

# COMPENDIUM 5

## HOUSING STOCKS AND AMENITIES

**BY**

**BUREAU OF STATICS, GUYANA  
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## 5.0 INTRODUCTION

Housing is a basic human need and linked to goal seventh of the millennium development goal (MDG) (ensuring environmental sustainability). One target of this goal is “to achieve by half in 2015 the proportion of the population without sustainable access to safe drinking water and basic sanitation”<sup>1</sup>. In the Guyana National Development Strategy plan drafted in 1996, it is also said, “the social and physical symptoms of existing deficiencies in the urban centres of Guyana are deteriorated infrastructure, bad housing, and inadequate to nonexistent community services (poor sanitation and water supply, traffic congestion, unsatisfactory drainage, and unhealthy environment)”<sup>2</sup>. To evaluate and assess the impact of this development strategy after sixteen years of its existence and concomitantly measure the achievement of this aspect of the millennium development goal in Guyana, this part of the census enquiry focuses on the following objectives:

- ❖ Assess the changes and regional distribution of the housing stocks;
- ❖ Assess the number and quality of the dwelling units within the framework of households’ dwelling tenure-ships in conjunction with the ownership status of the land where building constructed;
- ❖ Assess the availability of amenities such as safe drinking water, clean fuels for cooking and lighting in the households;
- ❖ Assess the overall general sanitation conditions of the dwellings such as toilet facilities, method of garbage waste disposal and accessibility of durable goods in the households.

## 5.1 HOUSING STOCKS IN GUYANA

### 5.1.0 Introduction

The 1996 development plan formulated to improve the demand for housing shortages in Guyana said: “Guyana needs a minimum of 5,200 housing units each year for at least ten years to alleviate the demands. The plan targeted a total of 1,200 new household formations every year and 4,000 units to replace the deteriorating stocks to ease overcrowding”<sup>3</sup>. This section is intended to assess the changes in the housing sector since the insertion of the development strategy.

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<sup>1</sup> MDG

<sup>2</sup>Chapter 23 Urban Development and Housing Sector in “National Development Strategy”, available at: <http://www.guyana.org/NDS/chap23.htm>

<sup>3</sup>Chapter 23 Urban Development and Housing Sector in “National Development Strategy”, available at: <http://www.guyana.org/NDS/chap23.htm>

### 5.1.1 Distribution of Building Stocks

One of the key indicators often used in the assessment of the national economy performance is the *Construction Sector*. The primary focus of this sector is the construction of buildings for both private and commercial uses within the realm of the local economy. As such, the national building stocks captured by the 2012 Population and Housing Census briefly gives an insight into the performance of the Construction Sector and by default the national economy.

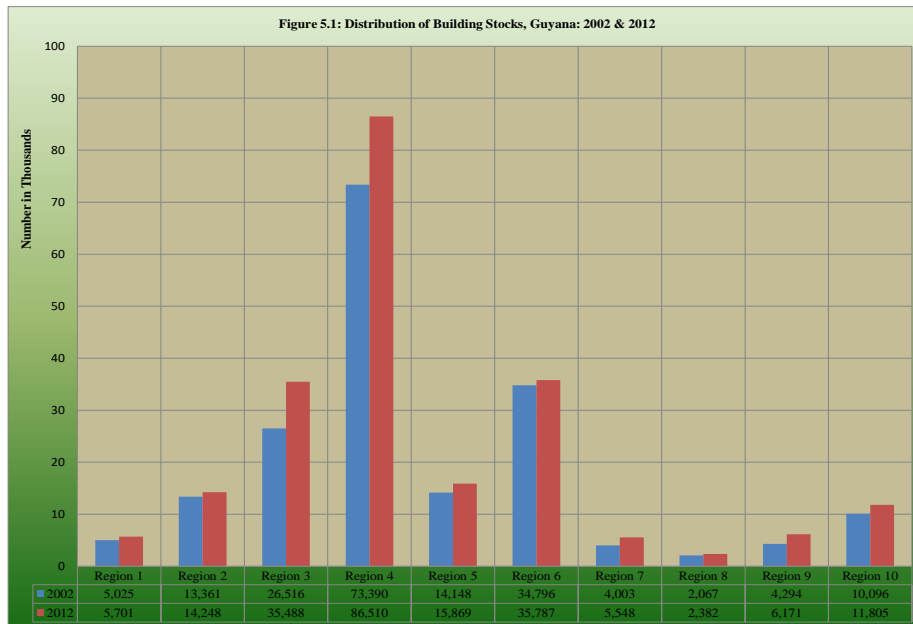
The national building stocks in the country presently stand at 219,509 buildings<sup>4</sup>. This figure represents an increase of 16.9 percent or by an absolute of 31,813 buildings when compared to the number of buildings in the country exactly ten years ago (See Table 5.1 and Figure 5.1). When the overall regional distribution pattern in 2012 was compared to that of 2002, the results indicate an identical pattern with only minor marginal differences. Accordingly, the regions with the highest concentration of population had also recorded the largest proportion of the building stocks. As such, Demerara/Mahaica (Region 4) which has about 42 percent of the population accounts for 39.4 percent of the buildings, and Regions 3 and 6 with marginal differences in the population size recorded almost the same proportion with 16.3 and 16.2 percent respectively. Trailing behind the first three (3) regions are Regions 5, 2 and 10 in accordance with the level of distribution given in Table 5.1. As usual, the least number of buildings are reported in the Hinterland Regions (Regions 1, 7, 8 and 9). These regions combined accounted for 8.2 percent in 2002 and slightly increased to 9.0 percent of the building stocks in 2012 (See Table 5.1 and Figure 5.1).

As observed in the case of the national total, all the regions recorded significant increases in their building stocks. The regions with exceptional growth rates surpassing the national average by a factor of two (2) are Regions 3 located along the coast, and Regions 7 and 9 within the Hinterland. Buildings in Region 3 grew by 33.8 percent, while the two (2) Hinterland Regions rose by 38.6 percent and 43.7 percent respectively. The increase for Region 6 was very minor (2.8 percent), when compared to the degree of changes in the number of buildings in the other regions as given in Table 5.1 and Figure 5.1.

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<sup>4</sup>*Note that the total number of buildings accounts for all buildings in the entire country regardless of the usage, i.e., residential, commercial or social purposes. Some buildings may be used for more than two purposes. A building with such dual purposes was recorded only one time.*

<b>Table 5.1: Distribution of Building Stocks by Regions, Guyana: 2002 - 2012</b>						
<b>Region</b>	<b>Number of Buildings</b>		<b>Percent</b>		<b>Changes</b>	
	<b>2002</b>	<b>2012</b>	<b>2002</b>	<b>2012</b>	<b>Number</b>	<b>Percent</b>
Region 1	5,025	5,701	2.7	2.6	676	13.5
Region 2	13,361	14,248	7.1	6.5	887	6.6
Region 3	26,516	35,488	14.1	16.2	8,972	33.8
Region 4	73,390	86,510	39.1	39.4	13,120	17.9
Region 5	14,148	15,869	7.5	7.2	1,721	12.2
Region 6	34,796	35,787	18.5	16.3	991	2.8
Region 7	4,003	5,548	2.1	2.5	1,545	38.6
Region 8	2,067	2,382	1.1	1.1	315	15.2
Region 9	4,294	6,171	2.3	2.8	1,877	43.7
Region 10	10,096	11,805	5.4	5.4	1,709	16.9
<b>Guyana</b>	<b>187,696</b>	<b>219,509</b>	<b>100</b>	<b>100</b>	<b>31,813</b>	<b>16.9</b>
<b>Hinterland</b>	15,389	19,802	8.2	9.0	4,413	28.7
<b>Coastland</b>	172,307	199,707	91.8	91.0	27,400	15.9
<b>Source:</b> Bureau of Statistics, Guyana: Population and Housing Census. 2002 & 2012						



Of the 219,509 buildings nationwide, 22,561(10.3 percent) were not occupied and were either vacant or closed. Proportional to the size of the total buildings in each region, most of the unoccupied buildings were found in the regions along the coast, particularly Region 5 (12.4 percent), Region 6 (12.2 percent), Region 3 (11.8 percent) and Region 2 (11.7 percent). Trailing behind these regions are Regions 4 and 7 with 9.4 percent 9.1 percent of the unoccupied buildings respectively (Table 5.2).

The sizeable numbers of closed and vacant buildings revealed by the result are not clear and seemed to be contrary to shortages of housing as alleged to have existed in the country as stipulated in the development plan strategy. It is impossible to have such a demand for housings and be witnessed by overcrowdings when on the opposite the census result showed an average of 10.3 percent (22,561) unoccupied buildings, comprising of 7.8 percent (17,149) vacant and 2.5 percent (5,412) closed buildings in 2012 respectively. Perhaps, the landlords of these premises were reluctant to give out their properties to low-income earners to occupy, instead reserved the dwellings for overseas visitors or international related organizations that may be willing to pay commensurate to the requisite demands of the landlords. Another scenario is that perhaps these buildings are in some dilapidated condition as alleged by the 1996 development plan and the owners are still contemplating renovation or reconstruction. On the other hand, the time has elapsed since the introduction of the plan and the demands for housing have been relaxed or in fact no longer exists. Which reason is more appropriate is uncertain and recommend further research.

<b>Table 5.2: Distribution of Building Stocks by Occupancy Status Classified by Regions, Guyana: 2012</b>										
<b>Region</b>	<b>Absolute Number</b>					<b>Percent</b>				
	<b>Occupied</b>	<b>Unoccupied Buildings</b>			<b>Grand Total</b>	<b>Occupied</b>	<b>Unoccupied Buildings</b>			<b>Grand Total</b>
		<b>Vacant</b>	<b>Closed</b>	<b>Total</b>			<b>Vacant</b>	<b>Closed</b>	<b>Total</b>	
Region 1	5,393	190	118	308	5,701	94.6	3.3	2.1	5.4	100
Region 2	12,582	1,230	436	1,666	14,248	88.3	8.6	3.1	11.7	100
Region 3	31,287	3,083	1,118	4,201	35,488	88.2	8.7	3.2	11.8	100
Region 4	78,397	5,818	2,295	8,113	86,510	90.6	6.7	2.7	9.4	100
Region 5	13,899	1,464	506	1,970	15,869	87.6	9.2	3.2	12.4	100
Region 6	31,407	3,847	533	4,380	35,787	87.8	10.7	1.5	12.2	100
Region 7	5,044	368	136	504	5,548	90.9	6.6	2.5	9.1	100
Region 8	2,200	117	65	182	2,382	92.4	4.9	2.7	7.6	100
Region 9	5,722	286	163	449	6,171	92.7	4.6	2.6	7.3	100
Region 10	11,017	746	42	788	11,805	93.3	6.3	0.4	6.7	100
<b>Guyana</b>	<b>196,948</b>	<b>17,149</b>	<b>5,412</b>	<b>22,561</b>	<b>219,509</b>	<b>89.7</b>	<b>7.8</b>	<b>2.5</b>	<b>10.3</b>	<b>100</b>
Hinterland	18,359	961	482	1,443	19,802	92.7	4.9	2.4	7.3	100
Coastland	178,589	16,188	4,930	21,118	199,707	89.4	8.1	2.5	10.6	100
<b>Source:</b> Bureau of Statistics, Guyana: Population and Housing Census. 2012										

On the issue of the unadjusted distribution pattern of the building stocks, one major factor noticed is that the pattern follows the trends of the population distribution in the country as already mentioned. Traditionally, the regions with the most significant proportions of the population have consistently continued to have a larger proportion of the national building stocks.

Meanwhile, one contributing factor to this intense building explosion is the Government of Guyana policy to make land available in all the ten (10) Administrative regions to families for the building of new homes. The impact of this policy has been observed in the last five (5) to six (6) years prior to the census. As an example, the *Construction Industry* increased by 62.7 percent (that is, from a workforce of 15,628 in 2002 to 25,427 in 2012), representing an average increase of 6.3 percent per annum (See Compendium Three: Tables 3.17 and 3.18).

The exceptionally high growth rates of buildings observed for the two (2) Hinterland Regions, which might be due to changes in the census methodology in 2012, should be interpreted with caution. For instance, the “institutional questionnaire” limited only to few census questions was administered to people living in logging and mining camps and listed under the institutional population in 2002, while conversely, they were enumerated as households’ population in the 2012 census to obtain more census information (i.e., labour force, housing, fertility, education, etc.) of persons living there. As such, both the “household and individual questionnaires” (See Preliminary Report: Appendix E), which include housing information and the characteristics of all persons were administered in the logging and mining camps. Accordingly, temporary camp dwellings were recorded as buildings. As these are regions observed to have considerable numbers of logging and mining camps, probably the building stocks recorded may have included significant number of the temporary mining and logging camp makeshift structures, thereby increasing the numbers of buildings in those regions enormously.

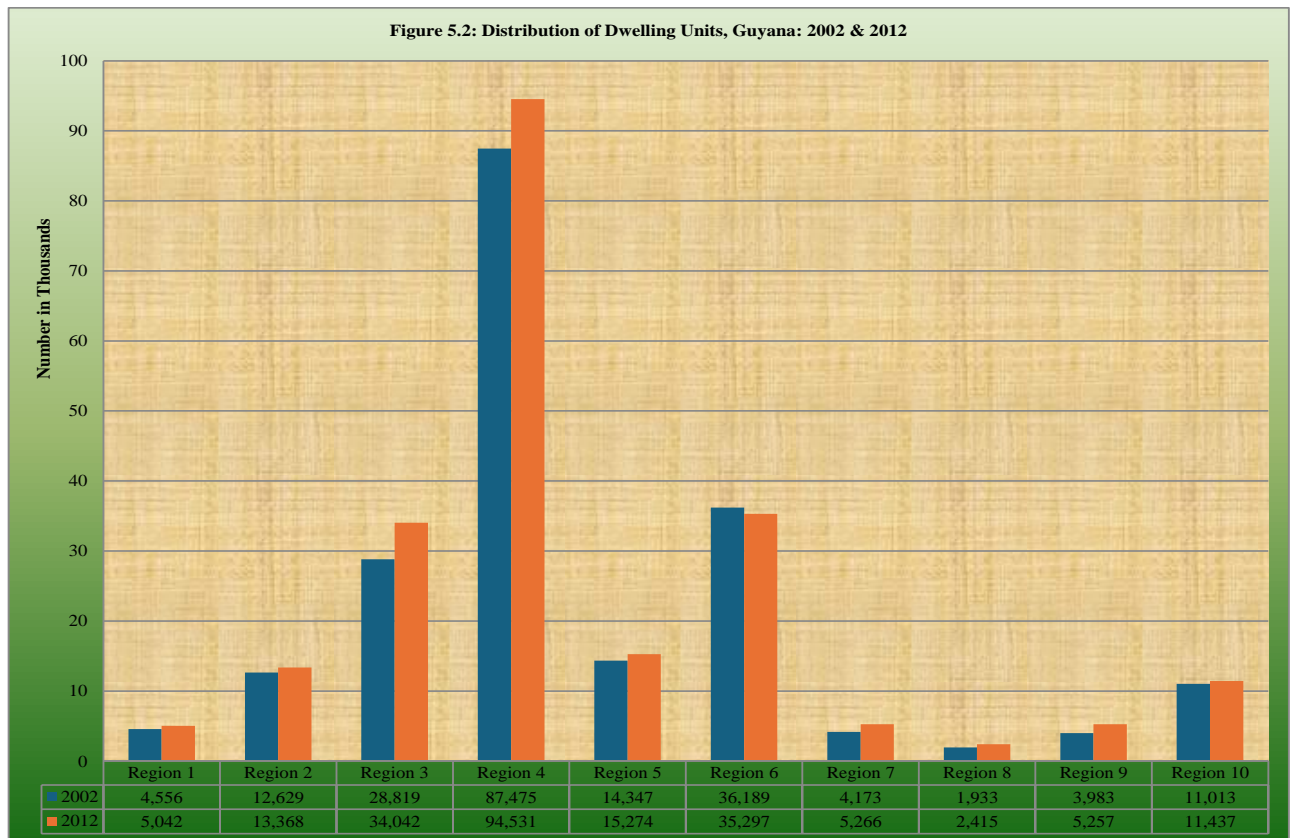
## **5.1.2 Distribution of Dwelling Units**

### **5.1.2.1 Distribution and Changes in the Number of Dwelling Units**

A dwelling unit is a subset of a building which may exceed the number of buildings, since multiple dwelling units can be found in one building. While there is no doubt that both dwellings and buildings are indicators of growth, the number of occupied dwelling units against the backdrop of vacant and closed dwelling units are good proxy in determining the coverage and completeness of a census.

In the 2012 Census, a total of 221,929 dwelling units were recorded, given an overall increase of 8.2 percentage points in comparison to the 2002 Census results, which had a total of 205,117 dwelling units. As in the case of buildings, the regions with the largest proportion of the population concentration had also recorded the largest proportion of dwellings. For that reason, following the ranking order of the population, Regions 4, 6 and 3 recorded the highest number of dwellings units and reflected in Table 5.3 and graphically illustrated in Figure 5.2.

Like the building stocks, all regions have shown tremendous amount of increase in the number of dwelling units during the intercensal period except for Region 6. Though Region 6 continues to rank second in the distribution pattern of the dwelling units, it was the only region which witnessed a decline. In 2002, there were 36,189 dwelling units in Region 6, but marginally dropped to 35,297 in 2012, accounting for a decline of -2.5 percent during the intercensal period. This decline is corroborated with the decrease in the population size of Region 6 during the consecutive intercensal periods. For instance, the population in Region 6 has been declining since 1980 when the *Population and Housing Census* of Guyana at that time registered the highest figure of 152,673 persons. From there onward, the population has been consistently declining and at present stands at 109,652 persons.





<b>Table 5.3: Distribution of Dwelling Units by Regions, Guyana: 2002 - 2012</b>						
<b>Region</b>	<b>Number</b>		<b>Percent</b>		<b>Changes</b>	
	<b>2002</b>	<b>2012</b>	<b>2002</b>	<b>2012</b>	<b>Number</b>	<b>Percent</b>
Region 1	4,556	5,042	2.2	2.3	486	10.7
Region 2	12,629	13,368	6.2	6.0	739	5.9
Region 3	28,819	34,042	14.1	15.3	5,223	18.1
Region 4	87,475	94,531	42.6	42.6	7,056	8.1
Region 5	14,347	15,274	7.0	6.9	927	6.5
Region 6	36,189	35,297	17.6	15.9	-892	-2.5
Region 7	4,173	5,266	2.0	2.4	1,093	26.2
Region 8	1,933	2,415	0.9	1.1	482	24.9
Region 9	3,983	5,257	1.9	2.4	1,274	32.0
Region 10	11,013	11,437	5.4	5.2	424	3.8
<b>Guyana</b>	<b>205,117</b>	<b>221,929</b>	<b>100</b>	<b>100</b>	<b>16,812</b>	<b>8.2</b>
Hinterland	14,645	17,980	7.1	8.1	3,335	22.8
Coastland	190,472	203,949	92.9	91.9	13,477	7.1
<b>Note:</b> Coastland regions include: Regions 2, 3, 4, 5, 6 and 10, while Hinterland regions include: Regions 1, 7, 8 and 9.						
<b>Source:</b> Bureau of Statistics, Guyana: Population and Housing Census. 2002 & 2012						

### 5.1.2.2 Closed and Vacant Dwelling Units

Of the 221,929 dwelling units recorded nationwide in the 2012 Census, 204,625 were occupied and inhabited by resident households. The rise represents an increase of 12.1 percent when compared to occupied dwelling units in the 2002 Census. Of note, this account suggests that approximately 7.8 percent (17,304) of the dwelling units recorded in 2012 was vacant and closed in comparison to 2002, which registered 22,508 or 11.0 percent of closed and vacant dwelling units, where there was no resident to interview during the visits of the census interviewers.

Occupancy was reported very high for all the ten administrative regions. For the entire country, the occupancy rate was 89.0 percent in 2002, slightly improving to 92.2 percent in the 2012 Census. Although the occupancy in Region 7 was high (87 percent) but had a marginal reduction when compared to the 2002 Census. This substantial increase in the level of occupancy indicates a simultaneous decline in the number of vacant and closed dwelling units as given in Table 5.4.

Meanwhile, like the relationship between a building and a dwelling unit, a household is likewise a subset of a dwelling unit, because depending on the living arrangement among

the occupants in a dwelling unit, it is possible to have any appropriate number of households. As such, the occupied 204,625 and 182,609 dwelling units in 2012 and 2002 respectively would be transformed into number of households to form the basis of our analysis as would be seen in the following sections.

