

# FOREST SECTOR INFORMATION REPORT

## YEAR 2006 REVIEW



**GUYANA FORESTRY COMMISSION**

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## **ABBREVIATIONS**

ACP	African Caribbean and Pacific (countries)
EU	European Union
FLEGT	(European Union) Forest Law Enforcement, Governance and Trade
GDP	Gross Domestic Product
GFC	Guyana Forestry Commission
ITTO	International Tropical Timber Organisation
NTFP	Non Timber Forest Product
SFP	State Forest Permission
SFEP	State Forest Exploratory Permit
TSA	Timber Sales Agreement
WCL	Wood Cutting Lease

## **GLOSSARY OF TERMS**

Dressed Lumber	Wood sawn lengthways from logs, further processed by planing, etc.
Firewood	Includes parts of trees made up into bundles or loads, or cut in a manner in which it is usual to cut wood for burning, and all refuse wood generally, but does not include straight logs or poles of any kind.
Fuelwood	Wood in the rough, from trunks and branches of trees, to be used as fuel for purposes such as cooking, heating and power production. Categories of Fuelwood are converted to charcoal.
Non-timber Forest Products	All biological material, other than timber products, that may be extracted from natural ecosystems, either for commercial purposes, for use within the household or for social, cultural or religious purposes. Also known as Non-wood Forest Products.
Piles	Long straight pieces usually destined to be driven into the ground by impact.
Poles	Straight pieces of 5m. or more in length taken from tree trunks. They are used principally to support telephone, telegraph and electrical transmission lines and for scaffolding.
Posts	Round, hewn, squared or split wood, usually less than 3m in length, but possibly up to 5m, used for fencing, guard rails and the like.
Primary Timber	Includes logs, firewood (raw materials), chainsaw lumber, roundwood and splitwood.
Round Logs	A bole or a large branch after felling. Under the ITTO definition it is referred to as <b>Industrial Roundwood</b> .
Roundwood	Wood in its natural state as felled or otherwise harvested, with or without bark, round, split, roughly squared or in other forms. Roundwood includes spars, posts, poles (Wallaba) and piles (Greenheart, Kakaralli and Mora).
Sawnwood	Dressed lumber, undressed lumber, sleepers and pallets.
Shingles	Squares of usually Wallaba ( <i>Eperua falcata</i> ) wood used to construct roofs and for paneling purposes.
Spars	Saplings 15-25cm in diameter.
Splitwood	Comprises paling and vat staves and shingles.
Timber	Includes a tree or any ligneous part of a tree whether standing, fallen or felled, and all wood, whether or not sawn, split, hewn or otherwise cut up or fashioned.
Undressed Lumber	Wood in the rough sawn lengthways from logs.
Wattles	Saplings less than 8cm in diameter.

## **METRIC CONVERSION TABLE**

<b><i>To Convert</i></b>	<b><i>From</i></b>	<b><i>Into m<sup>3</sup> multiply by</i></b>
Logs	Hoppus cft	0.036
	Cft	0.0283
Mill sawn lumber	Board ft / Board Measure	0.002358
Chainsawn Lumber	Board ft / Board Measure	0.002358
Piles	Linear ft	0.02
Poles	Linear ft	0.0067
Posts	Linear ft	0.0057
Paling Staves	Pieces	0.00236
Vat Staves	Pieces	0.001132
Shingles	Pieces	0.000566
Spars	Linear ft	0.000283
Charcoal	Lbs	0.0034
Firewood	Cords	2.83

## **EXCHANGE RATE**

**US\$ 1 = G\$ 200**

## **INTRODUCTION**

This report focuses on the Forestry Sector in Guyana for the year 2006. Production and Export of various forest products based on Guyana Forestry Commission (GFC) data are assessed in comparison with the previous year's performance. Additionally, the report compares summary averages of domestic and export prices and sector employment levels between the two (2) years.

To provide a wider perspective of the Forest sector, allocation of State Forest lands among industry operators (with areas classified according to GFC designated use/size categories) as at end of December 2006, and for the six-year period, 2001-2006, are included. The Forest Sector's contribution (as traditionally measured in official national statistics) to Guyana's Gross Domestic Product (GDP) over the last ten (10) years is also featured.

Before addressing the Forest Sector in Guyana, a qualitative background summary covering changes/features and outlook in the local and international economies between 2005 and 2006, is provided. This section includes developments in the International Tropical Timber Market with emphasis on the Latin America/Caribbean region, particularly Brazil.

In the core report, Production data compares the volume of various forest products by product categories and species category (where applicable) between the two (2) years and across the Regions (as designated for GFC purposes, and corresponding to the national Counties of Demerara, Berbice and Essequibo), by their respective sub-divisions referred to as Forest Stations. Log and Lumber production forecasts (by month) for year 2007 are also provided.

Export data is analyzed in terms of both volume and value. Export Commission collected by the GFC on forest products exports is also included.

The report concludes with a Table summarizing wood and wood products imports, by value, for years 2005 and 2006.

## **EXECUTIVE SUMMARY**

Bureau of Statistics data indicate a real sector growth of 11.0%, contribution to GDP rising to 3.85% (from 3.63% in 2005), the highest share in the last seven years. GFC data on primary production reveal that, for the traditional GDP components of Logs, Roundwood and Sawnwood, combined volume growth over 2005 was 19.3%. Logs and sawnwood recorded respective increases of 21.6% (from 323 911 m<sup>3</sup> to 393, 968 m<sup>3</sup>) and 17.0% (from 57,775 m<sup>3</sup> to 67, 569 m<sup>3</sup>), however, roundwood declined 12.2%. Adding in Splitwood, the increase in total primary timber volumes remained 19.3%, moving from 402,232 m<sup>3</sup> in 2005 to 479,766 m<sup>3</sup> in 2006. Plywood continued to decline, though of significantly lower magnitude in 2006, dropping 7.1% from 37,120 m<sup>3</sup> to 34, 494 m<sup>3</sup> and bringing overall output growth, of timber and plywood combined, down to 17.0%. The main Non-timber Forest Products were Wattles and Manicole Palm. Wattle production remained stable while Manicole Palm production declined significantly.

