	0.1	0.3	0.2	0.7	100
Region 5	98.7	0.1	0.2	0.0	0.0	0.1	0.5	0.1	0.3	100
Region 6	98.7	0.0	0.4	0.0	0.0	0.0	0.7	0.0	0.1	100
Region 7	79.3	0.0	3.2	0.0	0.1	0.1	12.9	2.2	2.3	100
Region 8	46.3	0.2	8.2	0.2	0.0	0.0	36.1	3.2	5.9	100
Region 9	15.6	0.7	4.7	0.1	0.3	0.1	77.9	0.4	0.2	100
Region 10	95.8	0.1	0.8	0.0	0.0	0.1	1.6	0.5	1.0	100
Total	90.3	0.6	1.0	1.0	1.1	0.2	3.8	1.4	0.7	100

Note: 25 roofing materials "not stated" was added to "other category"