Table 5.4: Distribution of Dwelling Units by Occupancy Status Classified by Regions, Guyana: 2002 - 2012												
Region	Absoute Number						Percent					
	2002			2012			2002			2012		
	Occupied Dwellings	Closed/V acant	Total	Occupied Dwellings	Closed/V acant	Total	Occupied Dwellings	Closed/V acant	Total	Occupied Dwelling	Closed/V acant	Total
Region 1	4,145	411	4,556	4,849	193	5,042	91.0	9.0	100	96.2	3.8	100
Region 2	11,220	1,409	12,629	12,081	1,287	13,368	88.8	11.2	100	90.4	9.6	100
Region 3	25,957	2,862	28,819	30,979	3,063	34,042	90.1	9.9	100	91.0	9.0	100
Region 4	77,937	9,538	87,475	89,360	5,171	94,531	89.1	10.9	100	94.5	5.5	100
Region 5	12,774	1,573	14,347	13,711	1,563	15,274	89.0	11.0	100	89.8	10.2	100
Region 6	31,469	4,720	36,189	31,254	4,043	35,297	87.0	13.0	100	88.5	11.5	100
Region 7	3,641	532	4,173	4,571	695	5,266	87.3	12.7	100	86.8	13.2	100
Region 8	1,871	62	1,933	2,371	44	2,415	96.8	3.2	100	98.2	1.8	100
Region 9	3,543	440	3,983	4,892	365	5,257	89.0	11.0	100	93.1	6.9	100
Region 10	10,052	961	11,013	10,557	880	11,437	91.3	8.7	100	92.3	7.7	100
<b>Guyana</b>	<b>182,609</b>	<b>22,508</b>	<b>205,117</b>	<b>204,625</b>	<b>17,304</b>	<b>221,929</b>	<b>89.0</b>	<b>11.0</b>	<b>100</b>	<b>92.2</b>	<b>7.8</b>	<b>100</b>
Hinterland	13,200	1,445	14,645	16,683	1,297	17,980	90.1	9.9	100	92.8	7.2	100
Coastland	169,409	21,063	190,472	187,942	16,007	203,949	88.9	11.1	100	92.2	7.8	100
<b>Source:</b> Bureau of Statistics, Guyana: Population and Housing Census. 2002 & 2012 Results												

### 5.1.2.3 Types of Dwelling Units the Households Occupied

The age and types of dwellings the households occupied may give a better understanding of the current conditions of the properties. In 2002, the households were recorded in seven main types of dwellings they resided, while in 2012 the “Makeshift Dwelling” type option was added to include households living in squatter areas and others in logging and mining camps, where makeshift structures were believed to be in significant numbers.

As given in Table 5.5 and illustrated in Figure 5.3, the bulk of the households are seen to have resided in “Separate House/Detached” type of dwelling units. In 2012, this category accounted for 70.5 percent (144,174) and remained relatively the same except in absolute terms when compared to 2002. The second and third categories of importance were “Part of a Private House/Attached” and “Flat/Apartment/Condominium”, where households occupying them constituted 11.2 percent and 8.3 percent respectively in 2012. The proportions of households living in the six main remaining types were little and

accounted for less than 5 percent each either in 2002 or 2012. Makeshift, the new category of dwelling type created in 2012 to include all sub-standard forms of dwellings has less than 1 percent or a total of 892 households were occupants of “makeshift dwellings”.

Notably during the intercensal period, the “Part of a Private House/Attached” dwelling type, which attracted 14.2 percent of the households in 2002, declined and on the other hand, there were increases in the number of households occupying dwellings such as “Flat/Apartment/Condominium”, “Double House/Duplex” and “Combined business and dwelling” types respectively. The increases in these types of dwelling units indicate that the housing industry in Guyana is gradually becoming diverse, for flat/apartment buildings are necessary hallmark style of the buildings in this modern-day era, capable of accommodating the growing number of young couples who may not have immediate access to land to build.

Households living in “Townhouse dwelling type” rose up more than twice. However, this type was among the categories which provided accommodation for smaller number of household occupants either in 2002 or 2012 respectively (Table 5.5 and Figure 5.3).

<b>Table 5.5: Distribution of Households by Types of Dwellings Occupied and Changes During the Intercensal Period, Guyana; 2002 - 2012</b>							
<b>N O</b>	<b>Types of Dwellings</b>	<b>Number</b>		<b>Percent</b>		<b>Changes</b>	
		<b>2002</b>	<b>2012</b>	<b>2002</b>	<b>2012</b>	<b>Number</b>	<b>Percent</b>
1	Separate house/detached	129,648	144,174	71.0	70.5	14,526	11.2
2	Part of a private house/Attached	25,950	22,852	14.2	11.2	-3,098	-11.9
3	Flat/Apartment/Condominium	13,582	16,982	7.4	8.3	3,400	25.0
4	Townhouse	1,474	2,974	0.8	1.5	1,500	101.8
5	Double house/Duplex	5,317	8,991	2.9	4.4	3,674	69.1
6	Combined business and dwelling	4,259	7,287	2.3	3.6	3,028	71.1
7	Barracks	446	104	0.2	0.1	-342	-76.7
8	Makeshift	NA	892	NA	0.4	NA	NA
9	Other	1,393	369	0.8	0.2	-1,024	-73.5
10	Not Stated	540	0	0.3	0.0	-540	-100.0
	<b>Total</b>	<b>182,609</b>	<b>204,625</b>	<b>100</b>	<b>100</b>	<b>22,016</b>	<b>12.1</b>
<b>Source:</b> Bureau of Statistics, Guyana: Population and Housing Census. 2002 & 2012							

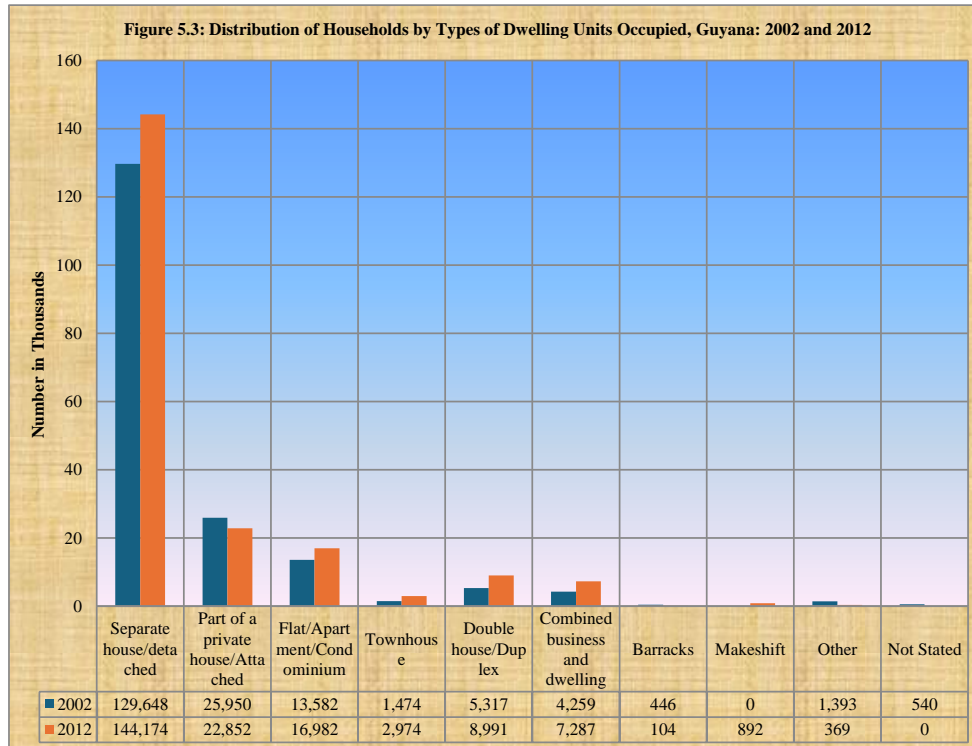


Table 5.6 shows household distribution by type of dwellings according to region for census 2012. As shown in the table, “Separate House/Detached” type of dwellings accounted for largest proportion and significantly following the result of the national average. For instance, examining the distribution by higher order of magnitude shows that households living in “Separate House/Detached” dwellings accounted for 91.1 percent of the households in Region 9, 82.8 percent in Region 6, 81.0 percent in Region 2, and 79.4 percent in Region 5, etc. The households living in the remaining categories varied remarkably in smaller proportions with some clustering around the pattern of the national average as reflected in Table 5.6.

Table 5.6: Households Distribution by Types of Dwellings Occupied Classified by Administrative Regions, Guyana: 2012														
N O	Types of Dwellings	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10	Guyana	Hinterland	Coastland
1	Separate house/detached	3,392	9,785	23,450	54,069	10,887	25,885	2,719	1,852	4,459	7676	144174	8,070	136,104
2	Part of a private house/Attached	348	419	2,555	14,820	1,322	1,760	184	99	107	1,238	22,852	737	22,115
3	Flat/Apartment/Condominium	516	380	1,904	11,097	304	906	777	194	106	798	16,982	1,493	15,489
4	Townhouse	32	550	218	1,600	204	291	14	7	6	52	2,974	64	2,910
5	Double house/Duplex	159	494	1,699	3,998	524	1,231	421	27	11	427	8,991	748	8,243
6	Combined business and dwelling	188	422	1,027	3,275	430	1,016	328	145	141	315	7,287	661	6,626
7	Barracks	2	6	12	60	0	2	11	9	0	2	104	72	32
8	Makeshift	148	22	100	340	21	39	101	33	50	38	892	294	598
9	Other	64	3	14	101	19	124	16	5	12	11	369	4,977	-4,608
	<b>Total</b>	<b>4,849</b>	<b>12,081</b>	<b>30,979</b>	<b>89,360</b>	<b>13,711</b>	<b>31,254</b>	<b>4,571</b>	<b>2,371</b>	<b>4,892</b>	<b>10,557</b>	<b>204,625</b>	<b>11,791</b>	<b>192,834</b>
		<b>Percent</b>												
1	Separate house/detached	70.0	81.0	75.7	60.5	79.4	82.8	59.5	78.1	91.1	72.7	70.5	68.4	70.6
2	Part of a private house/Attached	7.2	3.5	8.2	16.6	9.6	5.6	4.0	4.2	2.2	11.7	11.2	6.3	11.5
3	Flat/Apartment/Condominium	10.6	3.1	6.1	12.4	2.2	2.9	17.0	8.2	2.2	7.6	8.3	12.7	8.0
4	Townhouse	0.7	4.6	0.7	1.8	1.5	0.9	0.3	0.3	0.1	0.5	1.5	0.5	1.5
5	Double house/Duplex	3.3	4.1	5.5	4.5	3.8	3.9	9.2	1.1	0.2	4.0	4.4	6.3	4.3
6	Combined business and dwelling	3.9	3.5	3.3	3.7	3.1	3.3	7.2	6.1	2.9	3.0	3.6	5.6	3.4
7	Barracks	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.4	0.0	0.0	0.1	0.6	0.0
8	Makeshift	3.1	0.2	0.3	0.4	0.2	0.1	2.2	1.4	1.0	0.4	0.4	2.5	0.3
9	Other	1.3	0.0	0.0	0.1	0.1	0.4	0.4	0.2	0.2	0.1	0.2	42.2	-2.4
	<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
Source: Bureau of Statistics, Guyana: Population and Housing Census: 2012														

#### 5.1.2.4 The Quality of the Housing Units

Materials used in the construction of outer walls and roofing of dwellings provide viable information on the quality of the properties, and secondly serve as one feasible indicator for measuring changes in the standard of living. This sub-section is devoted to the examination of households by the quality of dwelling units they occupied as well as assessing the changes in the materials used during the intercensal period.

#### 5.1.2.4.1 Types of Materials Used to Build Outer-Wall of Dwellings

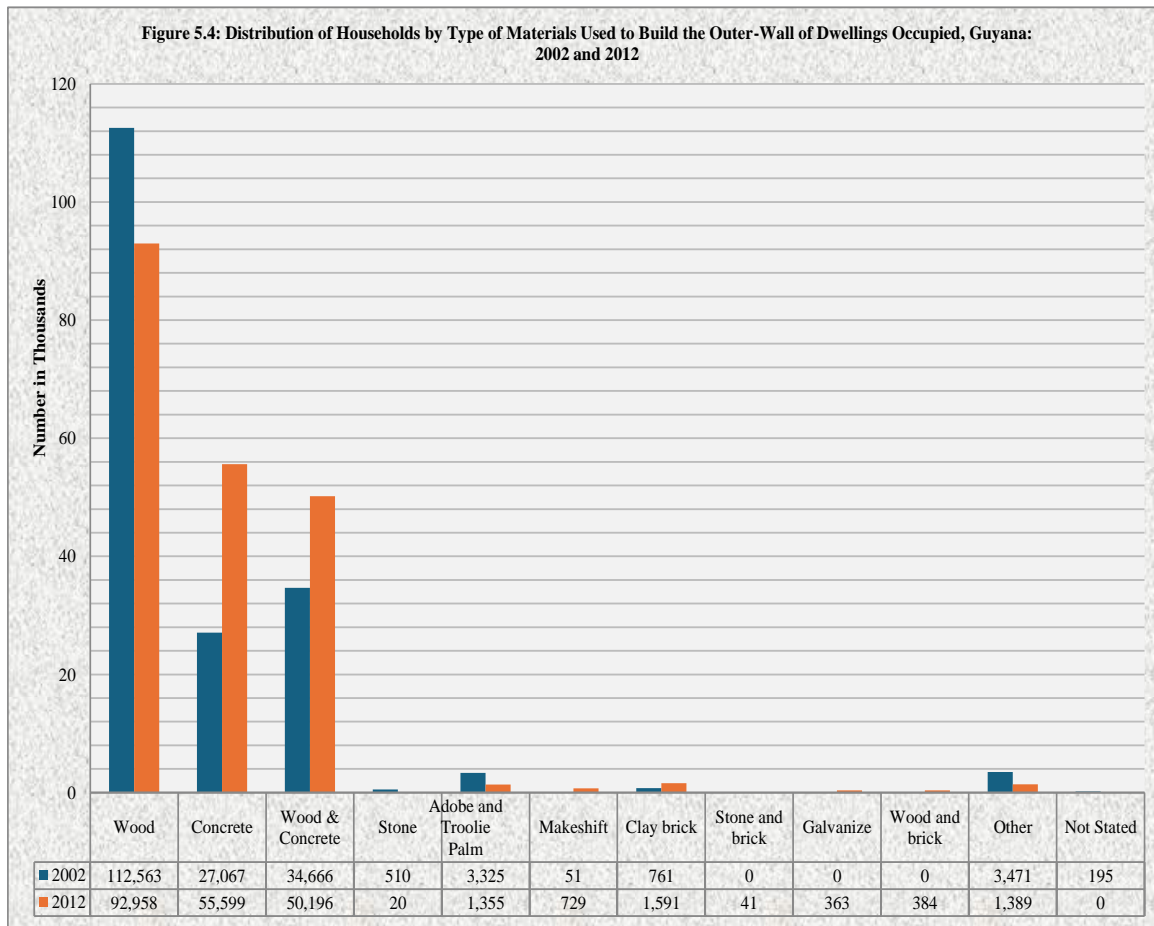
The options for types of materials used to build the outer walls of dwellings in the 2002 Census were limited to seven main categories. To widen the range, three new alternatives were added, thus expanding it to ten in 2012.

Table 5.7 shows the distribution of households by types of materials used to build the outer wall. The use of quality and durable materials to build the outer wall of dwelling units is becoming a norm in Guyana. In 2002, approximately six out of every ten dwelling units were built with wood, but the desire of households to change from wooden building to concrete and combined use of concrete and wood had changed the course of the materials used in the construction industry. For instance, while 15.7 percent of the households were occupants of dwellings built with concrete in 2002, the proportion had dramatically changed to nearly more than two times (27.2 percent) in 2012. Furthermore, though the increase was not as large compared to concrete, the combination of wood and concrete went up by a significant margin (45.7 percentage points), that is, rose from 19.0 percent in 2002 to 24.5 percent of the total distribution in 2012 (See Table 5.7 and Figure 5.4).

Table 5.7: Distribution of Households by Types of Materials used to Build the Outer-Wall of Dwellings and Changes During the Intercensal Period, Guyana: 2002- 2012							
N O	Materials for Outer-wall	Number		Percent		Changes	
		2002	2012	2002	2012	Number	Percent
1	Wood	112,563	92,958	61.6	45.4	-19,605	-17.4
2	Concrete	27,067	55,599	14.8	27.2	28,532	105.4
3	Wood & Concrete	34,666	50,196	19.0	24.5	15,530	44.8
4	Stone	510	20	0.3	0.0	-490	-96.1
5	Adobe and Troolie Palm	3,325	1,355	1.8	0.7	-1,970	-59.2
6	Makeshift	51	729	0.0	0.4	678	1,329.4
7	Clay brick	761	1,591	0.4	0.8	830	109.1
8	Stone and brick	NA	41	NA	0.0	NA	NA
9	Galvanize	NA	363	NA	0.2	NA	NA
10	Wood and brick	NA	384	NA	0.2	NA	NA
11	Other	3,471	1,389	1.9	0.7	-2,082	-60.0
12	Not Stated	195	0	0.1	0.0	-195	-100.0
	<b>Total</b>	<b>182,609</b>	<b>204,625</b>	<b>100</b>	<b>100</b>	<b>22,016</b>	<b>12.1</b>
<b>Source:</b> Bureau of Statistics, Guyana: Population and Housing Census. 2002 & 2012							

Again, though the share of ‘clay brick dwellings’ to the entire distribution was insignificant, it served as another direction for households wishing to build dwellings with quality material. In absolute terms, households living in dwellings constructed with clay brick rose from 761 in 2002 to 1,591 households in 2012. This sharp increase was

accompanied by a decline of 59.2 percentage points for households' occupants residing in dwellings constructed with "Adobe and Troolie Palm" which comprised 1.8 percent in 2002 and slumped to 0.7 percent later. The respective contributions of the remaining categories to the overall distribution were bare minimum, though changes were observed to have taken place.



Regional distribution of households by materials used to build the outer wall is reflected in Table 5.8 and seems to follow the pattern of the national average, where "wood", "concrete" and combined use of "wood & concrete" predominate. Apart from Region 9, where outer-wall materials mainly used were somehow varied, for instance, "clay brick" accounting for 29.0 percent, "other materials not properly identified", 23.1 percent, "Adobe and Troolie Palm", 19.3 percent and "concrete", 15.2 percent respectively, the use of "wood" as an outer-wall material was significantly high in the remaining regions. It ranges from a high of 86 percent of the households occupying wooden buildings in Region 1 to a low of 38.7 percent in Regions 3 and 4 respectively. Like the result for the national average, households who did not use wood for the building of the outer wall were attracted primarily by "concrete" and combined use of "wood & concrete", except in Region 8, where "Adobe and Troolie Palm" was second to wood as presented in Table 5.8.

**Table 5.8: Distribution of Households by Types of Materials Used to Build the Outer-Wall of Dwelling Units Occupied Classified by Administrative Regions, Guyana: 2012**

N O	Materials for Outer-wall	Administrative Regions												
		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10	Guyana	Hinterland	Coastland
1	Wood	4,170	5,993	11,979	34,562	7,517	19,098	3,117	1,503	332	4,687	92,958	9,122	83,836
2	Concrete	229	3,618	11,029	29,001	2,114	4,125	915	49	743	3,776	55,599	1,936	53,663
3	Wood & Concrete	249	2,444	7,664	25,467	4,004	7,955	322	84	80	1,927	50,196	735	49,461
4	Stone	0	1	2	8	1	4	0	0	1	3	20	1	19
5	Adobe and Troolie Palm	57	2	1	2	4	0	4	335	946	4	1,355	1,342	13
6	Makeshift	114	7	52	125	26	22	123	184	48	28	729	469	260
7	Clay brick	0	1	12	24	1	5	1	101	1,419	27	1,591	1,521	70
8	Stone and brick	0	0	1	11	4	0	0	4	20	1	41	24	17
9	Galvanize	3	14	166	55	28	18	6	11	10	52	363	30	333
10	Wood and brick	4	0	43	61	5	6	2	95	163	5	384	264	120
11	Other	23	1	30	44	7	21	81	5	1,130	47	1,389	1,239	150
	<b>Total</b>	<b>4,849</b>	<b>12,081</b>	<b>30,979</b>	<b>89,360</b>	<b>13,711</b>	<b>31,254</b>	<b>4,571</b>	<b>2,371</b>	<b>4,892</b>	<b>10,557</b>	<b>204,625</b>	<b>16,683</b>	<b>187,942</b>
		Percent												
1	Wood	86.0	49.6	38.7	38.7	54.8	61.1	68.2	63.4	6.8	44.4	45.4	54.7	44.6
2	Concrete	4.7	29.9	35.6	32.5	15.4	13.2	20.0	2.1	15.2	35.8	27.2	11.6	28.6
3	Wood & Concrete	5.1	20.2	24.7	28.5	29.2	25.5	7.0	3.5	1.6	18.3	24.5	4.4	26.3
4	Stone	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Adobe and Troolie Palm	1.2	0.0	0.0	0.0	0.0	0.0	0.1	14.1	19.3	0.0	0.7	8.0	0.0
6	Makeshift	2.4	0.1	0.2	0.1	0.2	0.1	2.7	7.8	1.0	0.3	0.4	2.8	0.1
7	Clay brick	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	29.0	0.3	0.8	9.1	0.0
8	Stone and brick	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.0	0.0	0.1	0.0
9	Galvanize	0.1	0.1	0.5	0.1	0.2	0.1	0.1	0.5	0.2	0.5	0.2	0.2	0.2
10	Wood and brick	0.1	0.0	0.1	0.1	0.0	0.0	0.0	4.0	3.3	0.0	0.2	1.6	0.1
11	Other	0.5	0.0	0.1	0.0	0.1	0.1	1.8	0.2	23.1	0.4	0.7	7.4	0.1
	<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: Bureau of Statistics, Guyana: Population and Housing Census. 2012

#### 5.1.2.4.2 Types of Materials Used For Roofing

An impression on the quality of a dwelling unit is determined chiefly by looking at the materials on the outer-wall and roofing materials used to cover the dwelling. Following the distribution pattern of the outer-wall materials, Table 5.9 shows that the households in Guyana essentially covered their dwellings with sheet metal (i.e., zinc, aluminum and Galvanize) abbreviated as Zn, Al, and Galv respectively.



Remarkably, about 90.3 percent of the households roofed their dwellings with Sheet Metal (Zn, Al & Galv) in 2002 and marginally increased to 95.8 percent during the intercensal period. The high usage rate implied that “sheet metal” was obviously the main roofing material. The remaining roofing materials were highly distracted, except “Thatched/Troolie Palm”, where approximately 3.8 percent of the households used that in 2002 and declined slightly to 2.6 percent in 2012 (Table 5.9 and Figure 5.5).