Timber exports expanded 48.8% in volume and 42.1% in value, driven primarily by further improved markets for logs, which climbed 64.8% in volume (to 190,783 m<sup>3</sup>) and 85.3% in value (to US\$22.3 M), thereby accounting for 75.8% of total timber export volume, 48.2% of total timber export value and 37.4% of overall export value. There were definite shifts to higher value species although the species utilization base has expanded when compared to the corresponding period of 2005. Improvements also prevailed for sawnwood, however, roundwood prices fell amidst increased volumes exported. Plywood earnings fell despite improved prices as it lost ground in the main market, the United States, and also in Latin America/Caribbean, but enjoyed superior conditions and volumes to Europe. India and China continued to be the dominant log export markets, while for sawnwood the lead destinations were spread in Latin America/Caribbean followed by Europe. For roundwood, the USA remained the primary importer of Greenheart Piles and Trinidad & Tobago the major destination for Wallaba Poles. Plywood lost ground in the main market, the United States, and also in Latin America/Caribbean, however, superior conditions and volumes obtained for Europe. Export value for other value-added wood products, such as Furniture, Doors, Windows, Mouldings, etc, decreased marginally from US\$4.5M to US\$4.3M. Overall, export value increased 22.6% from US\$48.6 M in 2005 to US\$59.5 M in 2006, while Export commission collected by the GFC rose 36.4% from US\$0.53 M to US\$0.72 M.

Both domestic and export average prices improved between 2005 and 2006, except for roundwood. Domestic levels remain lower than export prices.

Sector employment increased 9.5% from under 24,000 persons in 2005 to almost 26,000 in 2006, with the majority employment and increase deriving from logging activities.

## **1.0 ECONOMIC ENVIRONMENT**

### **1.1 The International Economy**

Strong global growth around 5% over the previous two (2) years continued in 2006 (5.1%)<sup>1</sup>. This is despite the effects of the major natural disasters of the last couple of years and the prevalence of high oil prices (a 41.3% increase in 2005, following a 30.7% increase in 2004). While the final increase in 2006 is estimated at 29.6%, prices have fallen from the high in July when the level reached thrice that as at end of 2003. High prices are expected to persist, however, especially considering greater instability in the Middle East.

World output growth has been fuelled by continued phenomenal growth in China, by 10.0%; over 7% in India as well as Asia as a whole; continued growth in Advanced Economies by 3%, including the US (3.4%), the European Union (2.8%), the UK (2.7%), Japan (2.7%), Canada (3.1%); in Africa 5.4%; in Central and Eastern Europe, 5.3%; in Russia, 6.5%; in the Middle East, 5.8%; and in Latin America, 4.7%. The latter region's performance continued a most vigorous ongoing expansion not experienced for a number of years before and driven by domestic demand from heightened public and private spending and consumption<sup>2</sup>.

On the downside, inflation is estimated at an average of 2.6% in Advanced Economies and 5.2% elsewhere. Significantly, also the US Dollar has depreciated compared to the currencies of its major trading partners, continuing its fall against the Euro and Japanese Yen which set in since late 2005, and in the course of 2006 also declining against the Chinese Yuan, the British Pound and the Brazilian Real. While international growth (4.9% projected for 2007) and inflation patterns are projected to hold in 2007, oil price increases will be of much lesser degree (9.1%). Average Commodity prices may decline 4.8%. However, sustained global growth may be affected by a sharper slowdown in the US economy than the estimated deceleration to 2.5%, especially as a slowdown in the US housing sector since late 2005 is now set to persist. Another major concern is that China's growth could prove unsustainable, and current favourable global financial conditions could tighten.

### **1.2 International Forestry Environment**

Amidst global economic expansion, improved consumer confidence, supply/capacity constraints relative to demand, and poor weather factors coupled with forest fires and flooding in major producing regions, the trend of rising prices for most tropical timber products sharpened in 2006.

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<sup>1</sup> IMF World Economic Outlook, September 2006

<sup>2</sup> IMF Regional Economic Outlook - Western Hemisphere, Nov 2006



Log demand and prices especially, increased while sawnwood prices remained stable or increased in the face of firm demand.

China, India, Japan and other Asian countries continue to be the lead importers of tropical timber, with China absorbing more than half of log imports and also leading tropical sawnwood imports while Japan is the main importer of Plywood. China has also overtaken Italy as the world's largest furniture exporter. Asian demand has led to the region replacing Europe in terms of lead prices for West African logs

The top tropical log producers continued to be Brazil followed by Indonesia and Malaysia. Brazil also led tropical Sawnwood production, India and Malaysia following behind. China, the Philippines and Malaysia topped Veneer outputs. For Plywood, however, Malaysia has emerged as the leading producer, overtaking Indonesia since 2004.

### **1.3 International Tropical Timber Market Summary**

In South East Asia, logging activities were curtailed by the rainy monsoon season earlier in the year and activities returning to normal by mid-year were later affected by forest fires and flooding. Asia boasts the world's most prolific tropical timber exporters in Malaysia and Indonesia and changes in export demand patterns exerted a negative effect on prices. Malaysia's main market is Europe and buyers there have sought cheaper sources in other Asian countries. Increasing interest from India, China and the Middle East, however, helped to stabilize the effect. Indonesia's Plywood and Veneer gained ground in China and from Singaporean traders taking advantage of better port and transport facilities than in Indonesia, to serve as intermediaries to the markets of China, India, Japan, Europe and the USA.

Conservation and Sustainable Forest Management (SFM) programs were formalized in some African countries. Congo received Forest Stewardship Council (FSC) certification on a 296,000-hectare Forest Management Unit. Liberia has classified 1.1 million hectares for protection and despite the lifting of a United Nations ban on Liberian log exports there was a moratorium on both log exports and new timber concessions pending appropriate legislation. Cameroon signed a Debt-for-Nature swap with France to protect part of the Congo River Basin, the world's largest tropical forest. In Ghana, mining activities in forest reserves are now subject to stronger regulatory framework and environmental guidelines, including area reclamation requirements and posting of reclamation bonds.