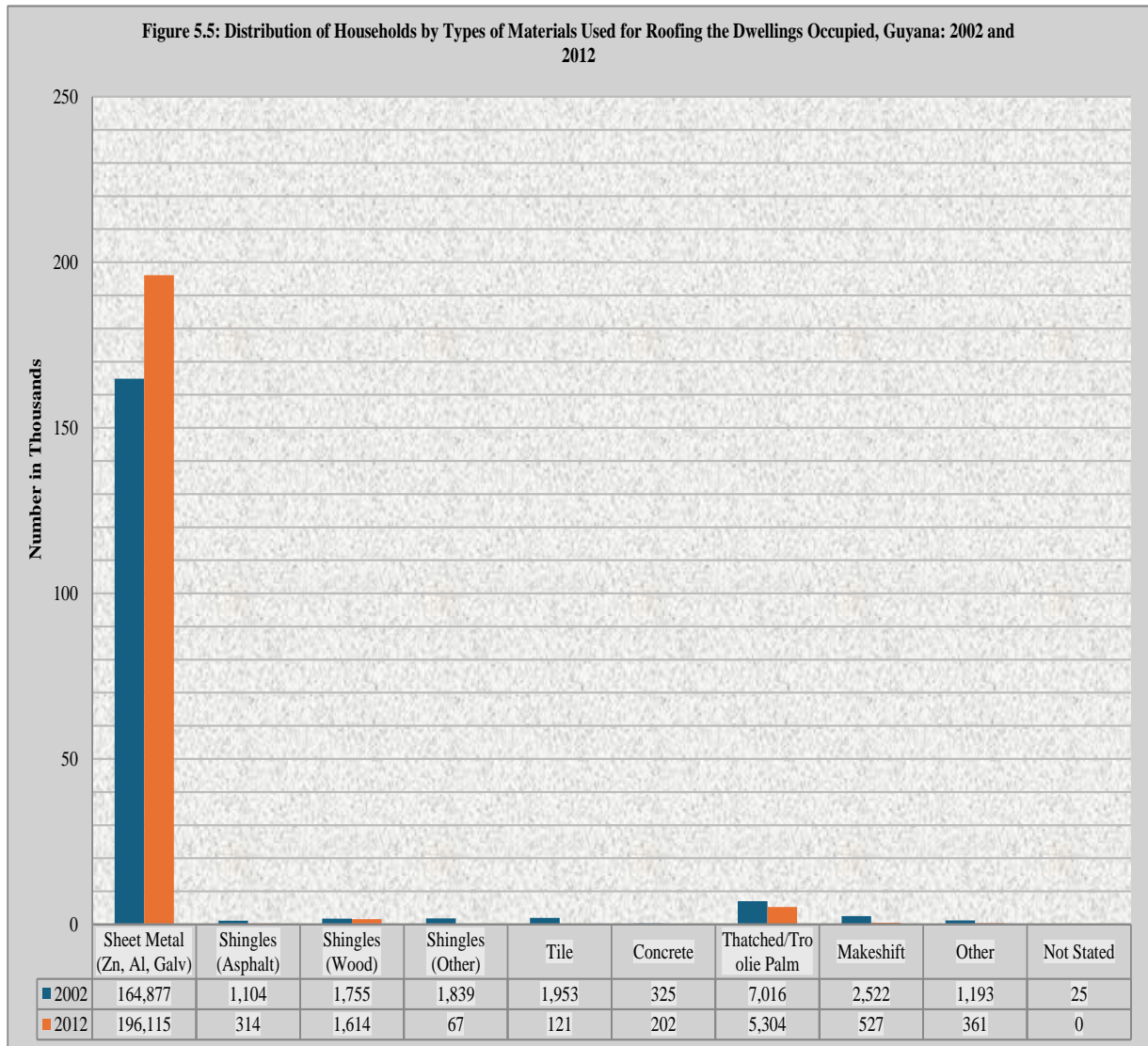


Table 5.9: Distribution of Households by Types of Materials used to Build the Roof of Dwellings and Changes during the Intercensal Period, Guyana: 2002- 2012							
N O	Roofing Materials	Number		Percent		Changes	
		2002	2012	2002	2012	Number	Percent
1	Sheet Metal (Zn, Al, Galv)	164,877	196,115	90.3	95.8	31,238	18.9
2	Shingles (Asphalt)	1,104	314	0.6	0.2	-790	-71.6
3	Shingles (Wood)	1,755	1,614	1.0	0.8	-141	-8.0
4	Shingles (Other)	1,839	67	1.0	0.0	-1,772	-96.4
5	Tile	1,953	121	1.1	0.1	-1,832	-93.8
6	Concrete	325	202	0.2	0.1	-123	-37.8
7	Thatched/Troolie Palm	7,016	5,304	3.8	2.6	-1,712	-24.4
8	Makeshift	2,522	527	1.4	0.3	-1,995	-79.1
9	Other	1,193	361	0.7	0.2	-832	-69.7
10	Not Stated	25	0		0	-25	-100.0
	<b>Total</b>	<b>182,609</b>	<b>204,625</b>		<b>100</b>	<b>22,016</b>	<b>12.1</b>
Source: Bureau of Statistics, Guyana: Population and Housing Census, 2002 & 2012							

Regional distribution presented in Table 5.10 shows similar findings against the backdrop of the national average. Households roofing dwellings with Sheet Metal (Zn, Al, and Galv) was significantly high for all the regions along the coast, accounting for more than 96 percent. The second regional alternative, which as expected was mainly used in three of the Hinterland Regions (Regions 1, 8 & 9) was “Thatched/Troolie Palm”. As reported, 55.2 percent of the households used “Thatched/Troolie Palm” to roof in Region 9, 28.2 percent in Region 1 and 23.7 percent in Region 8 respectively. The remaining types of roofing materials significantly attracted a very small percentage of households in all the regions.

**Table 5.10: Distribution of Households by Types of Materials Used to Roof the Dwellings Occupied Classified by Administrative Regions, Guyana: 2012**

N O	Roofing Materials	Administrative Regions												
		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10	Guyana	Hinterland	Coastland
1	Sheet Metal (Zn, Al, Galv)	3,335	11,635	30,752	87,768	13,614	31,112	4,201	1,517	1,822	10,359	196,115	10,875	185,240
2	Shingles (Asphalt)	1	1	26	208	21	13	3	22	12	7	314	38	276
3	Shingles (Wood)	7	26	118	987	33	62	37	112	145	87	1,614	301	1,313
4	Shingles (Other)	1	0	8	47	2	1	1	3	2	2	67	7	60
5	Tile	0	1	12	65	3	1	0	7	28	4	121	35	86
6	Concrete	1	1	21	130	12	19	1	1	5	11	202	8	194
7	Thatched/Troolie Palm	1,369	409	25	19	10	20	146	562	2,701	43	5,304	4,778	526
8	Makeshift	120	6	11	62	10	5	119	142	25	27	527	406	121
9	Other	15	2	6	74	6	21	63	5	152	17	361	235	126
	<b>Total</b>	<b>4,849</b>	<b>12,081</b>	<b>30,979</b>	<b>89,360</b>	<b>13,711</b>	<b>31,254</b>	<b>4,571</b>	<b>2,371</b>	<b>4,892</b>	<b>10,557</b>	<b>204,625</b>	<b>16,683</b>	<b>187,942</b>
		Percent												
1	Sheet Metal (Zn, Al, Galv)	68.8	96.3	99.3	98.2	99.3	99.5	91.9	64.0	37.2	98.1	95.8	65.2	98.6
2	Shingles (Asphalt)	0.0	0.0	0.1	0.2	0.2	0.0	0.1	0.9	0.2	0.1	0.2	0.2	0.1
3	Shingles (Wood)	0.1	0.2	0.4	1.1	0.2	0.2	0.8	4.7	3.0	0.8	0.8	1.8	0.7
4	Shingles (Other)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
5	Tile	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.3	0.6	0.0	0.1	0.2	0.0
6	Concrete	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.1
7	Thatched/Troolie Palm	28.2	3.4	0.1	0.0	0.1	0.1	3.2	23.7	55.2	0.4	2.6	28.6	0.3
8	Makeshift	2.5	0.0	0.0	0.1	0.1	0.0	2.6	6.0	0.5	0.3	0.3	2.4	0.1
9	Other	0.3	0.0	0.0	0.1	0.0	0.1	1.4	0.2	3.1	0.2	0.2	1.4	0.1
	<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: Bureau of Statistics, Guyana: Population and Housing Census: 2012

#### 5.1.2.4.3 Cross Classification of Roofing and Outer-Wall Materials

Cross classification of outer-wall and roofing materials in the construction of dwelling units briefly gives a better view about the quality and durability of the property. Using the cross classified absolute distribution in Table 5.11; the analysis is presented in twofold:

- ❖ Percentage distribution by row; and
- ❖ Percentage distribution by column.

Table 5.11: Distribution of Households by Combined Use of Roofing and Outer-wall Materials, Guyana: 2012													
N O	Roofing Materials	Outer Wall Construction Materials											
		Wood	Concrete	Wood & Concrete	Stone	Adobe & Troolie Palm	Makeshift	Clay brick	Stone & brick	Galvanize	Wood & brick	Other	Total
1	Sheet Metal (Zn, Al, Galv)	89,831	54,455	49,759	18	120	288	843	27	358	206	210	196,115
2	Shingles (Asphalt)	78	187	35	0	2	1	6	2	0	0	3	314
3	Shingles (Wood)	511	608	303	0	74	8	69	0	0	19	22	1,614
4	Shingles (Other)	11	42	9	0	2	1	0	0	0	1	1	67
5	Tile	11	69	11	1	2	0	17	0	0	6	4	121
6	Concrete	18	157	19	0	1	0	4	0	0	1	2	202
7	Thatched/Troolie Palm	2,204	24	29	1	1,136	113	636	11	2	143	1,005	5,304
8	Makeshift	179	5	5	0	6	312	3	0	3	2	12	527
9	Other	115	52	26	0	12	6	13	1	0	6	130	361
	<b>Total</b>	<b>92,958</b>	<b>55,599</b>	<b>50,196</b>	<b>20</b>	<b>1,355</b>	<b>729</b>	<b>1,591</b>	<b>41</b>	<b>363</b>	<b>384</b>	<b>1,389</b>	<b>204,625</b>
Source: Bureau of Statistics, Guyana: Population and Housing Census: 2012													

**Percentage distribution by row:** By illustration, “Sheet Metal (Zn, Al & Galv)” is given in Table 5.12 as row 1, Shingles (Asphalt), row 2, Shingles (Wood), row 3, etc. Taking each of the variables in the row one at a time, of the dwelling units roofed with “Sheet Metal (Zn, Al & Galv)”, how many of them had wood, concrete, wood & concrete, stone, Adobe & Troolie Palm, etc. as the outer-wall materials?

As reflected, the predominant use of “wood”, “concrete”, “wood and concrete” and to a lesser extent for other outer-wall materials is vividly shown in the table. For instance, of the households roofing with Sheet Metal (Zn, Al & Galv), 45.8 percent had “wood”, 27.8 percent used “concrete” and 25.4 percent made “wood and concrete” as their outer-wall materials respectively, but to lesser extent for the other outer-wall materials. As it was not surprising, the main outer-wall materials for households roofing with Makeshift materials were Makeshift material itself (59.2 percent) and second to that was wood (34.0 percent) and to lesser extent for other categories (Table 5.12).

Table 5.12: Percent Distribution of Households by Combined Use of Roofing and Outer-wall Materials, Guyana: 2012													
N O	Roofing Materials	Outer-Wall Construction Materials											
		Wood	Concrete	Wood & Concrete	Stone	Adobe & Troolie Palm	Makeshift	Clay brick	Stone & brick	Galvanize	Wood & brick	Other	Total
		Row Percent											
1	Sheet Metal (Zn, Al, Galv)	45.8	27.8	25.4	0.0	0.1	0.1	0.4	0.0	0.2	0.1	0.1	100
2	Shingles (Asphalt)	24.8	59.6	11.1	0.0	0.6	0.3	1.9	0.6	0.0	0.0	1.0	100
3	Shingles (Wood)	31.7	37.7	18.8	0.0	4.6	0.5	4.3	0.0	0.0	1.2	1.4	100
4	Shingles (Other)	16.4	62.7	13.4	0.0	3.0	1.5	0.0	0.0	0.0	1.5	1.5	100
5	Tile	9.1	57.0	9.1	0.8	1.7	0.0	14.0	0.0	0.0	5.0	3.3	100
6	Concrete	8.9	77.7	9.4	0.0	0.5	0.0	2.0	0.0	0.0	0.5	1.0	100
7	Thatched/Troolie Palm	41.6	0.5	0.5	0.0	21.4	2.1	12.0	0.2	0.0	2.7	18.9	100
8	Makeshift	34.0	0.9	0.9	0.0	1.1	59.2	0.6	0.0	0.6	0.4	2.3	100
9	Other	31.9	14.4	7.2	0.0	3.3	1.7	3.6	0.3	0.0	1.7	36.0	100
	<b>Total</b>	<b>45.4</b>	<b>27.2</b>	<b>24.5</b>	<b>0.0</b>	<b>0.7</b>	<b>0.4</b>	<b>0.8</b>	<b>0.0</b>	<b>0.2</b>	<b>0.2</b>	<b>0.7</b>	<b>100</b>
		Column Percent											
1	Sheet Metal (Zn, Al, Galv)	96.6	97.9	99.1	90.0	8.9	39.5	53.0	65.9	98.6	53.6	15.1	95.8
2	Shingles (Asphalt)	0.1	0.3	0.1	0.0	0.1	0.1	0.4	4.9	0.0	0.0	0.2	0.2
3	Shingles (Wood)	0.5	1.1	0.6	0.0	5.5	1.1	4.3	0.0	0.0	4.9	1.6	0.8
4	Shingles (Other)	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.3	0.1	0.0
5	Tile	0.0	0.1	0.0	5.0	0.1	0.0	1.1	0.0	0.0	1.6	0.3	0.1
6	Concrete	0.0	0.3	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.3	0.1	0.1
7	Thatched/Troolie Palm	2.4	0.0	0.1	5.0	83.8	15.5	40.0	26.8	0.6	37.2	72.4	2.6
8	Makeshift	0.2	0.0	0.0	0.0	0.4	42.8	0.2	0.0	0.8	0.5	0.9	0.3
9	Other	0.1	0.1	0.1	0.0	0.9	0.8	0.8	2.4	0.0	1.6	9.4	0.2
	<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: Derived from Table 2.11.

**Percentage distribution by column:** Following similar illustration in the case of distribution by row, “wood” is given in Table 5.12 as column 1, “concrete”, column 2, “wood & concrete”, column, 3, etc. The question is, of the households who utilized “wood” to build the outer wall, how many of them used “Sheet metal (Zn, Al & Galv)”, “Shingles (Asphalt)”, “Shingles (Wood)”, “Thatched/Troolie Palm”, etc. as their roofing materials?

As presented in Table 5.12, with the exceptions of “Adobe & Troolie Palm”, “Clay brick”, and “Other outer-wall materials not well defined”, where considerable proportions of the households used “Thatched/Troolie Palm” respectively as roofing materials, most of the households covered their dwellings with “Sheet metal (Zn, Al & Galv)”. For instance, more than 96 percent of the households who built their outer wall with “wood”, “concrete”, “wood and concrete” combined, “stone” and “Galvanize materials” respectively roofed their dwellings with sheet metal (Zn, Al & Galv).

### **5.1.2.5 Distribution of Households by Year Dwellings Built**

#### **5.1.2.5.1 Definition of Year Dwellings Completed**

The age of a dwelling is an important factor in the assessment of housing conditions besides the materials used for construction. For clarity, the year the dwelling was completed according to 2002 or 2012 census was defined as follow:

- The year in which the dwelling was completed and occupied for the first time and not when it was purchased;
- For households living in an incomplete dwelling, the year of occupancy was taken as the year when it was built; and
- In the case of major renovation, the year when the dwelling underwent that major renovation was considered as the year of construction.

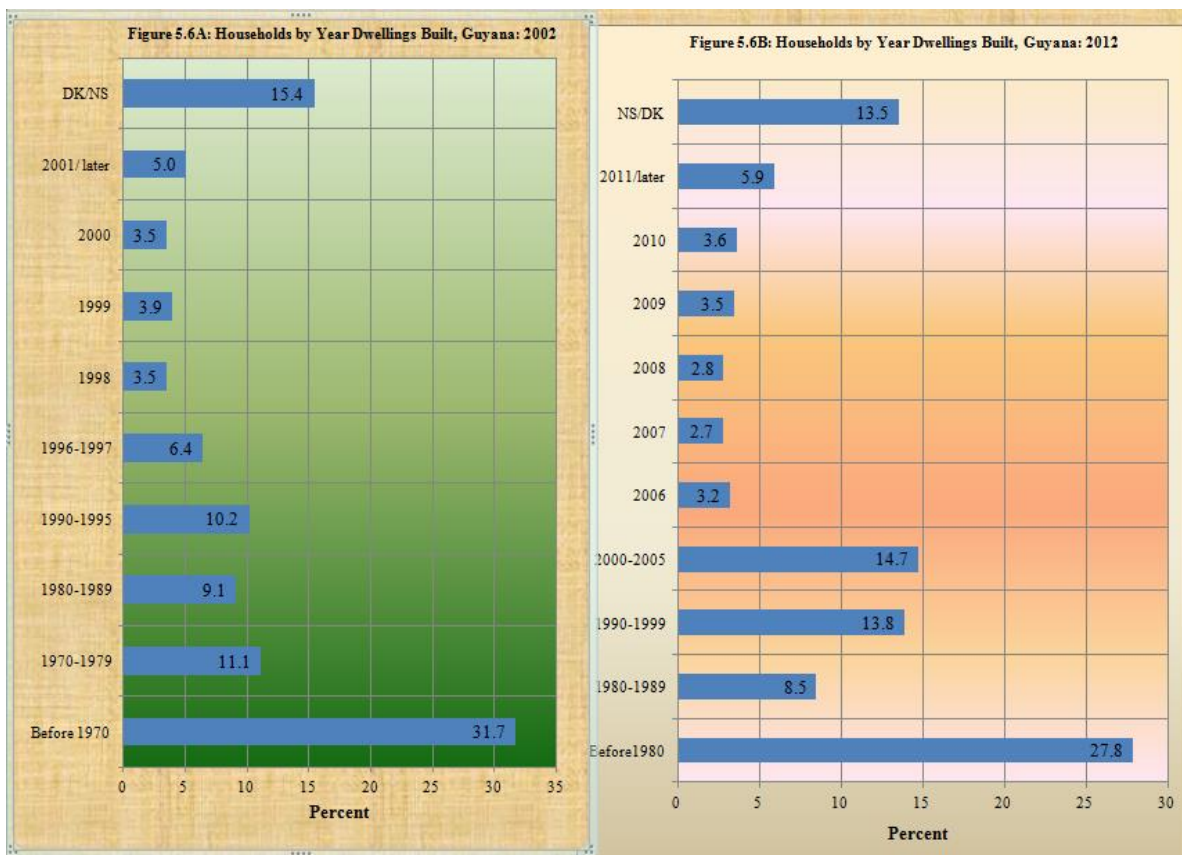
#### **5.1.2.5.2 Year Households Completed Dwellings**

The distribution of households by year they reported to have completed the construction of their dwellings is given in Table 5.13 and graphically presented in Figures 4.5 and 4.6. It is observed as given that the open intervals, that is: on or before 1970 or on or before 1980 was the construction period most frequently reported either in 2002 or 2012. In 2002, about 31.7 percent of the households lived in dwelling units that were built on or before 1970, while it was marginally down to 27.8 percent in comparison to the 2012' open interval, on or before 1980.

Sizeable proportions of the households (13.5 and 15.4 percent in 2012 and 2002 respectively) resided in dwelling units that had no year of construction. They may perhaps be tenants and other occupants who were not owners of the dwellings; and as such, they have no detailed information about when the dwellings were built (Table 5.13 and Figures 5.6A & 5.6B).

<b>Table 5.13: Distribution of Households by Year Dwellings Built, Guyana: 2002 &amp; 2012</b>					
<b>2002 Census</b>			<b>2012 Census</b>		
<b>Year of Construction</b>	<b>Number</b>	<b>Percent</b>	<b>Year of Construction</b>	<b>Number</b>	<b>Percent</b>
Before 1970	57,944	31.7	Before 1980	56,871	27.8
1970-1979	20,353	11.1	1980-1989	17,343	8.5
1980-1989	16,652	9.1	1990-1999	28,305	13.8
1990-1995	18,578	10.2	2000-2005	30,107	14.7
1996-1997	11,739	6.4	2006	6,457	3.2
1998	6,395	3.5	2007	5,586	2.7
1999	7,180	3.9	2008	5,749	2.8
2000	6,409	3.5	2009	7,067	3.5
2001/ later	9,191	5.0	2010	7,335	3.6
DK/NS	28,168	15.4	2011/later	12,125	5.9
<b>Total</b>	<b>182,609</b>	<b>100</b>	<b>DK/NS</b>	<b>27,680</b>	<b>13.5</b>
<b>x</b>	<b>x</b>	<b>x</b>	<b>Total</b>	<b>204,625</b>	<b>100</b>

**Source:** Bureau of Statistics, Guyana: Population and Housing Census. 2002 & 2012



Though, the open intervals being the construction periods most frequently reported is uncontested, it is implausible to directly link housing progress in the country entirely to the recent development in the construction industry (see Compendium 3: section 3.51.2), where construction sector is said to have dramatically made a gain during the intercensal period. It is possible that some of the dwellings were constructed years back, considering the types of materials generally used as discussed in the preceding section.