#### **1.3.1 Latin America & Caribbean**

In Latin America & the Caribbean, Brazil is the leading timber producer, also leading the world in

Log and Sawnwood production (as well as domestic consumption) though not in exports. It also ranks fourth in Veneer production and exports and fifth in Plywood production, but fourth in exports. Exports of solid wood products have declined over the course of the year the industry having been hit by appreciation of the local currency (Real) against the US Dollar. This has led to local input costs rising relative to export earnings (primarily in US dollars) and even some imports of sawnwood.

Domestic opportunities for poles emerged from expansion in domestic power generation and other demand sectors such as agri-business (fencing, etc), railroad and civil construction, and infrastructure modernization activities.

In Peru, the national currency has also strengthened against the US dollar. Nonetheless, export price of Mahogany Sawnwood to the US market rose sharply in May, displacing the price prevailing since late 2005 as the record high. Forest industry operators were apprehensive of a nationalization drive by the new Government; however, reassurances to the contrary eventually emerged.

In Bolivia, wood and wood products exports continued a rising trend, led by Furniture and Sawnwood. Exports for Guatemala, primarily a diverse range of products from Teak, have also increased.

#### **1.4 The Guyana Economy**

Gross Domestic Product (GDP) of the Guyana economy in 2006 reflected a real (at 1988 prices) increase of 4.7%, recovering from a 1.9%<sup>3</sup> (revised from 3%) decline in 2005 due to extensive flooding early in that year.

Sugar and Rice recovered partially from their 2005 downturns of 24.4% and 14.1% to growth of 5.5% and 12.4% respectively<sup>4</sup>. Forestry and the Engineering & Construction sectors climbed further from 6.0% to 11% and 9.5% to 12.0%, respectively, between the two (2) years. Manufacturing retained a 2% improvement while expansion in Transport & Communication and Distribution improved to 10% each from 9.5% and 8.5% in 2005. Financial Services also experienced stronger growth of 8% compared to 6.5% the previous year. However, the decline in the mining sector continued, with further contractions in Gold (25.3% compared to 26.3% in 2005)

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<sup>3</sup> Bureau of Statistics, letter dd February 05, 2007

<sup>4</sup> Article: 'Ram and McRae budget analysis', Stabroek News, Monday February 05, 2007,

and Diamond (7.6% from 19.8% in 2005). These have been joined by Bauxite with a reversal of the 6.0% gain in 2005 to 9.2% decline in 2006, resulting in the Mining sector's overall contraction to 22.4% compared to 17.7% in 2005. The major commodity is, of course, Gold, which has been affected by closure of major producer, Omai Gold Mines Ltd, since late 2005, the sub-sector thus failing to capitalize on rising world prices, albeit small mining output increased.

In terms of Balance of Payments, surplus improved in 2006 despite a trade deficit of US\$283.0 M (compared to US\$114.2 M in 2005) and final current account deficit of US\$181.4 M (US\$167.1 M in 2005). The deficit was offset by higher net capital inflows of US\$244.1M compared to US\$180.6 M in 2005 and deriving from increased disbursements of multilateral financing, higher foreign investments and lower debt service payments.

Inflation dropped from 8.2% recorded in 2005 to 4.2% with increases in prices of fuel, housing, education and food, continuing to be affected by rising import prices despite continued stability in the currency value. (The Guyana dollar depreciated by a mere 0.25% against the US dollar in 2006 and averaged between G\$199.75 - G\$200.25 to the US Dollar from September 2004 to September 2006 before moving to 200.75 by December 2006)

Enhanced performance in 2006, despite severe flooding again in the early months of the year, would have been enabled by political stability after the August general elections and continued government expenditure on economic infrastructure to promote private sector development and investment.

The 2007 National Budget projects real GDP growth of 4.9% with continuing improvements in all Agriculture sub-sectors, including Forestry; Manufacturing; Engineering & Construction; all Service sub-sectors (Transport & Communication, Distribution, Financial, etc); and importantly, partial recovery in Mining from improvements in Gold, Diamond and Bauxite. Government infrastructure works will continue, the ICC Cricket World Cup impact will formalize and further private sector capital investments are anticipated in construction, bauxite and oil exploration, among others.

### **1.5 The Forest Sector**

The Forest Sector (or Forestry) is traditionally reflected in National Income data based on production of Logs, Roundwood and Sawnwood and is grouped with Agriculture and Fishing.

National data indicate real (at 1988 prices) sector increase of 11% over 2005, contribution to real GDP rising from 3.63% in 2005 to 3.85%, and representing the highest percentage and real

value contribution since 1999. GFC data indicate growth of 19.3% in combined output volumes of Logs, Roundwood and Sawnwood (Primary Chainsawn Lumber only) as well as for all primary Timber (including Splitwood). While Logs, Sawnwood and Splitwood increased 21.6%, 17.0% and 7.9%, respectively, Roundwood declined 12.2%. However, Logs and Sawnwood, together total 461,538 m<sup>3</sup> accounting for 96.2% of total timber volume of 479,766 m<sup>3</sup> (compared to 94.9% in 2005 or 381,686 m<sup>3</sup> out of total timber volume of 402,232 m<sup>3</sup>). Logs strengthened its dominance, however, providing 82.1% (393,968 m<sup>3</sup>) of timber volume in 2006 compared to 80.5% (323,911 m<sup>3</sup>) in 2005. While Plywood production declined further (7.1%) from 37,120 m<sup>3</sup> in 2005 to 34,493 m<sup>3</sup> in 2006, this represented stabilization from declines in preceding years. Timber and Plywood output combined totaled 514,260 m<sup>3</sup>, an increase of 17.0% from the previous year's 439,352 m<sup>3</sup>. Export earnings jumped 22.6% from US\$48.6M to US\$59.5 M, surpassing the Rice sector for the first time, and have now almost doubled from the 2000 level (US\$35.7M). However, plywood exports declined also, due to inconsistent demand and prices but from all indications improved performance from the latter half of 2006 is set to continue over the next year.