Comparing housing developments in the earliest years, it seems more likely to believe that house construction in Guyana usually peaked “toward the end” of the intercensal period. For instance, 12,125 households, approximately 5.9 percent of the total households confirmed that they lived in dwelling units that were constructed within a year prior to the 2012 census (in 2011). The 2002 census recorded a similar trend, with 9,191 households, comprising 5.0 percent saying they lived in dwellings that were built about a year prior to the 2002 census (in 2001). The period “toward the end” seems to show greatest achievements than any that had been realized in any single year period as indicated in Table 5.13 and graphically illustrated in Figures 5.6A & 5.6B.

Also, between 2000 and 2005, about 30,107 households, comprising 14.7 percent of the total households, lived in dwelling units that were built during that period. This implies that buildings were constructed at an average of 5,018 per annum, compared to the previous period (i.e., 1990 to 1999) for which the corresponding rate was 2,831 per annum.

#### **5.1.2.5.3 Estimation of Dwellings Underwent Major Renovation**

The yearly increase in home building “toward the end” of each intercensal period beginning 2006 to 2011 in the case of 2012 census (i.e., averaging 7,387 households completing dwellings per year) or beginning 1998 to 2001 in the case of 2002 census also averaging 7,294 households completing dwellings per year signals well, but should be interpreted with caution when comparing to the progressive home developments in the earlier years. For instance, some dwellings constructed during the earlier years which may have given boost to house construction for those years respectively, if housing counts were conducted may have since collapsed and no longer existed or gone under major renovation and information about completed years reported forward in the later years or periods.

To account for these damaged or deteriorated dwellings that underwent major renovation, the distributions of households by year/period of construction for 2002 and 2012 respectively were regrouped to correspond to each other for ease of comparison. For instance, since the period 1980-1989 is reflected in 2002 and 2012 respectively, they can be regrouped as *before 1989* to make the periods comparable. Similarly, the years of completion starting from 1990 up to 1999 in 2002 can be regrouped *to one period as 1990-1999* to conform to the similar period 1990-1999 in 2012.



*For instance, number of dwellings built before 1989 and reported in 2012 should be equal to the sum of number of dwellings built before 1989 and reported in 2002 given as:*

- a) Before 1970*
- b) 1970-1979, and*
- c) 1980-1989*

*Similarly, number of dwellings built during the period 1990-1999 and reported in 2012 should be equal to the sum of number of dwellings built (1990-1999) and reported in 2002 as:*

- a) 1990-1995*
- b) 1996-1997*
- c) 1998, and*
- d) 1999.*

*Any deficit realizes in 2012 could be because of damaged or deteriorated (dd) dwellings, where major renovations were carried out or the dwellings underwent complete reconstruction. Hence, information about the years of construction was reported as new housing developments and recorded during the later periods in the 2012 census (i.e., 1990-1999, 2000-2005, 2006, 2007, etc.). Thus, for example damaged or deteriorated dwellings (“dd”) can be obtained as:*

$$dd = \sum(y_{2i} + \dots y_{2n}) - \sum(y_{1i} + \dots y_{1n})$$

*where:*

*dd = damaged or deteriorated dwellings*

*y<sub>2</sub> = construction period or year in the recent census*

*y<sub>1</sub> = construction period or year in the previous census*

*i = subscript and denotes changing period or year from “i” to “n”.*

#### ***Detailed example:***

$$\text{Before 1999 in 2012} = \sum(y_{2i} + \dots y_n) = 56,871 + 17,343 + 28,305 = \mathbf{102,519}$$

$$\text{Before 1999 in 2002} = \sum(y_{1i} + \dots y_n) = 57,944 + 20,353 + 16,652 + 18,578 + 11,739 + 6,395 + 7,180 = \mathbf{138,841}.$$

$$dd = \sum(y_{2i} + \dots y_n) - \sum(y_{1i} + \dots y_n) = 102,519 - 138,841 = \mathbf{-36,322}$$

***dd = -36,322 dwellings***

Note that had there not been major reconstruction activities on the existing dwellings reported in 2002, the number of reported dwellings in 2012 would have been the same as those reported in 2002 for the same period.

Overall, 138,841 households are reported to have completed their dwellings on or before 1999 as reported in the 2002 census, while on the other hand, 102,519 households were said to have completed their dwellings during the same period (on or before 1999) in the 2012 census (Table 5.14). The difference of -36,322 households, constituting 26.2 percent accounted for damaged or deteriorated dwellings. It represents households who carried out major repairs or complete reconstruction of their properties during the intercensal period.

<b>Table 5.14: Estimation of Dwellings Underwent Major Renovation/ Reconstruction During Intercensal Period, Guyana:2002 &amp; 2012</b>						
<b>Period of Construction</b>	<b>2002</b>		<b>2012</b>		<b>Difference</b>	
	<b>Number</b>	<b>Percent</b>	<b>Number</b>	<b>Percent</b>	<b>Number</b>	<b>Percent</b>
Before 1989	94,949	68.4	74,214	72.4	-20,735	-21.8
1990-1999	43,892	31.6	28,305	27.6	-15,587	-35.5
<b>Total</b>	<b>138,841</b>	<b>100</b>	<b>102,519</b>	<b>100</b>	<b>-36,322</b>	<b>-26.2</b>
reconstruction.						
<b>Source:</b> Derived from Table 5.13						

Notably, since the estimation involves a comparison between two census results, it was impossible to determine the number of deteriorated dwellings for dwellings built beyond 2000. Furthermore, the classification in the 2012 census didn't record single year of completion for 2000 and 2001 respectively to correspond to the same year as in the 2002 census. As such, only progress made in home construction could be determined after the comparable periods in both censuses.

Finally, though the dwellings later underwent repairs, the overall percentage difference recording more than a quarter of the existing dwelling size in 2002 is significant. It is possible to have imparted on the decision of the drafters of the *National Development Strategy Plan* to claim that deteriorated infrastructure existed in the country prior to the formation of the policy in 1996.

#### **5.1.2.5.4 Households Regional Distribution by Construction Year**

When Table 5.15 presenting the regional distribution only for 2012 was examined, it is observed that six out of the ten administrative regions had relatively high proportion of buildings that were built on or before 1980 following the pattern of the national average. As expected, they include the six regions along the coast, Regions 10, 6, 4, 3, 5 and 2 in that ranking order of magnitude. On the contrary, sizeable proportions of the households within the Hinterland Regions responded that they built their dwellings "toward the end" of the period. This proved that most of the dwellings in the Hinterland Regions were built with less resilient construction materials. And because major renovations or complete reconstruction were carried out, the years of construction were deferred "toward the end" of the period where such completion activities on the properties were necessarily done (Table 5.15).

**Table 5.15: Distribution of Households by Year Since Dwellings Built, by Region, Guyana: 2012**

Construction Year	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10	Guyana	Hinterland	Coastland
Before 1980	446	2,199	8,314	27,659	3,378	9,954	617	99	291	3,914	56,871	1,453	55,418
1980 - 1989	271	1,330	2,820	6,399	1,495	3,600	241	127	368	692	17,343	1,007	16,336
1990 - 1999	551	2,318	4,317	11,405	1,938	4,713	455	277	819	1,512	28,305	2,102	26,203
2000 - 2005	911	2,210	4,631	11,771	2,133	4,722	660	404	1,127	1,538	30,107	3,102	27,005
2006	263	481	995	2,426	477	902	210	145	242	316	6,457	860	5,597
2007	233	437	914	2,103	382	684	225	111	214	283	5,586	783	4,803
2008	256	482	1,000	2,070	375	690	219	133	278	246	5,749	886	4,863
2009	356	658	1,186	2,319	430	846	256	444	285	287	7,067	1,341	5,726
2010	347	471	1,260	2,562	422	1,040	328	274	335	296	7,335	1,284	6,051
2011/later	525	829	1,955	4,444	800	1,603	531	351	609	478	12,125	2,016	10,109
NS/DK	690	666	3,587	16,202	1,881	2,500	829	6	324	995	27,680	1,849	25,831
<b>Total</b>	<b>4,849</b>	<b>12,081</b>	<b>30,979</b>	<b>89,360</b>	<b>13,711</b>	<b>31,254</b>	<b>4,571</b>	<b>2,371</b>	<b>4,892</b>	<b>10,557</b>	<b>204,625</b>	<b>16,683</b>	<b>187,942</b>
<b>Percent</b>													
Before 1980	9.2	18.2	26.8	31.0	24.6	31.8	13.5	4.2	5.9	37.1	27.8	8.7	29.5
1980 - 1989	5.6	11.0	9.1	7.2	10.9	11.5	5.3	5.4	7.5	6.6	8.5	6.0	8.7
1990 - 1999	11.4	19.2	13.9	12.8	14.1	15.1	10.0	11.7	16.7	14.3	13.8	12.6	13.9
2000 - 2005	18.8	18.3	14.9	13.2	15.6	15.1	14.4	17.0	23.0	14.6	14.7	18.6	14.4
2006	5.4	4.0	3.2	2.7	3.5	2.9	4.6	6.1	4.9	3.0	3.2	5.2	3.0
2007	4.8	3.6	3.0	2.4	2.8	2.2	4.9	4.7	4.4	2.7	2.7	4.7	2.6
2008	5.3	4.0	3.2	2.3	2.7	2.2	4.8	5.6	5.7	2.3	2.8	5.3	2.6
2009	7.3	5.4	3.8	2.6	3.1	2.7	5.6	18.7	5.8	2.7	3.5	8.0	3.0
2010	7.2	3.9	4.1	2.9	3.1	3.3	7.2	11.6	6.8	2.8	3.6	7.7	3.2
2011/later	10.8	6.9	6.3	5.0	5.8	5.1	11.6	14.8	12.4	4.5	5.9	12.1	5.4
NS/DK	14.2	5.5	11.6	18.1	13.7	8.0	18.1	0.3	6.6	9.4	13.5	11.1	13.7
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: Bureau of Statistics, Guyana: Population and Housing Census: 2012

## 5.2 HOUSEHOLDS TENURE-SHIP STATUS

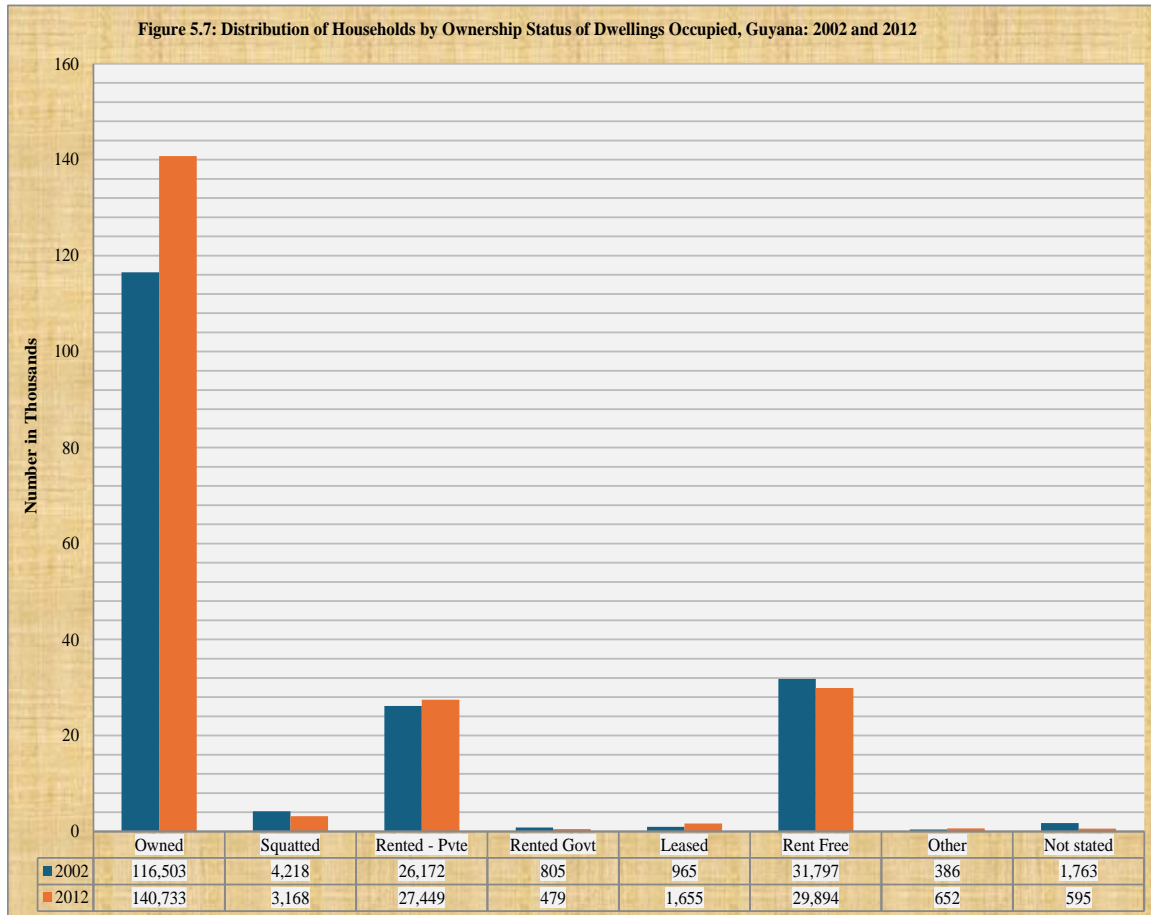
### 5.2.0 Introduction

This section is intended to investigate households' ownership of dwellings occupied (residential houses) as well as the lot or land where the dwellings are built. The finding will abreast the housing authorities whether institutional delays in the approval of building plans and the allocation of land still prevail as some of the constraints in the expansion of the housing sector as stated in the 1996 national development strategy.

### 5.2.1 Households Dwelling Tenure-Ship

Table 5.16 shows the distribution of households by ownership status of dwellings and changes during the intercensal period 2002 to 2012. As given, a significant proportion (more than two-thirds) owned the dwellings where they live in 2012 as graphically illustrated in Figure 5.7. The second and third categories but to smaller degree in magnitude were households who occupied the dwellings "Rent Free" and private individual renters. These two types accounted for 17.4 and 14.3 percent in 2002 and declined marginally to 14.6 and 13.4 percent accordingly during the intercensal period. The declines were followed by a reciprocal increase in the proportion of households who exclusively owned the dwellings. Households perhaps due to financial constraint or difficulty in obtaining permit for lot as such were squatting constituted 2.3 percent (4,218) in 2002 and declined to 1.5 percent (3,168) in 2012. The remaining types were very minimal and accounted for less than one (1) percent each, and besides they were said to have declined somehow during the intercensal period except households who were leasing the dwellings.

<b>Table 5.16: Distribution of Households by Ownership Status of Dwelling and Changes during the Intercensal Periods, Guyana: 2002 -2012</b>							
<b>N O</b>	<b>Ownership Status</b>	<b>Number</b>		<b>Percent</b>		<b>Changes</b>	
		<b>2002</b>	<b>2012</b>	<b>2002</b>	<b>2012</b>	<b>Number</b>	<b>Percent</b>
1	Owned	116,503	140,733	63.8	68.8	24,230	20.8
2	Squatted	4,218	3,168	2.3	1.5	-1,050	-24.9
3	Rented - Pvte	26,172	27,449	14.3	13.4	1,277	4.9
4	Rented Govt	805	479	0.4	0.2	-326	-40.5
5	Leased	965	1,655	0.5	0.8	690	71.5
6	Rent Free	31,797	29,894	17.4	14.6	-1,903	-6.0
7	Other	386	652	0.2	0.3	266	68.9
8	Not stated	1,763	595	1.0	0.3	-1,168	-66.3
	<b>Total</b>	<b>182,609</b>	<b>204,625</b>	<b>100</b>	<b>100</b>	<b>22,016</b>	<b>12.1</b>
<b>Source:</b> Bureau of Statistics, Guyana: Population and Housing Census: 2002 & 2012							



Meanwhile, the regional distribution given in Table 5.17 shows in general that a high proportion of the households owned the dwellings. This pattern follows closely the national average, where many of the households owned the dwellings and followed by households living “Rent Free” and “Rented Private”.

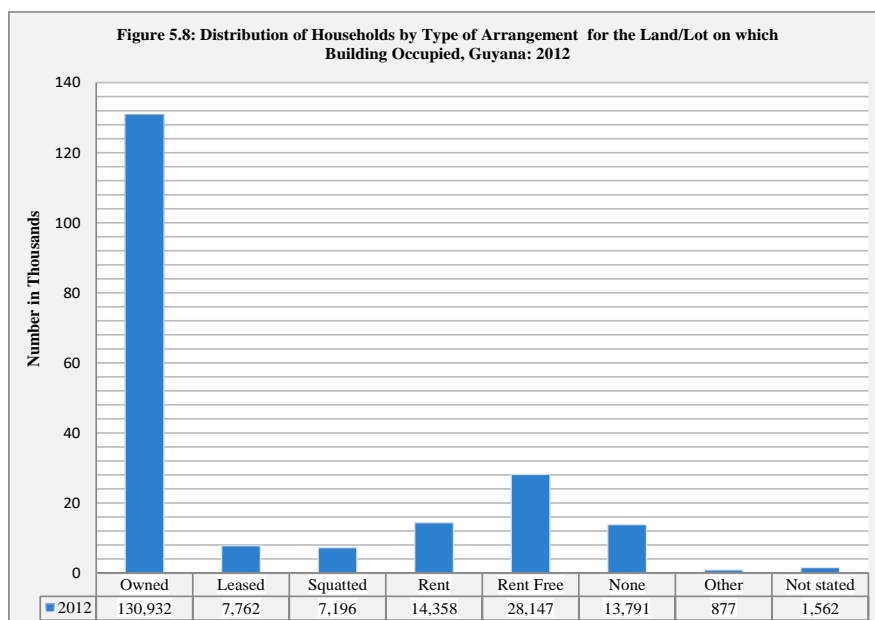
As observed from the distribution, perhaps because the requirement to obtain lot permit to build may not be complicated within the Hinterland Regions compared to the Coastland Regions, very high proportions of the households especially in Regions 1, 8 and 9 owned their dwellings as reflected in Table 5.16. Within the remaining regions, however, the proportion of households who owned their dwellings is high, but lesser to some extent and ranges from a low of 61.7 percent in Region 4 as expected to a high of 78.6 percent in Region 5. The other dwelling tenure-ship types were also minimal at the regional level, except households living in the dwellings “Rent Free” and “Rented Private” as already presented like the national average (Table 5.17).

Table 5.17: Households by Dwelling Tenure-Ship Classified by Administrative Regions, Guyana: 2012									
Region	Dwelling tenure-ship status								
	Owned	Squatted	Rented - Pvre	Rented Govt	Leased	Rent Free	Other	Not Stated	Total
Region 1	4,003	293	115	37	182	154	8	57	4,849
Region 2	10,205	134	753	43	45	877	10	14	12,081
Region 3	22,019	643	3,489	33	251	4,399	86	59	30,979
Region 4	55,153	1,370	17,466	180	813	13,720	436	222	89,360
Region 5	10,775	117	865	13	50	1,832	31	28	13,711
Region 6	21,997	241	2,708	36	51	6,142	22	57	31,254
Region 7	3,367	19	470	44	68	542	16	45	4,571
Region 8	1,922	122	151	9	26	132	9	0	2,371
Region 9	4,352	24	158	29	61	231	15	22	4,892
Region 10	6,940	205	1,274	55	108	1,865	19	91	10,557
<b>Guyana</b>	<b>140,733</b>	<b>3,168</b>	<b>27,449</b>	<b>479</b>	<b>1,655</b>	<b>29,894</b>	<b>652</b>	<b>595</b>	<b>204,625</b>
Hinterland	13,644	458	894	119	337	1,059	48	124	16,683
Coastland	127,089	2,710	26,555	360	1,318	28,835	604	471	187,942
	Percent								
Region 1	82.6	6.0	2.4	0.8	3.8	3.2	0.2	1.2	100
Region 2	84.5	1.1	6.2	0.4	0.4	7.3	0.1	0.1	100
Region 3	71.1	2.1	11.3	0.1	0.8	14.2	0.3	0.2	100
Region 4	61.7	1.5	19.5	0.2	0.9	15.4	0.5	0.2	100
Region 5	78.6	0.9	6.3	0.1	0.4	13.4	0.2	0.2	100
Region 6	70.4	0.8	8.7	0.1	0.2	19.7	0.1	0.2	100
Region 7	73.7	0.4	10.3	1.0	1.5	11.9	0.4	1.0	100
Region 8	81.1	5.1	6.4	0.4	1.1	5.6	0.4	0.0	100
Region 9	89.0	0.5	3.2	0.6	1.2	4.7	0.3	0.4	100
Region 10	65.7	1.9	12.1	0.5	1.0	17.7	0.2	0.9	100
<b>Guyana</b>	<b>68.8</b>	<b>1.5</b>	<b>13.4</b>	<b>0.2</b>	<b>0.8</b>	<b>14.6</b>	<b>0.3</b>	<b>0.3</b>	<b>100</b>
Hinterland	81.8	2.7	5.4	0.7	2.0	6.3	0.3	0.7	100
Coastland	67.6	1.4	14.1	0.2	0.7	15.3	0.3	0.3	100
<b>Source:</b> Bureau of Statistics, Guyana: Population and Housing Census: 2012									

## 5.2.2 Households Land Tenure-Ship of Where Building Built

Obtaining a permit for a lot/land for the purpose of house construction may seem like a major impediment in the expansion of the housing industry. While some households may have the means or income to start building projects and others may still be struggling, the allocation of land to applicants and perhaps to some extent institutional delay to approve building plan may serve as obstacles. Predicting this scenario as a major constraint, the respondents to the *Household Questionnaire* (See Appendix E: Preliminary Report) were asked to specify what type of arrangement they have in place concerning the lot/land their buildings occupy.

In 2012, a significant number (130,932 or 64.0 percent) of the households in the entire country have ownership titles of the land where their buildings are built, and second to this category were 13.7 percent (28,147) of the households who perhaps for one reason or the other constructed on the land without paying anything or live there “Rent Free”. Though households who were leasing and renting the land account for the minimal proportions compared to households with land title deeds, these two categories along with land squatters represent the bottleneck on land acquisition. The land renters and leasers combined accounted for 10.8 percent, while the squatters made up 3.5 percent or 7,196 households. Households who have nothing to do with the lot/land at all, and perhaps occupied the buildings constructed on the land as tenants and living there based on agreement made with the owners of the property constituted 6.7 percent.



In all, it is observed that a total of 14.3 percent or 29,316 households, including land renters, leasers and squatters may be encountering problems associated with difficulty in land acquisition or availability of adequate income to start building construction. Accordingly, upgrading the bottleneck in the acquisition of lot permit for house construction would be a great advantage for the housing industry in Guyana (Table 5.18 and Figure 5.8).

Meanwhile, the pattern of the regional distribution follows closely to that of the national average. Accordingly, households who owned the land where the buildings were constructed are in large majority and ranging from a high of 81.6 percent in Region 9 to a low of 55.0 percent in Region 10 (Figure 5.8 and Table 5.18).

<b>Table 5.18: Distribution of Households by Land Tenure ship Status of Land Building Built on, Classified by Administrative Regions, Guyana: 2012</b>														
<b>N O</b>	<b>Tenure Status</b>	<b>Administrative Regions</b>												
		<b>Region 1</b>	<b>Region 2</b>	<b>Region 3</b>	<b>Region 4</b>	<b>Region 5</b>	<b>Region 6</b>	<b>Region 7</b>	<b>Region 8</b>	<b>Region 9</b>	<b>Region 10</b>	<b>Guyana</b>	<b>Hinterland</b>	<b>Coastland</b>
1	Owned	3,415	9,564	20,387	52,197	9,930	20,885	2,971	1,782	3,993	5,808	130,932	12,161	118,771
2	Leased	565	410	1,045	3,079	307	798	541	46	220	751	7,762	1,372	6,390
3	Squatted	413	197	1,404	3,370	205	579	64	171	122	671	7,196	770	6,426
4	Rent	89	713	2,762	7,239	720	1,420	331	126	95	863	14,358	641	13,717
5	Rent Free	271	1,010	4,519	12,898	1,967	5,211	440	197	188	1,446	28,147	1,096	27,051
6	None	32	137	552	9,432	392	2,255	135	8	61	787	13,791	236	13,555
7	Other	8	23	67	372	129	31	21	7	139	80	877	175	702
8	Not stated	56	27	243	773	61	75	68	34	74	151	1,562	232	1,330
	<b>Total</b>	<b>4,849</b>	<b>12,081</b>	<b>30,979</b>	<b>89,360</b>	<b>13,711</b>	<b>31,254</b>	<b>4,571</b>	<b>2,371</b>	<b>4,892</b>	<b>10,557</b>	<b>204,625</b>	<b>16,683</b>	<b>187,942</b>
		<b>Percent</b>												
1	Owned	70.4	79.2	65.8	58.4	72.4	66.8	65.0	75.2	81.6	55.0	64.0	72.9	63.2
2	Leased	11.7	3.4	3.4	3.4	2.2	2.6	11.8	1.9	4.5	7.1	3.8	8.2	3.4
3	Squatted	8.5	1.6	4.5	3.8	1.5	1.9	1.4	7.2	2.5	6.4	3.5	4.6	3.4
4	Rented	1.8	5.9	8.9	8.1	5.3	4.5	7.2	5.3	1.9	8.2	7.0	3.8	7.3
5	Rent Free	5.6	8.4	14.6	14.4	14.3	16.7	9.6	8.3	3.8	13.7	13.8	6.6	14.4
6	None	0.7	1.1	1.8	10.6	2.9	7.2	3.0	0.3	1.2	7.5	6.7	1.4	7.2
7	Other	0.2	0.2	0.2	0.4	0.9	0.1	0.5	0.3	2.8	0.8	0.4	1.0	0.4
8	Not stated	1.2	0.2	0.8	0.9	0.4	0.2	1.5	1.4	1.5	1.4	0.8	1.4	0.7
	<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
<b>Source:</b> Bureau of Statistics, Guyana: Population and Housing Census: 2012														



## **5.3 HOUSING AMENITIES AND SANITATION FACILITIES**

### **5.3.0 Introduction**

The availability of basic amenities such as drinking water, electricity and sanitation facilities largely indicate conditions regarding quality of life. They are some of the main indicators often used in measuring human development index. This section of the census enquiry would focus on them; in addition to sources of fuel used for cooking, method of garbage collection and durable goods available in the households.

### **5.3.1 Toilet Facilities of the Households**

The Georgetown Sewerage and Water Commissioners (GSWC) were established in 1929 under the then British colonial rule to operate and maintain the sewerage and waterworks of Central Georgetown. At present, this sewerage system, being capital intensive, is still limited to part of Georgetown, and any household wishing to modernize his/her building outside of the old frame does so by linking the water closet (W.C.) to a cesspit/ septic tank. With an increased use of W.C. linked to cesspit/septic tank, the proportion of households using pit latrines and those who don't have any at all in the households has dropped considerably. This decline is remarkable, for it signals well the high achievement of the national development strategy earlier launched to alleviate unsanitary problem within the towns and the city of Guyana.

#### **5.3.1.1 Distribution and Changes in Toilet Facilities**

The distribution of the households by types of toilet facilities is presented in Table 5.19 and illustrated in Figure 5.9. Both the table and figure show that there has been a tremendous increase in the number of households using the improved methods of toilet waste disposal. For instance, while about two-fifths (41.5 percent or 75,853) of the households were using water closet (W.C.) linked to cesspit or septic tank and the main sewer-line combined in 2002, the proportion of households using that improved method had increased significantly to 63.5 percent or 129,963 in 2012 for the entire country.

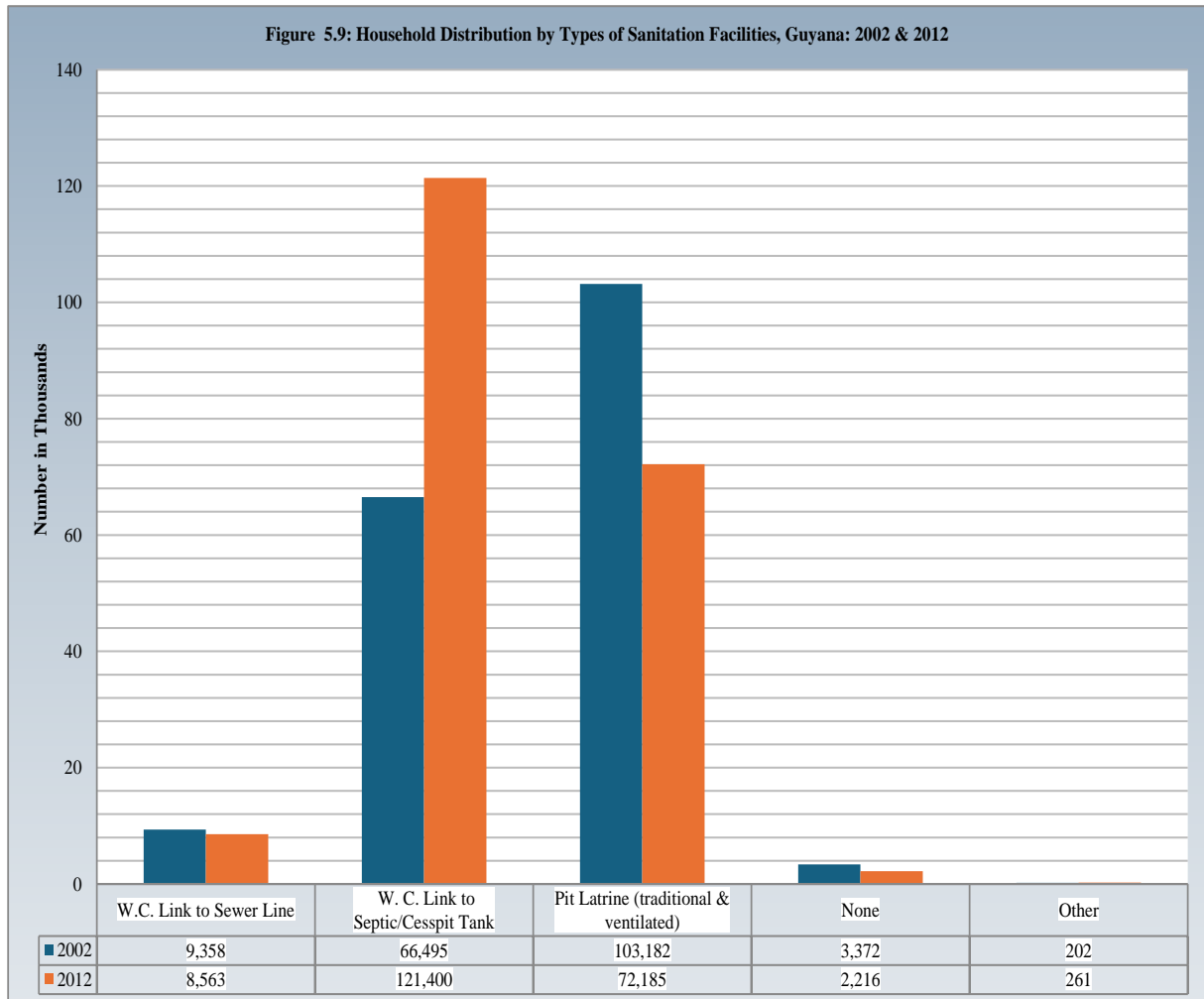
Disaggregating the two types of water closet methods commonly called flushed toilet system, only small percentage, about 5.1 percent of the households had W.C. linked to the main sewer line in 2002 and went down marginally to 4.1 percent in 2012. As for linking the W.C. to a cesspit or septic tank, most of the households used that to modernize their sanitation facilities. This was because the W.C. linked to the main sewer line was constructed in Central Georgetown during the colonial era and has not been extended outside the old city frame. In view of this, about 36.4 percent of the households wishing to modernize their sanitation facilities in 2002 linked the W.C. to cesspit or septic tank, which by the close of the intercensal period in 2012 had increased to 59.3 percent. The increase was accompanied by a subsequent decrease in the use of pit latrines (traditional & ventilated), where 56.5 percent or 103,182 of the households were engaged

in using that in 2002 and went down to 35.3 percent in 2012. The dramatic shifts had caused the proportion of households using cesspit or septic tank linked to water closet to increase sharply by 82.6 percentage points during the intercensal period as reflected in Table 5.19.

Interestingly, the use of W.C. linked to cesspit or septic tank as a mean of sewage waste disposals is expected to continuously increase, because it seems to be a commendable solution for anyone who may wish to modernize their toilet facilities in the rural or the suburbs of Georgetown in the future. To extend the major sewer lines beyond the city limit to provide similar services to majority of the scattered villages and towns would have greater impacts on the national budget, since the W.C. linked to the main sewer line project is capital intensive and may require a significant budgetary allocation.

<b>Table 5.19: Distribution of Households by Types of Sanitation Facilities , Guyana: 2002 &amp; 2012</b>						
<b>Sanitation Facilities</b>	<b>Number</b>		<b>Percent</b>		<b>Changes</b>	
	<b>2002</b>	<b>2012</b>	<b>2002</b>	<b>2012</b>	<b>Number</b>	<b>Percent</b>
W.C. Link to Sewer-Line	9,358	8,563	5.1	4.2	-795	-8.5
W. C. Link to Septic/Cesspit Tank	66,495	121,400	36.4	59.3	54,905	82.6
Pit Latrine (traditional & ventilated)	103,182	72,185	56.5	35.3	-30,997	-30.0
None	3,372	2,216	1.8	1.1	-1,156	-34.3
Other	202	261	0.1	0.1	59	29.2
<b>Total</b>	<b>182,609</b>	<b>204,625</b>	<b>100</b>	<b>100</b>	<b>22,016</b>	<b>12.1</b>
<b>Source:</b> Bureau of Statistics, Guyana: Population and Housing Census: 2002 & 2012						

In all during the intercensal period, very small percentage (i.e., 1.8 percent in 2002 marginally declining to 1.1 percent in 2012) of the households were reported to have had no toilet facility at all and perhaps shared toilet facility with friends or relatives or dispose the toilet waste somehow in any inappropriate manner. The use of ‘other method’ not clearly defined was very insignificant (see Table 5.19 and Figure 5.9).



Regionally, the variations regarding Hinterland and Coastland Regions are always noticeable. The use of pit latrines as a major form of toilet facility was observed to be in the households located within the Hinterland Regions compared to the Coastland Regions. As reflected in Table 5.20, about 71.1 percent of the households in the Hinterland areas generally use all forms of pit latrines compared to 32.1 percent in similar combined category in the Coastland areas.

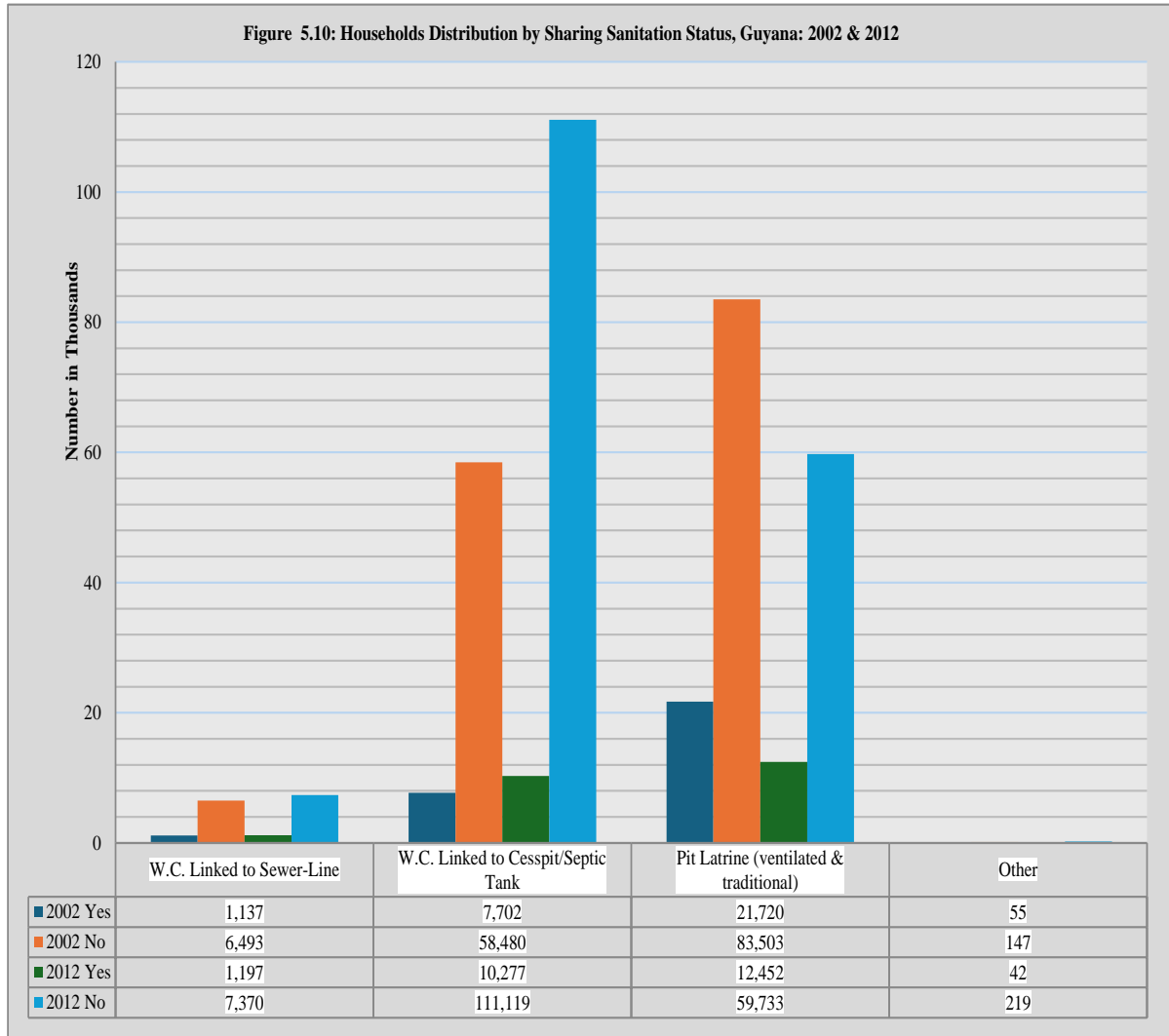
Of the pit latrine users in the Hinterland, 9.5 percent installed vent to their pit to make the pit safer, 46.1 percent took further precautionary measure by inserting slab to the pit, while 15.6 percent still make use of the typical traditional pit latrines without slab. Likewise of the pit latrine users in the Coastland areas, about 4.5 percent had vent installed to the pit, 20.0 percent installed slab to ensure additional proper sanitation safety, while 7.6 percent still use the typical traditional pit latrine without slab (Table 5.20).

As mentioned, that the use of W.C. linked to the main sewer-line was a system only available in Central Georgetown located in Region 4, the use of the second alternative, W.C. linked to cesspit or septic tank, was a system primarily in place in the Coastland Regions. The proportion of households with W.C. linked to cesspit or septic tank ranges from the highest of 67.5 and 67.3 percent in Region 4 and Region 3 respectively to a low of 50.9 percent in Region 2. Though Region 7 is counted within the Hinterland, 43.0 percent of the households there used the improved method like the Coastland Regions. Households residing in the remaining three Hinterland Regions (Regions 1, 9 and 8) in that order of importance mainly used the three basic forms of pit latrines combined and given as 86.2 percent, 77.1 percent and 64.6 percent respectively. Most of the Hinterland pit latrine users had slab to the pit. In all, except for Region 8, where about a quarter of the households are reported to have no toilet facility at all, followed by Region 9, with 11.5 percent, the proportions of households who dispose their toilet waste somehow indifferently were insignificant. Generally, therefore, concluding that the households in Guyana were seen to have practiced some healthy method of sanitation (Table 5.20).

Table 5.20: Distribution of Households by Types of Toilet Facilities Classified by Administrative Region, Guyana: 2012								
Region	W.C. Linked to Sewer-Line	W.C. Linked to Septic/Cesspit Tank	Ventilated Pit Latrine	Traditional Pit Latrine with Slab	Traditional Pit Latrine without Slab	None	Other	Total
Region 1	0	320	871	2,324	983	331	20	4,849
Region 2	0	6,152	535	3,113	2,277	0	4	12,081
Region 3	0	20,851	1,656	6,369	2,007	85	11	30,979
Region 4	8,563	60,294	3,820	10,442	5,886	321	34	89,360
Region 5	0	7,282	896	4,801	717	12	3	13,711
Region 6	0	17,219	1,268	10,268	2,361	119	19	31,254
Region 7	0	1,964	227	1,492	668	120	100	4,571
Region 8	0	179	155	804	572	606	55	2,371
Region 9	0	543	330	3,070	373	565	11	4,892
Region 10	4	6,592	341	2,548	1,011	57	4	10,557
<b>Guyana</b>	<b>8,567</b>	<b>121,396</b>	<b>10,099</b>	<b>45,231</b>	<b>16,855</b>	<b>2,216</b>	<b>261</b>	<b>204,625</b>
Hinterland	0	3,006	1,583	7,690	2,596	1,622	186	16,683
Coastland	8,567	118,390	8,516	37,541	14,259	594	75	187,942
Percent								
Region 1	0.0	6.6	18.0	47.9	20.3	6.8	0.4	100
Region 2	0.0	50.9	4.4	25.8	18.8	0.0	0.0	100
Region 3	0.0	67.3	5.3	20.6	6.5	0.3	0.0	100
Region 4	9.6	67.5	4.3	11.7	6.6	0.4	0.0	100
Region 5	0.0	53.1	6.5	35.0	5.2	0.1	0.0	100
Region 6	0.0	55.1	4.1	32.9	7.6	0.4	0.1	100
Region 7	0.0	43.0	5.0	32.6	14.6	2.6	2.2	100
Region 8	0.0	7.5	6.5	33.9	24.1	25.6	2.3	100
Region 9	0.0	11.1	6.7	62.8	7.6	11.5	0.2	100
Region 10	0.0	62.4	3.2	24.1	9.6	0.5	0.0	100
<b>Guyana</b>	<b>4.2</b>	<b>59.3</b>	<b>4.9</b>	<b>22.1</b>	<b>8.2</b>	<b>1.1</b>	<b>0.1</b>	<b>100</b>
Hinterland	0.0	18.0	9.5	46.1	15.6	9.7	1.1	100
Coastland	4.6	63.0	4.5	20.0	7.6	0.3	0.0	100
Source: Bureau of Statistics, Guyana: Population and Housing Census: 2012								

### 5.3.1.2 Households Sharing Sanitation Facilities

Sharing sanitation facilities with members of different households is unpleasant. As reflected in Table 5.21, a significant proportion of the households who had toilet facilities owned them exclusively and did not share with any neighbour. Nationally, about 82.9 percent of the households in 2002 did not share, marginally increasing to 88.2 percent in 2012 (Table 5.21 and Figure 5.10).



**Column Percent:** Sharing toilet facilities by type, the frequently shared category was pit latrines, which comprises 70.9 percent in 2002 and declined to 52.0 percent in 2012 of all households who confirmed to have shared. Second in magnitude was the W.C. linked to cesspit/ septic tank with 42.9 percent of the households in 2012 and followed by W.C. linked to the main sewer-line (5.0 percent). Perhaps, because the “other facility” was not clearly defined, it constituted negligible proportion of the households regarding total number who reported in the sharing category.