The main factors responsible for the sector's improved performance overall are as follows:

- ❖ Increase in production of primary forest produce and some elements of value added production – namely, furniture and building components.
- ❖ Increase in export volumes, total export value, price, demand, and market conditions.
- ❖ Growing international and regional market for tropical wood products, fueling an increase in price.
- ❖ A more stable market for tropical timber products.
- ❖ Diversification in the species base.
- ❖ Increased investment in the forest sector
- ❖ Increased market promotion, market information (including prices and markets), and product development in the timber trade in Guyana. This is partly attributed to the initiatives undertaken by the Forest Product marketing Council of Guyana – an associated body of the Guyana Forestry Commission (GFC)
- ❖ Sustained and even stronger growth in the Engineering & Construction sector which recorded 9.5% and 12.0% in 2005 and 2006, respectively, compared to an annual average of 2.9% for the preceding five (5) years.

Timber, Plywood and Fuelwood Production and Export volumes for Years 2000 – 2006 are summarized in *Table 1*, below. Export values are shown in *Table 2*.

Table 1

## Annual Production and Export Volumes of Timber and Plywood for Years 2000 - 2006

		(x 1000 cu. metres)						
Year		2000	2001	2002	2003	2004	2005	2006
Product								
<b>Logs</b>	Production	288.5	311.9	297.5	236.2	366.0	323.9	394.0
	Export	44.3	35.1	47.9	48.0	60.3	115.8	190.8
<b>Chainsawn Lumber</b>	Production	28.8	29.5	31.0	38.2	36.1	57.8	67.6
	Export	18.8	18.8	32.7	27.4	37.5	42.1	44.9
<b>Roundwood</b> (Piles, Poles, Posts, Spars)	Production	26.9	19.3	14.6	14.7	18.0	19.6	17.2
	Export	3.4	1.9	6.4	9.2	14.5	9.0	13.5
<b>Splitwood**</b> (Staves, Shingles)	Production	1.4	2.0	1.4	3.1	3.0	3.2	3.4
	Export	0.4	0.9	0.7	2.0	2.0	2.2	2.4
<b>Total Timber</b>	Production	345.6	362.7	344.5	292.2	423.1	404.5	482.2
	Export	66.9	56.7	87.7	86.6	114.3	169.1	251.6
<b>Plywood</b>	Production	91.9	70.6	51.3	74.7	54.2	37.1	34.5
	Export	87.0	69.9	46.8	52.6	49.5	36.6	24.0
<b>Total Timber &amp; Plywood</b>	Production	437.5	433.3	395.8	366.9	477.3	441.6	516.7
	Export	153.9	126.6	134.5	139.2	163.8	205.7	275.5
<b>Fuelwood</b> (Charcoal, Firewood)	Production	24.9	15.2	20.3	16.6	17.0	17.8	20.5
	Export	0.3	-	1.4	0.9	1.9	1.7	3.5
<b>Timber, Plywood &amp; Fuelwood</b>	Production	462.4	448.5	416.1	383.5	494.3	459.4	537.2
	Export	154.2	126.6	135.9	140.1	165.7	207.4	279.1

Table 2: Annual Export Values of Forest Products for Years 2000 - 2006

(US\$M)

Product	Year	2000	2001	2002	2003	2004	2005	2006
Logs		2.8	3.2	4.6	8.5	5.8	12.0	22.3
Sawnwood*		6.2	7.6	10.7	9.2	13.8	17.7	20.4
Roundwood		0.7	0.4	1.1	3.8	2.5	1.8	2.3
Splitwood**		0.2	0.3	0.4	0.5	1.2	1.1	1.2
<b>Total Timber</b>		<b>9.9</b>	<b>11.5</b>	<b>16.8</b>	<b>22.0</b>	<b>23.3</b>	<b>32.6</b>	<b>46.2</b>
Plywood		23.6	16.7	12.3	12.4	15.5	11.3	8.8
<b>Total Timber &amp; Plywood</b>		<b>33.5</b>	<b>28.2</b>	<b>29.1</b>	<b>34.4</b>	<b>38.8</b>	<b>43.9</b>	<b>55.0</b>
Other Value - Added Products (Furniture, Building Components)		...	2.5	3.0	3.5	4.3	4.5	4.3
Other Products ***		2.2	2.4	0.1	0.1	0.3	0.2	0.2
<b>Total Other Products</b>		<b>2.2</b>	<b>4.9</b>	<b>3.1</b>	<b>3.6</b>	<b>4.6</b>	<b>4.7</b>	<b>4.5</b>
<b>Total Export Value</b>		<b>35.7</b>	<b>33.1</b>	<b>32.2</b>	<b>38.0</b>	<b>43.4</b>	<b>48.6</b>	<b>59.5</b>

N.B. \* Sawnwood exports derive from both Chainsawn (Primary) production and Millsawn lumber

\*\* Splitwood data includes both primary and mill produced splitwood

\*\*\* Includes Fuelwood export values which were minimal for all the above years

...Data not available for 2000

## 1.6 Market Outlook for Guyana's Timber Exports: Year 2007

High log exports to Asia/Pacific, especially China and India, are expected to continue, to fuel expansion in secondary wood products, China and India capitalizing on economies of scale, cheaper labour/processing costs, and greater and more diversified recovery from logs. China forecasts need for 5 million m<sup>3</sup> more of tropical timber by 2010 up from 11.4 million m<sup>3</sup> in 2005 of which, 7.4 million m<sup>3</sup> alone were in log form<sup>5</sup>. In the near term, capacity constraints, forest fires and efforts to curb illegal timber in Malaysia and Indonesia, and increased regulations and restrictions in West Africa, will ensure prices remain strong. Additionally, Guyana's lesser used species (LUS), such as Darina (*Angelim Pedra*) and Tonka Bean (*Cumaru*), continue to gain ground; they are increasingly recognized as being the same as some popularly traded species of different names.