**Row Percent:** Taking each type of toilet facility by row, of the total pit latrine users, 20.6 percent shared, and 79.4 percent did not in 2002, and improving to 17.3 percent and 82.7 percent respectively in 2012. Likewise of the two flushed toilet types, that is, W.C. linked to cesspit/ septic tank and W.C. linked to the main sewer-line combined, 12.0 percent shared, and 88.0 percent limited the usage exclusively to the households in 2002 and marginally improving to only 8.8 sharing percent and 91.2 percent limiting the usage to the households in 2012. Of all, households reported in the “other category” frequently

shared compared to the rest. Perhaps, the “other category” may refer to some sub-standard toilet facilities, where the usage has no restriction, or the owner has less control (Table 5.21).

<b>Table 5.21: Distribution of Households by Sanitation Facility Sharing Status, Guyana: 2002 - 2012</b>							
<b>N O</b>	<b>Type of toilet facilities</b>	<b>2002</b>			<b>2012</b>		
		<b>Yes</b>	<b>No</b>	<b>Total</b>	<b>Yes</b>	<b>No</b>	<b>Total</b>
1	W.C. Linked to Sewer-Line	1,137	6,493	7,630	1,197	7,370	8,567
2	W.C. Cesspit/Septic tank	7,702	58,480	66,182	10,277	111,119	121,396
3	Pit Latrine (ventilated & traditional)	21,720	83,503	105,223	12,452	59,733	72,185
4	Other	55	147	202	42	219	261
	<b>Total</b>	<b>30,614</b>	<b>148,623</b>	<b>179,237</b>	<b>23,968</b>	<b>178,441</b>	<b>202,409</b>
		<b>Row Percent</b>			<b>Row Percent</b>		
1	W.C. Linked to Sewer-Line	14.9	85.1	100	14.0	86.0	100
2	W.C. Cesspit/Septic tank	11.6	88.4	100	8.5	91.5	100
3	Pit Latrine (ventilated & traditional)	20.6	79.4	100	17.3	82.7	100
4	Other	27.2	72.8	100	16.1	83.9	100
	<b>Total</b>	<b>17.1</b>	<b>82.9</b>	<b>100</b>	<b>11.8</b>	<b>88.2</b>	<b>100</b>
		<b>Column Percent</b>			<b>Column Percent</b>		
1	W.C. Linked to Sewer-Line	3.7	4.4	4.3	5.0	4.1	4.2
2	W.C. Cesspit/Septic tank	25.2	39.3	36.9	42.9	62.3	60.0
3	Pit Latrine (ventilated & traditional)	70.9	56.2	58.7	52.0	33.5	35.7
4	Other	0.2	0.1	0.1	0.2	0.1	0.1
	<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
<b>Source:</b> Bureau of Statistics, Guyana: Population and Housing Census: 2002 & 2012							

Of importance, was that all the administrative regions have shown significant proportions of households not sharing toilet facilities with other neighbors and vary somehow by regions (Table 5.22). Among the households along the coastal regions, the proportion sharing toilet facilities ranges from a high of 13.0 percent in Region 3 to a low of 8.5 in Region 2. As it was not surprising because most of the households there have a traditional communal lifestyle, the custom seemed to have been transformed into sharing of toilet facilities as well, that higher percentage of households in the Hinterland were reported to have shared compared to those in Coastland. The proportion sharing ranges from a low of 17.0 percent in Region 1 to a high of 27.0 percent in Region 8 (Table 5.22).

Finally, the households grouped in “other category” and those who do not have any at all, combined, comprising a small proportion of 1.2 percent or 2,477 as reflected in Table 5.20 perhaps could be households living in severe sub-standard housing conditions. On the overall, sharing toilet facilities was seen to be insanitary and discouraged by the majority of the households. This is a good indicator of environmental sustainability.

Table 5.22: Distribution of Households by Status of Sharing Sanitation Facilities by Region, Guyana: 2012

Region	Sanitation Facilities Shared							Sanitation Facilities Not Shared							Grand Total
	W.C. Linked to Sewer Line	W.C. Linked to Septic/Cesspit Tank	Ventilated Pit Latrine	Traditional Pit Latrine with Slab	Traditional Pit Latrine without Slab	Other	Total	W.C. Linked to Sewer Line	W.C. Linked to Septic/Cesspit Tank	Ventilated Pit Latrine	Traditional Pit Latrine with Slab	Traditional Pit Latrine without Slab	Other	Total	
Region 1	0	41	138	435	150	2	766	0	279	733	1,889	833	18	3,752	4,518
Region 2	0	354	55	320	293	0	1,022	0	5,798	480	2,793	1,984	4	11,059	12,081
Region 3	0	2,222	241	1,136	412	3	4,014	0	18,629	1,415	5,233	1,595	8	26,880	30,894
Region 4	1,197	5,324	816	2,074	1,302	13	10,726	7,366	54,970	3,004	8,368	4,584	21	78,313	89,039
Region 5	0	600	98	736	124	1	1,559	0	6,682	798	4,065	593	2	12,140	13,699
Region 6	0	943	197	1,036	262	3	2,441	0	16,276	1,071	9,232	2,099	16	28,694	31,135
Region 7	0	293	80	446	112	15	946	0	1,671	147	1,046	556	85	3,505	4,451
Region 8	0	31	29	266	149	2	477	0	148	126	538	423	53	1,288	1,765
Region 9	0	31	50	769	96	3	949	0	512	280	2,301	277	8	3,378	4,327
Region 10	0	438	66	435	129	0	1,068	4	6,154	275	2,113	882	4	9,432	10,500
<b>Guyana</b>	<b>1,197</b>	<b>10,277</b>	<b>1,770</b>	<b>7,653</b>	<b>3,029</b>	<b>42</b>	<b>23,968</b>	<b>7,370</b>	<b>111,119</b>	<b>8,329</b>	<b>37,578</b>	<b>13,826</b>	<b>219</b>	<b>178,441</b>	<b>202,409</b>
Hinterland	0	396	297	1,916	507	22	3,138	0	2,610	1,286	5,774	2,089	164	11,923	15,061
Coastland	1,197	9,881	1,473	5,737	2,522	20	20,830	7,370	108,509	7,043	31,804	11,737	55	166,518	187,348
	Percent							Percent							
Region 1	0.0	0.9	3.1	9.6	3.3	0.0	17.0	0.0	6.2	16.2	41.8	18.4	0.4	83.0	100
Region 2	0.0	2.9	0.5	2.6	2.4	0.0	8.5	0.0	48.0	4.0	23.1	16.4	0.0	91.5	100
Region 3	0.0	7.2	0.8	3.7	1.3	0.0	13.0	0.0	60.3	4.6	16.9	5.2	0.0	87.0	100
Region 4	1.3	6.0	0.9	2.3	1.5	0.0	12.0	8.3	61.7	3.4	9.4	5.1	0.0	88.0	100
Region 5	0.0	4.4	0.7	5.4	0.9	0.0	11.4	0.0	48.8	5.8	29.7	4.3	0.0	88.6	100
Region 6	0.0	3.0	0.6	3.3	0.8	0.0	7.8	0.0	52.3	3.4	29.7	6.7	0.1	92.2	100
Region 7	0.0	6.6	1.8	10.0	2.5	0.3	21.3	0.0	37.5	3.3	23.5	12.5	1.9	78.7	100
Region 8	0.0	1.8	1.6	15.1	8.4	0.1	27.0	0.0	8.4	7.1	30.5	24.0	3.0	73.0	100
Region 9	0.0	0.7	1.2	17.8	2.2	0.1	21.9	0.0	11.8	6.5	53.2	6.4	0.2	78.1	100
Region 10	0.0	4.2	0.6	4.1	1.2	0.0	10.2	0.0	58.6	2.6	20.1	8.4	0.0	89.8	100
<b>Guyana</b>	<b>0.6</b>	<b>5.1</b>	<b>0.9</b>	<b>3.8</b>	<b>1.5</b>	<b>0.0</b>	<b>11.8</b>	<b>3.6</b>	<b>54.9</b>	<b>4.1</b>	<b>18.6</b>	<b>6.8</b>	<b>0.1</b>	<b>88.2</b>	<b>100</b>
Hinterland	0.0	2.6	2.0	12.7	3.4	0.1	20.8	0.0	17.3	8.5	38.3	13.9	1.1	79.2	100
Coastland	0.6	5.3	0.8	3.1	1.3	0.0	11.1	3.9	57.9	3.8	17.0	6.3	0.0	88.9	100

Source: Bureau of Statistics, Guyana: Population and Housing Census: 2012



## **5.3.2 Households Water Facilities**

### **5.3.2.1 Households Sources of Water Supply**

Guyana, meaning "land of many waters", is rich in water resources, as such the question of sources of water supply to the households here is within the framework of usable water available for home consumption, and not an investigation geared towards finding out difficulty households encountered to access water, for instance, the availability of water in the desert. As pointed out earlier, most of the population is concentrated in the coastal plains, many of which are below sea level and is protected by a series of sea walls. Besides, some numerous shallow reservoirs inland of the coastal plain, called "water conservancies" store surface water primarily for irrigation purposes.

**National Distribution:** In 2012, more than four-fifths (82.4 percent) of the households in Guyana sources of water supply was pipe-borne water. Of this proportion however, much of the water came through either public piped into dwelling or into yard. For instance, "public piped into dwelling" and "public piped into yard" served as sources for 39.0 percent and 30.7 percent of the households respectively. Private arrangement also focused on piped into dwelling or into yard, along with water catchment through rainwater collection and truck-borne water. These categories combined accounted for a total of 17.9 percent. For households who are still using the traditional sources such as well, river, creek, etc., "river/stream/creek/pond/spring" served as a source for 6.4 percent, while "public well" and "dug well/bore-hole" accounted for another 3.2 percent of the households. Only a small percentage (1.5 percent or 3,091) of the households made use of "public standpipe or hand pump" as their source to get water (Table 5.23).

<b>Table 5.23: Distribution of Households by Sources of Water Supply and Changes During the Intercensal Periods, Guyana: 2002-2012</b>							
<b>N O</b>	<b>Sources of water supply</b>	<b>Number</b>		<b>Percent</b>		<b>Changes</b>	
		<b>2002</b>	<b>2012</b>	<b>2002</b>	<b>2012</b>	<b>Number</b>	<b>Percent</b>
1	Pvte, Piped into Dwelling	16,912	15,457	9.3	7.6	-1,455	-8.6
2	Pvte Catchments/Rainwater	8,829	10,335	4.8	5.1	1,506	17.1
3	Pvte Piped into yard	11,175	10,671	6.1	5.2	-504	-4.5
4	Public, Piped into Dwelling	52,956	79,772	29.0	39.0	26,816	50.6
5	Public, Piped into Yard	59,642	62,801	32.7	30.7	3,159	5.3
6	Public Standpipe or hand pump	5,949	3,091	3.3	1.5	-2,858	-48.0
7	Public Well	1,796	2,453	1.0	1.2	657	36.6
8	River/Stream/Creek/pond/spring	19,386	13,019	10.6	6.4	-6,367	-32.8
9	Truck borne	n/a	191	n/a	0.1	n/a	n/a
10	Dug well/bore-hole	n/a	4,111	n/a	2.0	n/a	n/a
11	Other	5,964	2,724	3.3	1.3	-3,240	-54.3
	<b>Total</b>	<b>182,609</b>	<b>204,625</b>	<b>100</b>	<b>100</b>	<b>22,016</b>	<b>12.1</b>
<b>Source:</b> Bureau of Statistics, Guyana: Population and Housing Census: 2002 & 2012							

Meanwhile, it should be noted that only 2.0 percent of households still make use of the traditional way of accessing potable water, which is digging well or bore-holes. This practice is found in the Hinterland areas, where the services of Guyana Water Inc (GWI) are not available (Table 5.23).

Remarkably, there have been changes during the intercensal period. As reflected in Table 5.23, apart from “private catchments/rainwater” and “public well”, which also slightly increased, all other forms of water supplies have declined and shifted mainly to public supply of water either through “public piped into dwelling” and “public piped into yard” (Table 5.23).

**Regional Distribution:** The distribution of households across the ten administrative regions by sources of water supply follows the typical pattern of the national average, where the public entity serving as a primary source of water supply was eminent. The sources for many of the households within the Coastland areas were “public piped into dwelling” and “public piped into yard”, while on the contrast, the primary sources within the Hinterland were “river/stream/creek/pond/spring” and “dug well/bore-hole”. For example, the predominant use of “public piped into dwelling” was reported in Region 10 as 50.0 percent, Region 4 (42.9 percent), Region 3 (42.0 percent), Region 6 (39.1percent), and Region 5 (38.1 percent), and lesser in other regions. Source of water supply through “public piped into yard” was another principal mean to obtain water in Region 6 (41.7 percent), Region 5 (34.1 percent), Region 3 (33.4 percent) and Region 4 (32.7 percent) respectively and lesser in other regions (Table 5.24).

As noted, households whose primary source was “river/stream/creek/pond/spring” were mainly in the Hinterland. This includes Regions 8 (65.8 percent), Region 1 (48.2 percent) and Region 7 (41.0 percent) respectively. The traditional “dug well/bore-hole” was the major source of water supply in Region 9 and accounted for 71.8 percent (see Table 5.24).

In conclusion, in the absence of sources of drinking water which will be dealt with in the next section, this distribution shows that approximately 90 percent of the households had access to improved sources of water supply.

Table 5.24: Distribution of Households by Sources of Water Supply Classified by Administrative Regions, Guyana: 2012														
N O	Sources of Water Supply	Administrative Regions												
		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10	Guyana	Hinterland	Coastland
1	Pvte, Piped into Dwelling	48	476	1,830	8,749	1,206	1,844	158	35	54	1,057	15,457	295	15,162
2	Pvte Catchments/Rainwater	672	2,015	2,257	2,086	344	1,499	468	363	11	620	10,335	1,514	8,821
3	Pvte Piped into yard	60	495	1,453	5,315	1,106	1,696	119	70	28	329	10,671	277	10,394
4	Public, Piped into Dwelling	204	4,004	13,022	38,309	5,225	12,210	1,323	46	155	5,274	79,772	1,728	78,044
5	Public, Piped into Yard	608	2,549	10,348	29,255	4,677	13,037	510	72	359	1,386	62,801	1,549	61,252
6	Public Standpipe or hand pump	305	23	326	1,581	183	374	50	43	149	57	3,091	547	2,544
7	Public Well	303	172	347	1,292	48	157	13	31	73	17	2,453	420	2,033
8	River/Stream/Creek/pond/spring	2,336	2,181	1,003	1,151	525	366	1,874	1,560	493	1,530	13,019	6,263	6,756
9	Truck borne	0	3	4	65	6	12	3	7	5	86	191	15	176
10	Dug well/bore-hole	273	21	27	113	9	59	8	67	3,512	22	4,111	3,860	251
11	Other	40	142	362	1,444	382	0	45	77	53	179	2,724	215	2,509
	<b>Total</b>	<b>4,849</b>	<b>12,081</b>	<b>30,979</b>	<b>89,360</b>	<b>13,711</b>	<b>31,254</b>	<b>4,571</b>	<b>2,371</b>	<b>4,892</b>	<b>10,557</b>	<b>204,625</b>	<b>16,683</b>	<b>187,942</b>
		Percent												
1	Pvte, Piped into Dwelling	1.0	3.9	5.9	9.8	8.8	5.9	3.5	1.5	1.1	10.0	7.6	1.8	8.1
2	Pvte Catchments/Rainwater	13.9	16.7	7.3	2.3	2.5	4.8	10.2	15.3	0.2	5.9	5.1	9.1	4.7
3	Pvte Piped into yard	1.2	4.1	4.7	5.9	8.1	5.4	2.6	3.0	0.6	3.1	5.2	1.7	5.5
4	Public, Piped into Dwelling	4.2	33.1	42.0	42.9	38.1	39.1	28.9	1.9	3.2	50.0	39.0	10.4	41.5
5	Public, Piped into Yard	12.5	21.1	33.4	32.7	34.1	41.7	11.2	3.0	7.3	13.1	30.7	9.3	32.6
6	Public Standpipe or hand pump	6.3	0.2	1.1	1.8	1.3	1.2	1.1	1.8	3.0	0.5	1.5	3.3	1.4
7	Public Well	6.2	1.4	1.1	1.4	0.4	0.5	0.3	1.3	1.5	0.2	1.2	2.5	1.1
8	River/Stream/Creek/pond/spring	48.2	18.1	3.2	1.3	3.8	1.2	41.0	65.8	10.1	14.5	6.4	37.5	3.6
9	Truck borne	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.3	0.1	0.8	0.1	0.1	0.1
10	Dug well/bore-hole	5.6	0.2	0.1	0.1	0.1	0.2	0.2	2.8	71.8	0.2	2.0	23.1	0.1
11	Other	0.8	1.2	1.2	1.6	2.8	0.0	1.0	3.2	1.1	1.7	1.3	1.3	1.3
	<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
<b>Source:</b> Bureau of Statistics, Guyana: Population and Housing Census: 2012														

### **5.3.2.2 Households Sources of Drinking Water**

The Guyana Water Authority (GUYWA) was established in 1972 to construct, operate and maintain water distribution systems outside of Georgetown to small towns and rural villages located in the Hinterland Regions and took over the water service provision in these regions from the Ministry of Public Works. While administrative data dating back from its establishment is not available for this enquiry, changes between the two recent censuses show that there have been significant improvements in the households with respect to sources of drinking water.

In 2002, two principal sources of drinking water within the households were observed. These sources which were primarily provided by the Guyana Water Inc (GWI) include: water supplied by pipes into dwelling units and water supplied by pipes into the yards. Accordingly, they jointly comprised about 59.5 percent of the total distribution. This was followed by households who used rainwater collection (14.6 percent) and bottled water (7.9 percent) in the home to drink. The remaining seven sources of drinking water were reported in smaller numbers which when combined accounted for 18.1 percent of the total distribution in 2002 (Table 5.25).

By the close of the intercensal period in 2012, tremendous changes had occurred, and water supplied by pipes into dwelling units and pipes into yards which accounted for 25.7 percent and 33.8 percent in 2002, were no longer ranked first and second respectively in the distribution. They decreased from their 2002 levels to 15.2 percent and 11.9 percent in 2012 respectively. Households who shifted were mainly attracted by drinking bottled water, which rose from 7.9 percent in 2002 to 33.0 percent. Additional two important sources which absorbed households who shifted were rainwater collection, which too increased from 14.6 percent to 20.5 percent and Vendor/private supplier, which also rose from 3.0 percent to 10.7 percent (Table 5.25 and Figure 5.11).

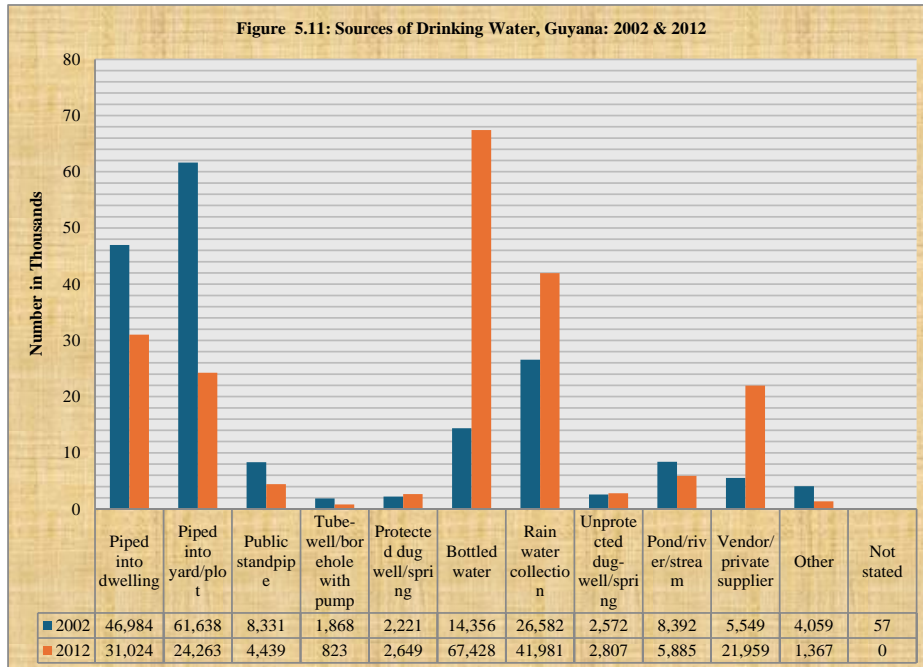


Table 5.25: Distribution of Households by Source of Drinking Water and Changes During the Intercensal Period: Guyana: 2002 -2012							
N O	Sources of Drinking Water	Number		Percent		Changes	
		2002	2012	2002	2012	Number	Percent
1	Piped into dwelling	46,984	31,024	25.7	15.2	-15,960	-34.0
2	Piped into yard/plot	61,638	24,263	33.8	11.9	-37,375	-60.6
3	Public standpipe	8,331	4,439	4.6	2.2	-3,892	-46.7
4	Tube-well/borehole with pump	1,868	823	1.0	0.4	-1,045	-55.9
5	Protected dug well/spring	2,221	2,649	1.2	1.3	428	19.3
6	Bottled water	14,356	67,428	7.9	33.0	53,072	369.7
7	Rain water collection	26,582	41,981	14.6	20.5	15,399	57.9
8	Unprotected dug-well/spring	2,572	2,807	1.4	1.4	235	9.1
9	Pond/river/stream	8,392	5,885	4.6	2.9	-2,507	-29.9
10	Vendor/private supplier	5,549	21,959	3.0	10.7	16,410	295.7
11	Other	4,059	1,367	2.2	0.7	-2,692	-66.3
12	Not stated	57	0	0.0	0.0	-57	-100
	<b>Total</b>	<b>182,609</b>	<b>204,625</b>	<b>100</b>	<b>100</b>	<b>22,016</b>	<b>12.1</b>
<b>Source:</b> Bureau of Statistics, Guyana: Population and Housing Census: 2002 & 2012							

The significant shifts of people observed from the two primary sources of drinking water to bottled water perhaps may be due to households being uncomfortable with the quality of the pipe-borne water provided by the Guyana Water Inc (GWI), hence they used the water mainly for other purposes instead of drinking (Table 5.25).