In keeping with the Government's policy to promote value added forest production, increase foreign exchange earnings and employment, the Guyana Forestry Commission in collaboration with the forest sector is working towards the formulation of a National log export policy for Guyana. To this end, a log export policy has been proposed, incorporating full and phased log export bans for major species, starting from 2008. The immediate benefit anticipated is a shift to greater sawnwood production and exports followed by expansion in solid wood products such as furniture, building components, etc.

Sawnwood opportunities are growing in Europe and Latin America/Caribbean, markets where Guyana already has a recognized presence and enjoy duty-free access. It must be noted that the European Union is strengthening efforts to block products sourced from illegal logging under its Forest Law Enforcement, Governance and Trade (EU-FLEGT) action plan. Additionally, the duty-free access to the EU market is scheduled to be renegotiated for beyond 2007 under the EU-ACP Partnership Agreement. Expectations are that the preferences will not be reduced, however, new arrangements are likely to be reciprocal and competition may eventually arise in the domestic market from imported Italian furniture, Italy being the second largest furniture exporter globally. Year 2007 is, therefore, a crucial year for development of the value-added sector and the forest industry as a whole, especially considering the impending restrictive log export policy.

Improved performance in dressed sawnwood and secondary wood products such as Furniture, are expected to develop over the longer term following efforts by the Forest Products Marketing Council of Guyana Inc (FPMC). The Council has facilitated cases of local technology change and

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<sup>5</sup> ITTO *Tropical Timber Market Report*, Vol 11, No. 18, 16 – 30 September, 2006

equipment maintenance training. Increasingly, it is the primary liaison between external buyers and local existing and potential producers having networked with the prominent market groupings such as the International Wood Products Association (IWPA) and the North American Wholesale Lumber Association (NAWLA). Both these associations have clout in the US market. And the US household furniture market is close to US\$80 billion (2005). Further, a 5.5% annual growth is only expected to drop to 4.4% by 2015<sup>6</sup>.

Recovering export conditions for plywood over the latter half of 2006 are expected to prevail in 2007 and domestic capacity has had more time to adjust upward. Japan has become the leading Plywood importer, driven by recovery in building construction. Export opportunities to the US market may increase, therefore, as major Asian suppliers, Malaysia, Indonesia and China seek to further capitalize on the Japanese market but face setbacks from weather, fire and flood factors. Guyana's Plywood, while attracting less US demand is also cheaper than popular Asian varieties. A declining US housing sector, however, has already impacted in 2006 and deceleration and greater than anticipated slowdown in the US economy will dampen prospects. Gains in Europe will have to be expanded and recovery pursued in the Latin America/Caribbean region.

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<sup>6</sup> ITTO *Tropical Timber Market Report*, Vol 11, No.16, 16 – 31 August, 2006.



## **2.0 LAND ALLOCATION WITHIN GUYANA'S STATE FOREST**

State Forest Lands account for 75% of national land and total 13.68 M hectares. The GFC is the authorized entity with regards to granting licenses for use of State Forest Lands for production or otherwise. Individual tracts (commonly called concessions) allocated by the GFC for production are classified (licensed) based on size and duration of contract as follows: -

<b>Concession Type</b>	<b>Size Limitation</b> <i>Hectares / (acres)</i>	<b>Contract Period</b>
State Forest Permission (SFP)	Under 8,094 (20,000)	2 years
Wood Cutting Lease (WCL)	8,094 – under 24,281 (20,000 – under 60,000)	3 – 10 years
Timber Sales Agreement (TSA)	24,281 and above (60,000 and above)	15 – 25 years

State Forest Lands are also allocated for pre-production exploration, in the form of State Forest Exploratory Permits (SFEP), and for other non-production purposes covering conservation and research and reserve areas referred to as Permanent Research and Reserve Areas. Additionally, in cases where a concessionaire has a SFP in excess of 8,094 ha, these are currently in the process of conversion into TSAs or WCLs depending on the size. In the interim, these SFP's are referred to as State Forest Conversion Areas.

A summary of State Forest Allocation, as at end of December 2006, is shown in *Table 3*, overleaf. A major portion of State Forests, that is, 40% or 5.50 M hectares, remain unallocated. This does not derive strictly from policy initiatives (e.g. conservation) and, therefore, indicates, at face value, additional availability, that is, the potential for significant forest sector expansion. However, factoring in future national development initiatives such as interior road networks and expansion of Amerindian lands, together with unsuitable areas (forest degradation, secondary/recovering forests, etc), GFC estimates indicate availability of only just over half the current unallocated hectares – 2.86 M hectares or 20.7% of State Forests.

*Table 3: Land Allocation within State Forests as at December 31, 2006*

<b>Classification</b>	<b>Number</b>	<b>Total Area (hectares)</b>	<b>% of Total State Forest</b>	<b>% of Allocated Land</b>
<b>Production Areas</b>				
- State Forest				
Permission (SFP)	275	910,240	7	14
- Wood Cutting				
Lease (WCL)	5	320,486	2	5
- Timber Sales				
Agreement (TSA)	26	4,420,579	32	66
- SFP Conversion				
Areas	30	537,903	4	8
- State Forest				
Exploratory				
Permit (SFEP)	5	506,663	4	7
<b>Total Production</b>				
<b>Allocations</b>	<b>341</b>	<b>6,695,871</b>	<b>49</b>	<b>100</b>
<b>Permanent Research and Reserve Areas</b>				
- Iwokrama				
Research Site	1	371,592	3	25
- GFC Forest Reserves	11	18,147	0	1
- Other Research &				
Reserve Sites	3	1,095,955	8	74
<b>Total Reserve &amp;</b>				
<b>Research Areas</b>	<b>15</b>	<b>1,485,694</b>	<b>11</b>	<b>100</b>
<b>Total Forests Allocated</b>				
		<b>8,181,565</b>	<b>60</b>	
Total Unallocated Forests				
		5,497,051	40	
<b>Total State Forests</b>				
		<b>13,678,616</b>	<b>100</b>	
<b>(Amerindian Lands</b>				
	70	2,084,426)		

A historical comparison of count of Production Area allocations is provided in *Table 4*, covering the past six (6) years.