Generally, the regional distribution presented in Table 5.26 revealed that of the households residing in the Coastland, ranging from 87 percent in Region 10 to 99 percent in Region 6 obtained safe drinking water from acceptable sources. For instance, they obtained their drinking water through PVC pipes installed within the dwelling unit or yard, “public standpipe”, “tube-well/borehole with pump”, “bottled water”, “rainwater collection”, etc. (see Table 5.26).

Also, it must be noted that the use of both types of “bottled water” (i.e., “bottled water” itself and “vendor/private supplier”) as a main source of portable drinking water was notably in place in Region 4, which has more than two-fifths of the total resident population. This as previously mentioned could be that the households, particularly in the City of Georgetown and its surrounding suburbs are more comfortable with “bottled water” as compared to the pipe-borne water provided by GWI.

On the other hand, accessing portable safe drinking water remains a challenge for approximately 35.1 percent of the households residing within the Hinterland Regions. Overall, about 65.8 percent within the entire Hinterland areas drinks water from what appears to be from acceptable sources, while the remainder still faces problems.

Table 5.26: Distribution of Households by Main Source of Drinking Water Classified by Administrative Regions, Guyana: 2012														
N O	Sources of drinking water	Administrative Regions												
		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10	Guyana	Hinterlan	Coastland
1	Piped into dwelling	68	362	4,233	7,863	4,571	9,366	156	36	140	4,229	31,024	400	30,624
2	Piped into yard/plot	263	251	2,645	7,670	3,316	8,753	83	115	165	1,002	24,263	626	23,637
3	Public standpipe	104	153	371	1,161	383	1,750	72	82	236	127	4,439	494	3,945
4	Tube-well/borehole with pump	365	4	12	61	11	227	2	14	114	13	823	495	328
5	Protected dug well/spring	66	2	43	279	10	167	25	208	1,539	310	2,649	1,838	811
6	Bottled water	143	1,362	11,744	39,443	3,664	8,011	1,118	58	131	1,754	67,428	1,450	65,978
7	Rain water collection	2,560	9,270	10,817	12,249	1,057	1,994	1,940	633	51	1,410	41,981	5,184	36,797
8	Unprotected dug-well/spring	76	16	10	88	5	39	28	51	2,069	425	2,807	2,224	583
9	Pond/river/stream	1,157	581	210	535	136	203	885	958	376	844	5,885	3,376	2,509
10	Vendor/private supplier	9	69	780	19,409	309	744	219	96	19	305	21,959	343	21,616
11	Other	38	11	114	602	249	0	43	120	52	138	1,367	253	1,114
	<b>Total</b>	<b>4,849</b>	<b>12,081</b>	<b>30,979</b>	<b>89,360</b>	<b>13,711</b>	<b>31,254</b>	<b>4,571</b>	<b>2,371</b>	<b>4,892</b>	<b>10,557</b>	<b>204,625</b>	<b>16,683</b>	<b>187,942</b>
		Percent												
1	Piped into dwelling	1.4	3.0	13.7	8.8	33.3	30.0	3.4	1.5	2.9	40.1	15.2	2.4	16.3
2	Piped into yard/plot	5.4	2.1	8.5	8.6	24.2	28.0	1.8	4.9	3.4	9.5	11.9	3.8	12.6
3	Public standpipe	2.1	1.3	1.2	1.3	2.8	5.6	1.6	3.5	4.8	1.2	2.2	3.0	2.1
4	Tube-well/borehole with pump	7.5	0.0	0.0	0.1	0.1	0.7	0.0	0.6	2.3	0.1	0.4	3.0	0.2
5	Protected dug well/spring	1.4	0.0	0.1	0.3	0.1	0.5	0.5	8.8	31.5	2.9	1.3	11.0	0.4
6	Bottled water	2.9	11.3	37.9	44.1	26.7	25.6	24.5	2.4	2.7	16.6	33.0	8.7	35.1
7	Rain water collection	52.8	76.7	34.9	13.7	7.7	6.4	42.4	26.7	1.0	13.4	20.5	31.1	19.6
8	Unprotected dug-well/spring	1.6	0.1	0.0	0.1	0.0	0.1	0.6	2.2	42.3	4.0	1.4	13.3	0.3
9	Pond/river/stream	23.9	4.8	0.7	0.6	1.0	0.6	19.4	40.4	7.7	8.0	2.9	20.2	1.3
10	Vendor/private supplier	0.2	0.6	2.5	21.7	2.3	2.4	4.8	4.0	0.4	2.9	10.7	2.1	11.5
11	Other	0.8	0.1	0.4	0.7	1.8	0.0	0.9	5.1	1.1	1.3	0.7	1.5	0.6
	<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: Bureau of Statistics, Guyana: Population and Housing Census: 2012

Of the households who are believed to be drawing water from intolerable sources, about 42.3 percent in Region 9 drink water from “unprotected dug-well/spring”, 40.4 percent, 23.9 percent and 19.4 percent respectively draw water from “pond/river/stream” in Regions 8, 1 and 7. The primary means of safe drinking water facilities in these Hinterland Regions are “rain water collection”, reported as 52.8 percent in Region 1, 42.4 percent in Region 7 and 26.7 percent in Region 8, while “protected dug well/spring” served as second main access to safe drinking water in Region 9.

Finally, the prevalence of safe drinking water overall can be described as very good in Guyana as substantial proportions of the households are reported to have obtained safe drinking water from standardized sources.

### **5.3.3 Households Cooking and Lighting Facilities**

#### **5.3.3.0 Introduction**

Types of fuel used for domestic consumption and lighting are not only indicators of the standard of living, but they are also linked to health and sanitation conditions. In the wake of an increase of fire incidence in Guyana, the cruder the sources of fuel for cooking and lighting, the more hazardous it is in terms of carbon-monoxide, intense heat, and environmental safety and protection, etc.

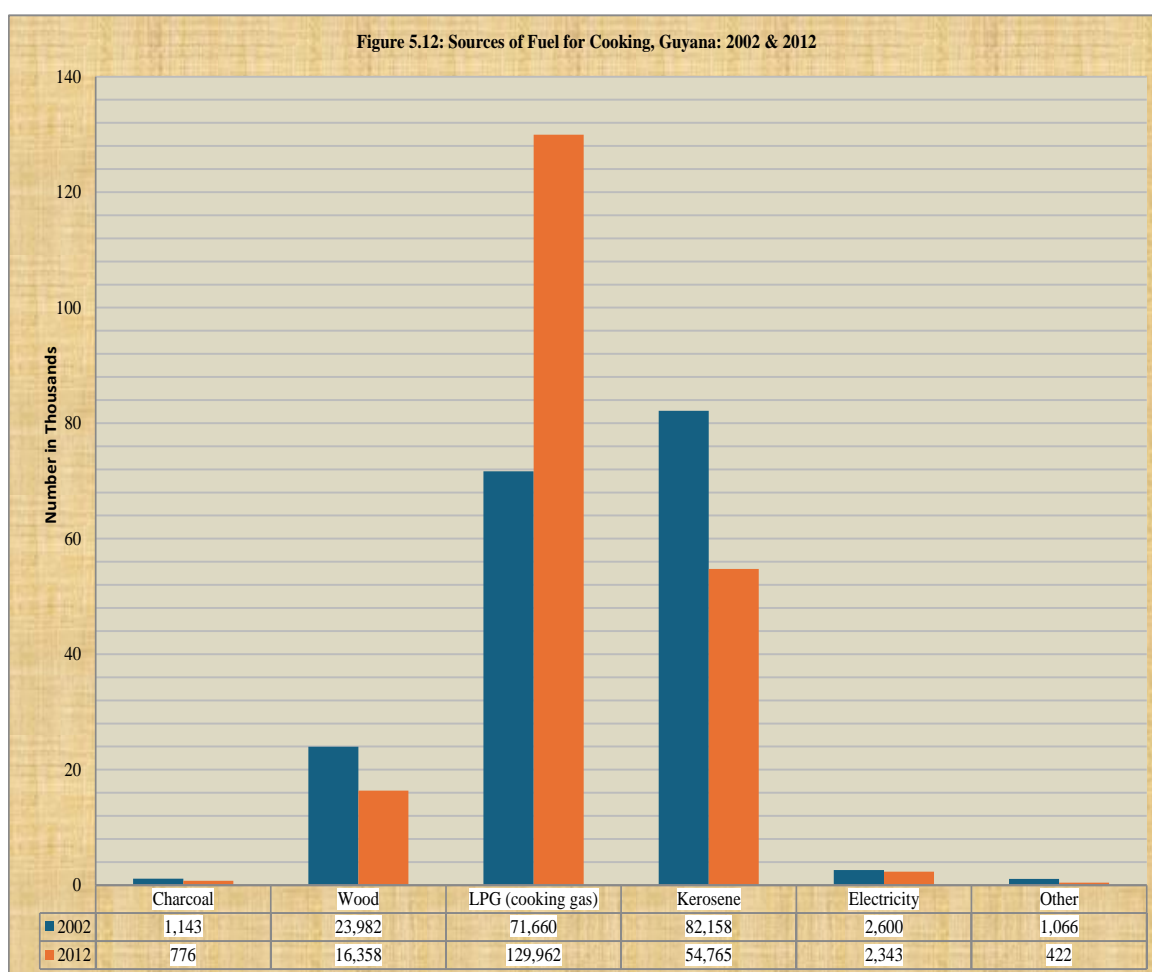
#### **5.3.3.1 Households Cooking Fuel Facilities**

In 2012, about two-thirds of the households in Guyana used LPG cooking gas as a domestic source of cooking fuel and followed by kerosene, which usage made up 26.8 percent. Firewood was the third source of domestic cooking fuel, but because it often produces carbon-monoxide and intense heat, it is considered a traditional crude method and largely in place in the Hinterland Regions (Regions 1, 7, 8 and 9), where the access to modern fuel facilities, such as, electricity and cooking gas are limited. As such, about 8.0 percent of the households used wood in 2012 for cooking. Another better source of fuel for local communities is charcoal since Guyana has a dense tropical rainforest. However, less than 1 percent of the households used charcoal to cook and the proportion of households using that had remained relatively unchanged. The use of electricity is an excellent method, but the usage is hindered perhaps by cost and availability countrywide. As a result, only 1.1 percent of the households utilized that in 2012 to cook, relatively remaining the same from the 2002 level of 1.4 percent (Table 5.27).

The predominant use of LPG cooking gas continues unabated throughout and followed by kerosene. However, changes during the intercensal period revealed that all other sources of fuel for cooking, including kerosene had dropped significantly and shifted to LPG cooking gas, which presently served as a principal source of domestic cooking fuel. For instance, of the 45.0 percent of the households using kerosene in 2002, about one-third of them had shifted to LPG cooking gas before the end of the intercensal period. Similar shifts were observed for households using wood, electricity, charcoal and ‘other method’ not clearly defined (Table 5.27 and Figure 5.12). This is practically indicative of good standards, where such fuel for cooking is an essential part of modern households.



<b>Table 5.27: Distribution of Households by Type of Cooking Fuels and Changes During the Intercensal Period, Guyana: 2002 - 2012</b>						
<b>Cookinig Fuels</b>	<b>Number</b>		<b>Percent</b>		<b>Changes</b>	
	<b>2002</b>	<b>2012</b>	<b>2002</b>	<b>2012</b>	<b>Number</b>	<b>Percent</b>
Charcoal	1,143	776	0.6	0.4	-367	-32.1
Wood	23,982	16,358	13.1	8.0	-7,624	-31.8
LPG (cooking gas)	71,660	129,962	39.2	63.5	58,302	81.4
Kerosene	82,158	54,765	45.0	26.8	-27,393	-33.3
Electricity	2,600	2,343	1.4	1.1	-257	-9.9
Other	1,066	422	0.6	0.2	-644	-60.4
<b>Total</b>	<b>182,609</b>	<b>204,625</b>	<b>100</b>	<b>100</b>	<b>22,016</b>	<b>12.1</b>
<b>Source:</b> Bureau of Statistics, Guyana: Population and Housing Census: 2002 & 2012						



<b>Table 5.28: Distribution of Households by Type of Cooking Fuel Classified by Administrative</b>							
<b>Region</b>	<b>Cooking Fuel</b>						
	<b>Charcoal</b>	<b>Wood</b>	<b>LPG (cooking gas)</b>	<b>Kerosene</b>	<b>Electricity</b>	<b>Other</b>	<b>Total</b>
Region 1	19	2,067	1,799	957	1	6	4,849
Region 2	24	1,571	5,818	4,663	5	0	12,081
Region 3	70	1,740	21,324	7,751	44	50	30,979
Region 4	287	1,522	68,198	18,837	260	256	89,360
Region 5	43	760	8,184	4,683	28	13	13,711
Region 6	104	3,310	14,116	13,661	63	0	31,254
Region 7	55	917	2,939	592	24	44	4,571
Region 8	29	1,347	642	317	9	27	2,371
Region 9	10	2,945	1,876	52	4	5	4,892
Region 10	135	179	5,066	3,251	1,905	21	10,557
<b>Guyana</b>	<b>776</b>	<b>16,358</b>	<b>129,962</b>	<b>54,764</b>	<b>2,343</b>	<b>422</b>	<b>204,625</b>
Hinterland	113	7,276	7,256	1,918	38	82	16,683
Coastland	663	9,082	122,706	52,846	2,305	340	187,942
	<b>Percent</b>						
Region 1	0.4	42.6	37.1	19.7	0.0	0.1	100
Region 2	0.2	13.0	48.2	38.6	0.0	0.0	100
Region 3	0.2	5.6	68.8	25.0	0.1	0.2	100
Region 4	0.3	1.7	76.3	21.1	0.3	0.3	100
Region 5	0.3	5.5	59.7	34.2	0.2	0.1	100
Region 6	0.3	10.6	45.2	43.7	0.2	0.0	100
Region 7	1.2	20.1	64.3	13.0	0.5	1.0	100
Region 8	1.2	56.8	27.1	13.4	0.4	1.1	100
Region 9	0.2	60.2	38.3	1.1	0.1	0.1	100
Region 10	1.3	1.7	48.0	30.8	18.0	0.2	100
<b>Guyana</b>	<b>0.4</b>	<b>8.0</b>	<b>63.5</b>	<b>26.8</b>	<b>1.1</b>	<b>0.2</b>	<b>100</b>
Hinterland	0.7	43.6	43.5	11.5	0.2	0.5	100
Coastland	0.4	4.8	65.3	28.1	1.2	0.2	100
<b>Source:</b> Bureau of Statistics, Guyana: Population and Housing Census: 2012							

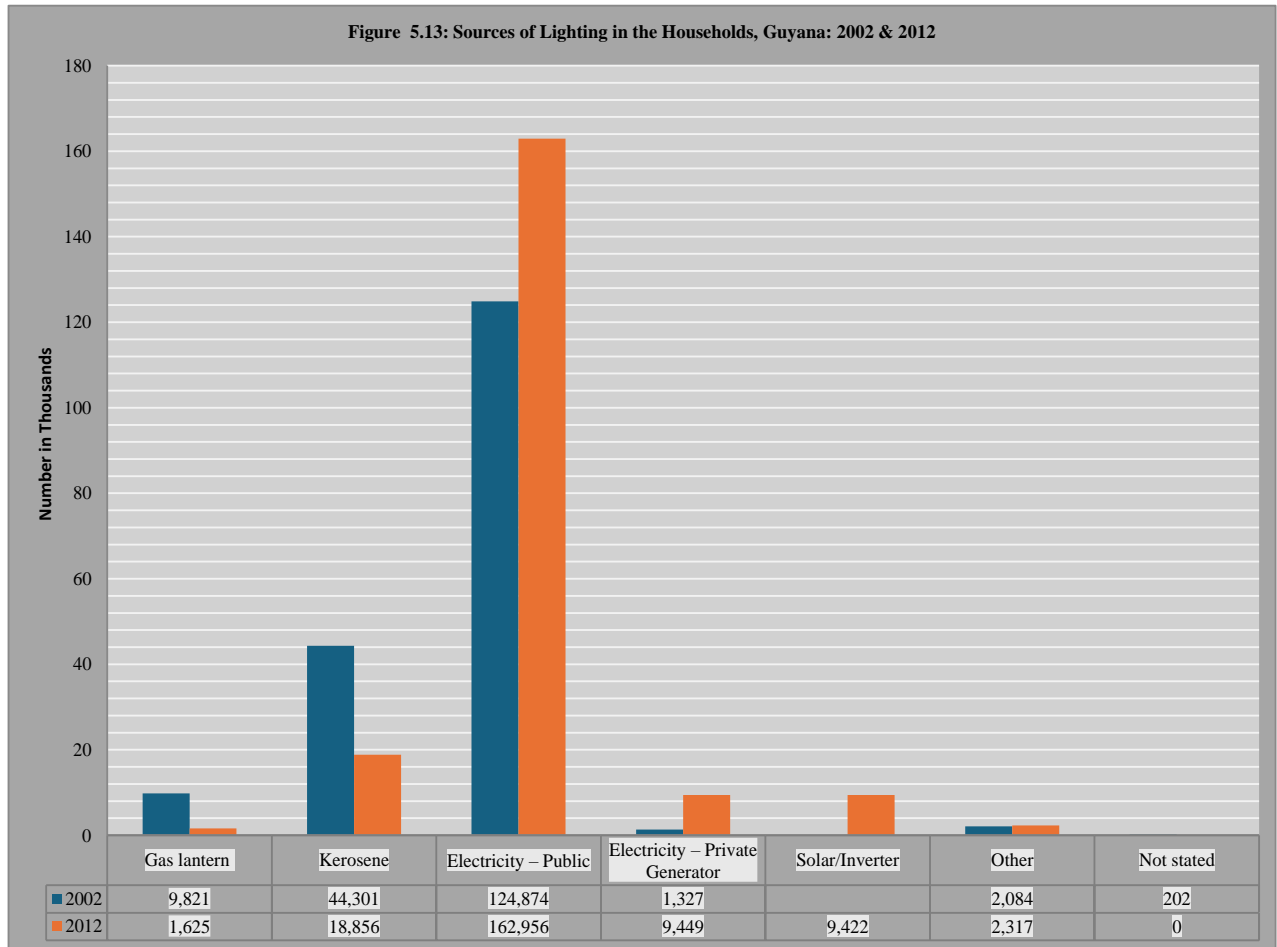
The predominant use of LPG cooking gas as a main source of fuel for cooking at the regional level is reflected in Table 5.28. In the Coastland Regions, the use of LPG cooking gas ranks from a low of 45.2 percent in Region 6 to a high of 76.3 percent in Region 4. Households in the Coastland who did not use LPG cooking gas mainly have kerosene related stoves for cooking and less in the use of the other methods. Difficult access to the modern sources of fuel such as electricity and LPG cooking gas due to poor transportation had caused three of the Hinterland (Regions 9, 8 and 1) in that ranking order of magnitude to still maintain wood significantly as a common facility available in the households for cooking. For instance, in the ranking order of magnitude, Region 9 (60.2 percent), Region 8 (56.8 percent) and Region 1(42.6 percent) of the households respectively use wood as their principal source of fuel to cook (See Table 5.28).

### 5.3.3.2 Households Lighting Facilities

Apart from cooking fuel being used as one major indicator to categorize living standards, another most important one too directly linked to the sanitation of the households is sources of lighting. Most of the households in Guyana use electricity to provide light in their homes. The two main sources of the lighting facility are government public enterprise and private individuals who primarily utilize solar panel /inverter and small private electric generator to provide them with light. In 2002, public electricity provided 68.4 percent of the households with light and increased to 79.6 percent by the close of the period. Similarly, the use of solar panel /inverter and portable electric generator by private individuals provided less than one percent of the households with light in 2002 which sharply increased to 9.2 percent in 2012. These two categories (public and private electricity) combined accounted for 69.1 percent in 2002 and increased to 88.9 percent in 2012.

The second source of lighting facility was kerosene lamp where about a quarter (i.e., 24.3 percent) of the households used that in 2002, but dramatically declined during the intercensal period to 9.2 percent. Many of the households using kerosene lamps and gas lantern shifted to solar panel/inverter and portable electric generator, thus causing the proportion of households using these two categories of lighting facility to sharply increase as mentioned. The “*other method*” which might include anything from the traditional use of wood to candlelight or anything of that type along with unidentified source of lighting are of bare minimum and accounted for about 1.1 percent throughout (Table 5.29 and Figure 5.13).

<b>Table 5.29: Distribution of Households by Types of Lighting Facilities and Changes During the Intercensal Period, Guyana: 2002 - 2012</b>							
<b>N O</b>	<b>Lighting facilities</b>	<b>Number</b>		<b>Percent</b>		<b>Changes</b>	
		<b>2002</b>	<b>2012</b>	<b>2002</b>	<b>2012</b>	<b>Number</b>	<b>Percent</b>
1	Gas lantern	9,821	1,625	5.4	0.8	-8,196	-83.5
2	Kerosene	44,301	18,856	24.3	9.2	-25,445	-57.4
3	Electricity – Public	124,874	162,956	68.4	79.6	38,082	30.5
4	Electricity – Private Generator	1,327	9,449	0.7	4.6	17,544	1322.1
5	Solar/Inverter		9,422		4.6		
6	Other	2,084	2,317	1.1	1.1	233	11.2
7	Not stated	202	0	0.1	0.0	-202	-100.0
	<b>Total</b>	<b>182,609</b>	<b>204625</b>	<b>100</b>	<b>100</b>	<b>22,016</b>	<b>12.1</b>
<b>Source:</b> Bureau of Statistics, Guyana: Population and Housing Census: 2002 & 2012							



At the Regional level, many households use standardized forms of lighting in their homes. Following the national average, the use of public electricity was overwhelmingly observed particularly along the coastal areas. For those perhaps with limited access to public electricity, they mainly use small private electric generators and solar panel/inverter. As it was not unexpected, a significant proportion of the public electricity users were in the Coastland and ranged from as low as 67.5 percent in Regions 2 to as high as 88.9 percent in Region 4.

In all, about a quarter (25.3 percent) of the households in the Hinterland areas make use of public electricity as compared to 84.5 percent in the Coastland areas. Households wishing to modernize light in the homes in the Hinterland areas do so mostly by using solar panel/inverter (42.3 percent) and followed by private electric generator (12.7 percent). Apart from those two lighting facilities, 10.8 percent of the Hinterland households use kerosene. This might perhaps be due to their limited access to these standardized lighting facilities in their areas. As such, solar panel/inverter users were especially high in Region 9 (68.1 percent) and Region 1 (48.3 percent) respectively and to lesser extent in Regions 8 and 7. The use of what is called '*other method*' not clearly

specified was high in Region 8 and accounted for 35.2 percent. What is meant by ‘*other method*’ is not clear and perhaps could be something like the provision of campfire in the mining and logging camps since Region 8 has a series of these camps or perhaps may refer to the use of unsafe candlelight in terms of fire hazard to properties and lives (see Table 5.30).

Finally, that approximately 90 percent of the households in Guyana used electricity for lighting is an indicator of good standard of living. However, there is a need to encourage the small percentage of households who are still utilising sub-standard facilities.

<b>Table 5.30: Distribution of Households by Types of Lighting Facilities Classified by Administrative Regions, Guyana: 2012</b>							
<b>Region</b>	<b>Lighting Facilities</b>						
	<b>Gas lantern</b>	<b>Kerosene</b>	<b>Electricity – Public</b>	<b>Electricity – Private Generator</b>	<b>Solar/ Inverter</b>	<b>Other</b>	<b>Total</b>
Region 1	40	723	804	825	2,347	110	4,849
Region 2	131	1,628	8,151	989	1,182	0	12,081
Region 3	233	2,829	26,399	1,135	198	185	30,979
Region 4	686	5,662	79,473	2,546	272	721	89,360
Region 5	194	2,333	10,418	548	165	53	13,711
Region 6	159	3,941	26,113	941	100	0	31,254
Region 7	33	411	2,176	916	936	99	4,571
Region 8	61	293	434	304	444	835	2,371
Region 9	21	383	813	81	3,330	264	4,892
Region 10	67	653	8,175	1,164	448	50	10,557
<b>Guyana</b>	<b>1,625</b>	<b>18,856</b>	<b>162,956</b>	<b>9,449</b>	<b>9,422</b>	<b>2,317</b>	<b>204,625</b>
Hinterland	155	1,810	4,227	2,126	7,057	1,308	16,683
Coastland	1,470	17,046	158,729	7,323	2,365	1,009	187,942
<b>Percent</b>							
Region 1	0.8	14.9	16.6	17.0	48.4	2.3	100
Region 2	1.1	13.5	67.5	8.2	9.8	0.0	100
Region 3	0.8	9.1	85.2	3.7	0.6	0.6	100
Region 4	0.8	6.3	88.9	2.8	0.3	0.8	100
Region 5	1.4	17.0	76.0	4.0	1.2	0.4	100
Region 6	0.5	12.6	83.6	3.0	0.3	0.0	100
Region 7	0.7	9.0	47.6	20.0	20.5	2.2	100
Region 8	2.6	12.4	18.3	12.8	18.7	35.2	100
Region 9	0.4	7.8	16.6	1.7	68.1	5.4	100
Region 10	0.6	6.2	77.4	11.0	4.2	0.5	100
<b>Guyana</b>	<b>0.8</b>	<b>9.2</b>	<b>79.6</b>	<b>4.6</b>	<b>4.6</b>	<b>1.1</b>	<b>100</b>
Hinterland	0.9	10.8	25.3	12.7	42.3	7.8	100
Coastland	0.8	9.1	84.5	3.9	1.3	0.5	100
<b>Source:</b> Bureau of Statistics, Guyana: Population and Housing Census: 2012							

### **5.3.4 Households Garbage Waste Disposal Facilities**

Garbage waste disposal collection plan was part of the initiatives identified by the Government of Guyana to manage and control waste disposals in the municipalities. Despite its administrative problems arising from manpower to financial, there was significant improvement during the intercensal period. The proportion of households deemed to have disposed of their garbage in a proper manner was 91.9 percent in 2002 and marginally increased to 96.0 percent in 2012 (Table 5.31 and Figure 5.14).

Categorically, burning garbage and collection services using 'public' or 'private' trucks topped the principal methods used to dispose of garbage. About 55.2 percent of the households used burning to dispose of their garbage in 2012 and followed by 39.0 percent of households who engaged the modernized 'public' or 'private' truck method. The proportional shares of the remaining methods (dumping garbage on the land, composting garbage, dumping garbage in the river/sea/pond, burying and other method not clearly defined) accounted for less than five (5) percent respectively.

Interestingly, five of the primary methods used by the households to dispose of their garbage declined and shifted to engaging of 'public' or 'private' truck to collect the garbage during the intercensal period. For instance, the first primary method (burning garbage) changed from 66.1 percent to 55.2 percent, dumping on the land and in the river/sea/pond combined went down from 7.7 percent in 2002 to 3.9 percent in 2012, etc. Although the share of households using 'compost' method was relatively insignificant but was among households who had considerably changed (i.e., dropped by 78.7 percentage points) and followed by households dumping on the land and in the river/sea/pond (44.6 and 39.9 percentage points) respectively. The last two (dumping on the land and in the river/sea/pond) are considered crude traditional methods that pollute water and land and furthermore served as a breeding ground for insects, particularly flies and mosquitoes (see Table 5.31 and Figure 5.14).

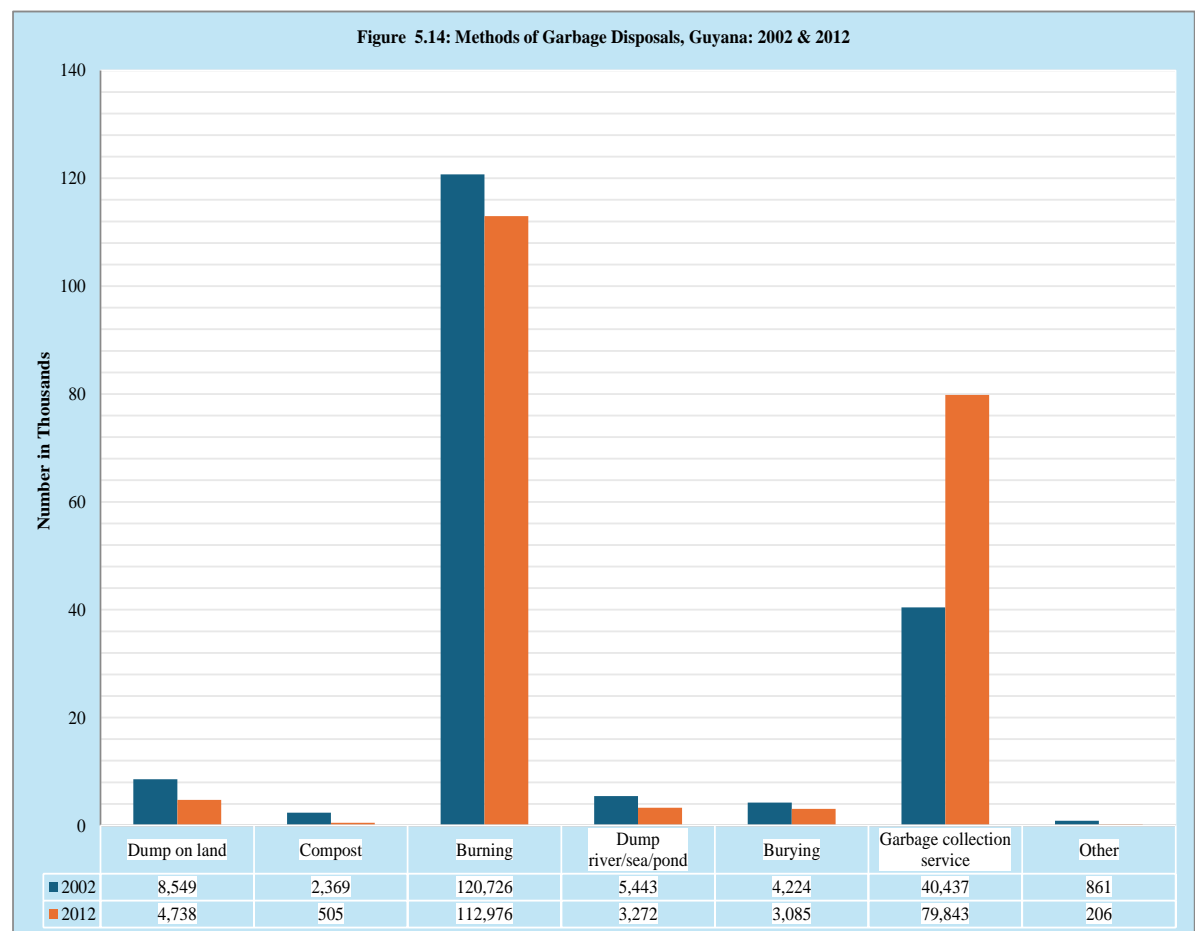
At the Regional level, although there has been a sharp decline in the number of households using 'burning garbage' at the national level, it is still the most utilized method by households in the regions. The proportions of households burning garbage range from a low of 35.5 percent in Region 4 to a high of 90.1 percent in Region 5. All Regions except Region 4 use this method as the main source of disposing garbage. This indicates that garbage collection services have improved mainly in Region 4 (Table 5.32).

Coupled with a greater number of households abandoning the traditional cruder methods and shifting to garbage collection by 'public' or 'private' truck and significant number of households adopting to burning at the regional levels are good practice of environmental control which need to encourage.

**Table 5.31: Distribution of Households by Methods of Garbage Collection, Guyana: 2002 & 2012**

Collection Methods	Number		Percent		Changes	
	2002	2012	2002	2012	Number	Percent
Dump on land	8,549	4,738	4.7	2.3	-3,811	-44.6
Compost	2,369	505	1.3	0.2	-1,864	-78.7
Burning	120,726	112,976	66.1	55.2	-7,750	-6.4
Dump river/sea/pond	5,443	3,272	3.0	1.6	-2,171	-39.9
Burying	4,224	3,085	2.3	1.5	-1,139	-27.0
Garbage collection service	40,437	79,843	22.1	39.0	39,406	97.5
Other	861	206	0.5	0.1	-655	-76.1
<b>Total</b>	<b>182,609</b>	<b>204,625</b>	<b>100</b>	<b>100</b>	<b>22,016</b>	<b>12.1</b>

**Source:** Bureau of Statistics, Guyana: Population and Housing Census: 2002 & 2012



<b>Table 5.32: Distribution of Households by Method of Garbage Disposal Classified by</b>									
<b>Region</b>	<b>Dump on land</b>	<b>Compost</b>	<b>Burning</b>	<b>Dump river/sea /pond</b>	<b>Burying</b>	<b>Garbage collection service public</b>	<b>Garbad ge truck - Private</b>	<b>Other</b>	<b>Total</b>
Region 1	880	42	3,534	231	76	74	9	3	4,849
Region 2	397	25	10,072	341	187	923	136	0	12,081
Region 3	319	59	16,488	1,192	456	2,350	10,085	30	30,979
Region 4	713	115	31,679	562	786	46,214	9,187	104	89,360
Region 5	318	38	12,351	189	147	559	73	36	13,711
Region 6	578	71	23,189	543	412	5,888	573	0	31,254
Region 7	258	46	2,949	61	263	109	876	9	4,571
Region 8	418	51	1,541	18	208	91	42	2	2,371
Region 9	285	36	4,319	20	103	76	41	12	4,892
Region 10	572	22	6,854	115	447	2,165	372	10	10,557
<b>Guyana</b>	<b>4,738</b>	<b>505</b>	<b>112,976</b>	<b>3,272</b>	<b>3,085</b>	<b>58,449</b>	<b>21,394</b>	<b>206</b>	<b>204,625</b>
Hinterland	1,841	175	12,343	330	650	350	968	26	16,683
Coastland	2,897	330	100,633	2,942	2,435	58,099	20,426	180	187,942
	<b>Percent</b>								
Region 1	18.1	0.9	72.9	4.8	1.6	1.5	0.2	0.1	100
Region 2	3.3	0.2	83.4	2.8	1.5	7.6	1.1	0.0	100
Region 3	1.0	0.2	53.2	3.8	1.5	7.6	32.6	0.1	100
Region 4	0.8	0.1	35.5	0.6	0.9	51.7	10.3	0.1	100
Region 5	2.3	0.3	90.1	1.4	1.1	4.1	0.5	0.3	100
Region 6	1.8	0.2	74.2	1.7	1.3	18.8	1.8	0.0	100
Region 7	5.6	1.0	64.5	1.3	5.8	2.4	19.2	0.2	100
Region 8	17.6	2.2	65.0	0.8	8.8	3.8	1.8	0.1	100
Region 9	5.8	0.7	88.3	0.4	2.1	1.6	0.8	0.2	100
Region 10	5.4	0.2	64.9	1.1	4.2	20.5	3.5	0.1	100
<b>Guyana</b>	<b>2.3</b>	<b>0.2</b>	<b>55.2</b>	<b>1.6</b>	<b>1.5</b>	<b>28.6</b>	<b>10.5</b>	<b>0.1</b>	<b>100</b>
Hinterland	11.0	1.0	74.0	2.0	3.9	2.1	5.8	0.2	100
Coastland	1.5	0.2	53.5	1.6	1.3	30.9	10.9	0.1	100
<b>Source:</b> Bureau of Statistics, Guyana: Population and Housing Census: 2012									



### 5.3.5 Households Access to Valuable Goods

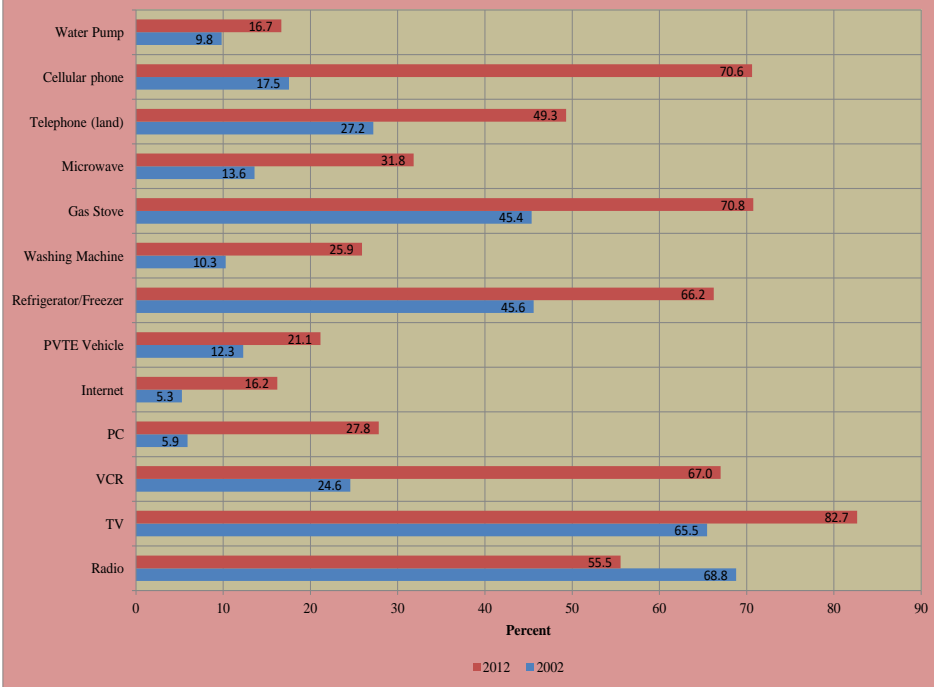
Possession of substantial monetary assets may though be laudable but a household's ownership of durable goods to be used at any time when demanded or for leisure is a proxy too used to easily categorize the socioeconomic status of a household. For instance, ownership of a computer, internet, radio or television measures the household's ability to have an efficient access to mass media; telephone ownership measures an access to proficient way of communications; ownership of refrigerator indicates a capacity to have an appropriate mean to hygienic storage facility; ownership of a vehicle reflects an easy access to means of transportation, etc. In general, the ownership of these items has bearing on the household's wellbeing as well as the rank and file in a society.

In Guyana, the number of durable goods in the households to allow an easy access to mass media has increased since 2002. Apart from radio, which the possession rate by households declined, the usage of the remaining three devices in the accessibility of mass media has significantly gone up. For instance, the proportion of households using television has increased from 65.5 percent in 2002 to 82.7 percent in 2012, personal computer (pc), from just 5.7 percent in 2002 to 27.8 percent in 2012, and internet availability, also from 5.3 to 16.2 percent in 2012. These changes indicate positive transformation of access to information in the households (Table 5.33 and Figure 5.15).

In addition, ownership of devices used to access an efficient way of communication has significantly increased. In 2002, about 27.2 and 17.5 percent of the households had landline telephones and Cellular (cell phones) respectively but by the close of the intercensal period in 2012, the proportions of households with landline phones have almost doubled while Cellular phone users have increased more than four times. The sharp increase in the use of cellular phones may perhaps be due to an introduction of *Global System for Mobile Communications* commonly abbreviated as GSM phones in the country in 2004, where presently, two well-known GSM providers (GT&T and Digicel) are rivaling to render services to any potential customer.

Regarding the ownership of private vehicles for easy means of transportation, 12.3 percent of the households possessed that in 2002, and improved greatly to 21.1 percent in 2012. As for safe food storage facility and appropriate device for cooking within the household, about 45.6 percent of the households were said to have refrigerator/freezer while 45.4 percent have gas stove for cooking. By 2012, usages of these two durable goods have increased to 66.2 percent and 70.8 percent respectively. Besides those mentioned, the proportions of households in possession of durable goods have systematically increased during the intercensal period as given in Table 5.31, thus implying a positive sign on the rise in the standard of living (See Table 5.33 and Figure 5.15).

Figure 5.15: Percentage Distribution of Households by Durable Good Possession: 2002 and 2012



<b>Table 4.33: Households with Access to Valuable Durable Goods, Guyana: 2002 - 2012</b>								
<b>N O</b>	<b>Types of Durable Goods</b>	<b>2002</b>				<b>2012</b>		
		<b>Yes</b>	<b>No</b>	<b>NS</b>	<b>Total</b>	<b>Yes</b>	<b>No</b>	<b>Total</b>
1	Radio	125,629	54,496	2,484	182,609	113,665	90,960	204,625
2	TV	119,533	60,610	2,466	182,609	169,160	35,465	204,625
3	VCR	44,844	134,208	3,557	182,609	137,138	67,487	204,625
4	PC	10,782	168,437	3,390	182,609	56,931	147,694	204,625
5	Internet	9,622	168,974	4,013	182,609	33,162	171,463	204,625
6	PVTE Vehicle	22,458	156,255	3,896	182,609	43,257	161,368	204,625
7	Refrigerator/Freezer	83,254	96,003	3,352	182,609	135,501	69,124	204,625
8	Washing Machine	18,755	159,972	3,882	182,609	53,032	151,593	204,625
9	Gas Stove	82,815	96,513	3,281	182,609	144,807	59,818	204,625
10	Microwave	24,789	154,047	3,773	182,609	65,125	139,500	204,625
11	Telephone (land)	49,683	127,312	5,614	182,609	100,887	103,738	204,625
12	Cellular	32,011	146,857	3,741	182,609	144,524	60,101	204,625
13	Water Pump	17,913	151,838	12,858	182,609	34,081	170,544	204,625
14	Electric Generator	x	x	x	x	14,487	190,138	204,625
15	Air Condition Unit	x	x	x	x	5,511	199,114	204,625
16	Water Heater	x	x	x	x	3,002	201,623	204,625
17	Cable TV/Satellite	x	x	x	x	10,655	193,970	204,625
18	Solar Panel	x	x	x	x	11,321	193,304	204,625
19	Boat(engine/paddle)	x	x	x	x	9,183	193,442	202,625
		<b>Percent</b>						
1	Radio	68.8	29.8	1.4	100	55.5	44.5	100
2	TV	65.5	33.2	1.4	100	82.7	17.3	100
3	VCR	24.6	73.5	1.9	100	67.0	33.0	100
4	PC	5.9	92.2	1.9	100	27.8	72.2	100
5	Internet	5.3	92.5	2.2	100	16.2	83.8	100
6	PVTE Vehicle	12.3	85.6	2.1	100	21.1	78.9	100
7	Refrigerator/Freezer	45.6	52.6	1.8	100	66.2	33.8	100
8	Washing Machine	10.3	87.6	2.1	100	25.9	74.1	100
9	Gas Stove	45.4	52.9	1.8	100	70.8	29.2	100
10	Microwave	13.6	84.4	2.1	100	31.8	68.2	100
11	Telephone (land)	27.2	69.7	3.1	100	49.3	50.7	100
12	Cellular	17.5	80.4	2.0	100	70.6	29.4	100
13	Water Pump	9.8	83.1	7.0	100	16.7	83.3	100
14	Electric Generator	x	x	x	x	7.1	92.9	100
15	Air Condition Unit	x	x	x	x	2.7	97.3	100
16	Water Heater	x	x	x	x	1.5	98.5	100
17	Cable TV/Satellite	x	x	x	x	5.2	94.8	100
18	Solar Panel	x	x	x	x	5.5	94.5	100
19	Boat(engine/paddle)	x	x	x	x	4.5	95.5	100
<b>Source:</b> Bureau of Statistics, Guyana: Population and Housing Census: 2002 & 2012								