*Table 4*

**Number of Production Area Allocations for the period 2001 - 2006**

<b>Production Areas</b>	<b>Year</b>					
	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
	<b>(Number Allocated)</b>					
State Forest Permissions (SFP's)	269	224	283	253	263	275
SFP Conversion Areas	51	50	-	-	28	30
Wood Cutting Leases (WCL's)	5	6	6	5	5	5
Timber Sales Agreements (TSA's)	21	22	23	22	24	26
State Forest Exploratory Permits (SFEP's)	3	1	-	7	5	5
<b>Total Number Allocated</b>	<b>349</b>	<b>303</b>	<b>312</b>	<b>287</b>	<b>325</b>	<b>341</b>

## **2.1 OTHER FOREST SECTOR LICENSES**

All timber activities (primary extraction, storage, processing to secondary timber, etc) and non-timber forest extraction within State Forests also fall under the licensing authority of the GFC. Activity licenses are valid for one (1) calendar year only and, therefore, continued production requires annual renewals in accordance with GFC requirements. *Table 5* indicates the number of licenses accorded by the GFC under the various activity classes for Year 2006, compared to the previous year.

*Table 5*

### **Activity Licenses: Comparison of Years 2005 & 2006**

<b>ACTIVITY/ LICENSE TYPE</b>	<b>1/2 YEAR</b>	<b>DEMERARA DIVISION</b>	<b>ESSEQUIBO DIVISION</b>	<b>BERBICE DIVISION</b>	<b>NORTH WEST DIVISION</b>	<b>TOTAL</b>
SAWMILL	<b>2006</b>	<b>39</b>	<b>33</b>	<b>27</b>	<b>1</b>	<b>100</b>
	2005	36	33	28	-	97
PERMIT TO ERECT SAWMILL	<b>2006</b>	<b>15</b>	<b>7</b>	<b>2</b>	<b>-</b>	<b>24</b>
	2005	12	13	5	1	31
SAWPIT	<b>2006</b>	<b>69</b>	<b>29</b>	<b>16</b>	<b>9</b>	<b>123</b>
	2005	79	37	15	4	135
TIMBERDEPOT	<b>2006</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>-</b>	<b>5</b>
	2005	0	4	-	-	4
TIMBERPATH	<b>2006</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>-</b>	<b>9</b>
	2005	1	3	2	-	6
TIMBER DEALERS	<b>2006</b>	<b>153</b>	<b>37</b>	<b>23</b>	<b>8</b>	<b>221</b>
	2005	136	41	21	3	201
FIREWOOD	<b>2006</b>	<b>3</b>	<b>4</b>	<b>2</b>	<b>-</b>	<b>9</b>
	2005	4	3	2	-	9
CHARCOAL	<b>2006</b>	<b>10</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>10</b>
	2005	7	1	-	-	8

### **3.0 CONTRIBUTION TO GROSS DOMESTIC PRODUCT**

Forestry's contribution to Gross Domestic Product (GDP) is traditionally measured from output of Logs, Roundwood and Sawnwood. Annual changes in value are computed in proportion to volume increases, exchange rate changes and real inflation. Nominal Values are then adjusted to base year real value. The base year currently used in national data by the Bureau of Statistics, the designated national authority, is 1988. Hence real GDP is reflected at 1988 prices.

The value-added timber product of Plywood is measured under Manufacturing. Additional wood/forest related value-added products, such as furniture, are not captured.

*Table 6*

#### **Forestry's Contribution to Gross Domestic Product for the period 1997- 2006**

*G\$M at 1988 Prices*

<b>YEAR</b>	<b>GDP AT FACTOR COST*</b>	<b>FORESTRY</b>	<b>FORESTRY as % of GDP</b>
1997	5,360	264	4.93
1998	5,270	200	3.80
1999	5,426	226	4.17
2000	5,352	189	3.53
2001	5,474	195	3.56
2002	5,536	180	3.25
2003	5,500	183	3.33
2004	5,587	184	3.29
2005**	5,478	199	3.63
2006**	5,734	221	3.85

*\* Measures domestic output exclusive of indirect taxes on goods and services.*

*Source: Bank of Guyana Statistical Bulletin, March 2006; (\*\* 2005 revised & 2006 Data: Bureau of Statistics)*

Under current measurements, Forestry's contribution to GDP in real terms (at 1988 prices) over the last ten (10) years is shown in *Table 6*, above.

Together with national GDP improvement in 2006, Forestry's real contribution also increased, both in terms of absolute value and relative share. An 11% growth was recorded, resulting in a sector contribution of 3.85% GDP for year 2006, the highest in the last seven (7) years.

## **4.0 PRODUCTION**

*Table 7*, overleaf, indicates production volumes for various Timber and Non-Timber Forest Products for the year 2006 compared to 2005 totals. Volumes shown represent the amalgamation of production attributed to individual Forest Stations within the respective Regions (as per GFC designation) of Demerara, Essequibo, and Berbice, based on location of source concessions. Appendices I – IV, attached, provide further details by Regions and Forest Stations.

With the exception of **Plywood**, all products listed in the production tables are referred to as Primary forest products, considered as produced in or at the edge of the forest and accounted for before further (downstream) processing into secondary or value-added products (e.g. dressed lumber, furniture, building component, etc).

While **Chainsawn Lumber** and the axe-hewn products, **Staves** and **Shingles**, do derive from further processing, they are treated as primary products due to most conversion being undertaken at concession site. The source, logs are not included in production log volumes quoted.

Chainsawn Lumber is distinct from Millsawn Lumber. Ideally, the production data should also include millsawn lumber to more accurately reflect total lumber available to the market. However, sufficient data is not available due to poor submission of same as per the GFC's monthly Sawmill Return form. It must be noted that Log volumes quoted include logs which would have been eventually allocated to conversion into millsawn lumber, unlike the case with chainsawn lumber.

Plywood is a secondary (value-added) product manufactured from logs at a ply-mill. The logs used are primarily of the Baromalli species and would have been included in log production data. The major plywood producer in Guyana is Barama Company Ltd which began production in 1993.

Table 7: Total Production by Period for the Year 2006

PRODUCTS	Unit	Jan - Jun	Jul - Sep	Oct - Dec	Jul - Dec	Year 2006	Year 2005	2006
						Total	Total	% Change
<b>TIMBER PRODUCTS</b>								
<i>Logs</i>	m <sup>3</sup>							
Special Category								
Greenheart		59,839.78	31,040.18	38,579.69	69,619.87	129,459.65	102,414.04	26.41
Purpleheart		20,194.08	15,825.80	13,363.41	29,189.21	49,383.29	41,128.34	20.07
Others		3,954.95	3,332.32	2,654.80	5,987.12	9,942.07	4,072.47	144.13
<b>Total Special Category Logs</b>		<b>83,988.81</b>	<b>50,198.30</b>	<b>54,597.90</b>	<b>104,796.20</b>	<b>188,785.01</b>	<b>147,614.85</b>	<b>27.89</b>
Class 1		41,246.72	27,031.64	20,187.47	47,219.11	88,465.83	70,351.45	25.75
Class 2		42,080.32	18,084.04	19,177.13	37,261.17	79,341.49	82,614.56	(3.96)
Class 3		14,797.97	11,897.72	10,680.19	22,577.91	37,375.88	23,330.24	60.20
<b>Total Other Class Logs</b>		<b>98,125.01</b>	<b>57,013.40</b>	<b>50,044.79</b>	<b>107,058.19</b>	<b>205,183.20</b>	<b>176,296.25</b>	<b>16.39</b>
<b>Total Logs</b>		<b>182,113.82</b>	<b>107,211.70</b>	<b>104,642.69</b>	<b>211,854.39</b>	<b>393,968.21</b>	<b>323,911.10</b>	<b>21.63</b>
<i>Roundwood</i>	m <sup>3</sup>							
Greenheart Piles		4,525.43	2,189.59	2,512.59	4,702.18	9,227.61	13,164.48	(29.91)
Kakaralli Piles		337.93	24.17	48.74	72.91	410.84	483.73	(15.07)
Mora Piles		52.00	-	-	-	52.00	0.00	100
Wallaba Poles		3,046.61	1,434.58	1,712.26	3,146.84	6,193.45	5,026.41	23.22
Posts		989.70	198.75	110.70	309.45	1,299.15	855.33	51.89
Spars		14.60	6.14	4.41	10.55	25.15	70.11	(64.13)
<b>Total Roundwood</b>		<b>8,966.27</b>	<b>3,853.23</b>	<b>4,388.70</b>	<b>8,241.93</b>	<b>17,208.20</b>	<b>19,600.06</b>	<b>(12.20)</b>
<i>Primary (Chainsawn) Lumber</i>	m <sup>3</sup>							
Special Category								
Greenheart		3,508.35	828.76	1,322.77	2,151.53	5,659.88	5,292.23	6.95
Purpleheart		3,481.65	1,695.04	3,937.90	5,632.94	9,114.59	6,535.46	39.46
Others		487.52	356.32	815.42	1,171.74	1,659.26	1,142.53	45.23
<b>Total Special Category Lumber</b>		<b>7,477.52</b>	<b>2,880.12</b>	<b>6,076.09</b>	<b>8,956.21</b>	<b>16,433.73</b>	<b>12,970.22</b>	<b>26.70</b>
Class 1		14,890.94	7,957.84	11,789.57	19,747.41	34,638.35	30,918.30	12.03
Class 2		4,978.89	2,568.07	2,969.14	5,537.21	10,516.10	9,185.77	14.48
Class 3		2,146.30	1,762.08	2,072.89	3,834.97	5,981.27	4,700.92	27.24

	<b>Total Other Class Lumber</b>		<b>22,016.13</b>	<b>12,287.99</b>	<b>16,831.60</b>	<b>29,119.59</b>	<b>51,135.72</b>	<b>44,804.99</b>	<b>14.13</b>
	<i>Total Lumber</i>	<i>Primary</i>	<b>29,493.65</b>	<b>15,168.11</b>	<b>22,907.69</b>	<b>38,075.80</b>	<b>67,569.45</b>	<b>57,775.21</b>	<b>16.95</b>
<i>Splitwood</i>		m <sup>3</sup>							
Paling Staves			404.31	255.10	256.06	511.16	915.47	702.90	30.24
Vat Staves			-	-	0.01	0.01	0.01	0.00	100
Shingles			69.45	21.59	14.18	35.77	105.22	243.13	(56.72)
	<i>Total Splitwood</i>		<b>473.76</b>	<b>276.69</b>	<b>270.25</b>	<b>546.94</b>	<b>1,020.70</b>	<b>946.03</b>	<b>7.89</b>
<i>Fuelwood</i>									
Charcoal		kg	122,340.19	105,287.64	91,311.11	196,598.75	<b>318,938.94</b>	391,708.25	(18.58)
Firewood		m <sup>3</sup>	9,050.13	5,124.95	3,941.01	9,065.96	<b>18,116.09</b>	14,822.51	22.22
<i>Plywood</i>		m <sup>3</sup>	<b>15,249.00</b>	<b>10,148.67</b>	<b>9,096.24</b>	<b>19,244.91</b>	<b>34,493.91</b>	<b>37,119.70</b>	(7.07)
<b>NON - TIMBER FOREST PRODUCTS</b>									
Wattles		pieces	91,884.00	51,735.00	41,896.00	93,631.00	<b>185,515.00</b>	183,752.00	0.96
Manicole Palm		stems	1,574,053.00	313,578.00	538,115.00	851,693.00	<b>2,425,746.00</b>	4,007,579.00	(39.47)
Other NTFP's (Mangrove Bark, Balata)		pieces	12,224.00	-	27,994.00	27,994.00	<b>40,218.00</b>	9,333.48	330.90



## 4.1 Production Volumes

Compared to 2005, volumes for the major timber products, Logs and Chainsawn Lumber, reflect significant improved performance. While both years were affected by heavy rainfall and flooding, at the start, the impact would have been more severe in 2005. Additionally, the price of production input, fuel, continues to rise, though levels have fallen from the high in July 2006 when world market price reached a level three times that of the end of 2003.

Current year production has been driven by expansion in the Engineering & Construction sector, deriving particularly from the Government's continued housing drive and infrastructure works across the country. Also, there was expansion in the hotel/accommodation industry and construction of Guyana's first Cricket Stadium, all in preparation for Guyana's leg of the West Indies' hosting of Cricket World Cup 2007. On the external front, a more favourable export market prevailed, both in terms of demand volumes and unit prices, especially for Logs for which, export volume was equivalent to 48 % of production, compared to 36 % the previous year. The Sawnwood market continued to hold firm while Plywood has been recovering.

Logs and Chainsawn Lumber production increased 21.6% and 17%, respectively. However, Plywood and Roundwood volumes declined by 7.1% and 12.2%, respectively. Overall production of primary timber and fuelwood increased by 19.3%, and factoring in Plywood, the year's total timber and plywood production volume improvement was still a high 17%. More detailed analyses of production volumes are undertaken below.

### 4.1.1 Log Production

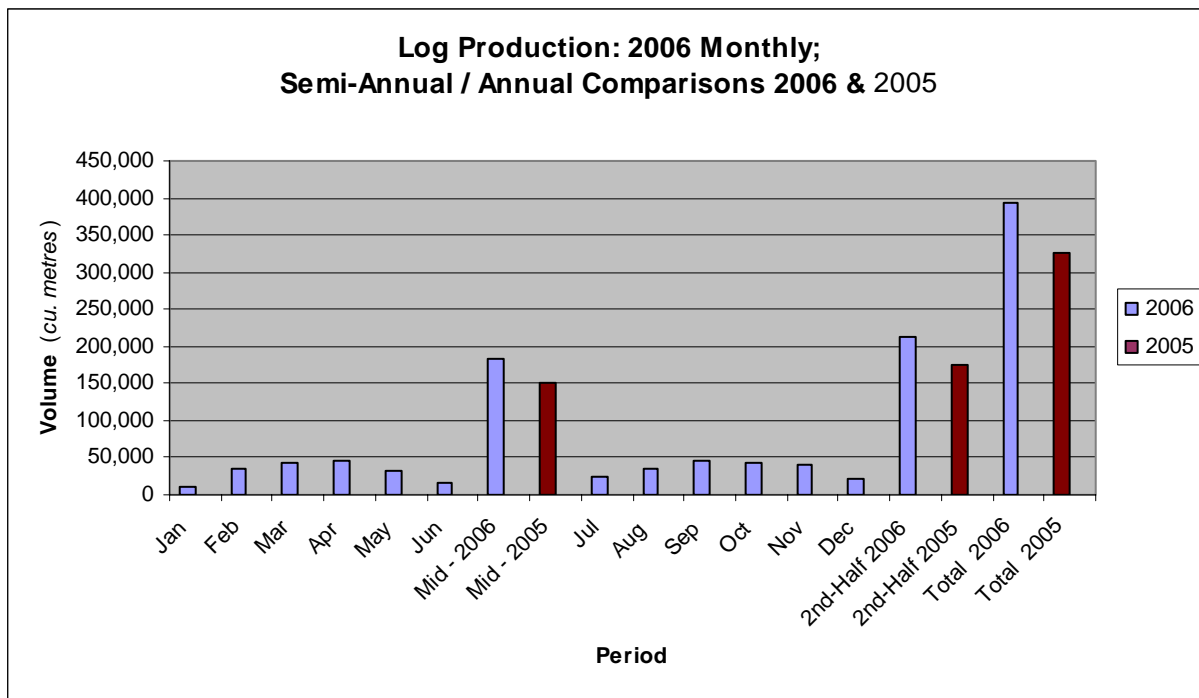
A total of 393,968 m<sup>3</sup> of Logs was recorded for the year compared to 323,911 m<sup>3</sup> in 2005, the increase, therefore, being 70,057 m<sup>3</sup> or 21.6%. The 2006 volume was the highest recorded for the last seven (7) years (**Fig. 2**, below). The second half-year accounted for 211,854 m<sup>3</sup> (or 53.8%) compared to 173, 841 m<sup>3</sup> (or 44.2%) for the corresponding 2005 period. The primary species continued to be Greenheart (a Special Category species) with 129,460 m<sup>3</sup>, 26.4% greater than for 2005 (102,414 m<sup>3</sup>). This accounted for 32.9% of year 2006 log total, compared to 31.6% in 2005. The other major special category species, Purpleheart, recorded improvement also, its 49,383 m<sup>3</sup> being 20.1% greater than the 2005 volume (41,128 m<sup>3</sup>). The combined volume for the other special category species, Bulletwood, Brown Silverballi, and Letterwood, more than doubled, from 4,072 m<sup>3</sup> in 2005 to 9,942 m<sup>3</sup>, primarily due to export demand for Bulletwood, production of which, increased from 2,905 m<sup>3</sup> in 2005 to 8,977 m<sup>3</sup> in 2006. Total production of logs of other species groups (categorized as Class 1, Class 2 and Class 3) was 205,183 m<sup>3</sup>, 16.4% greater than the 176,296 m<sup>3</sup> in 2005.

The most significant Class I species were Mora (34,061 m<sup>3</sup>), Kabukalli (14,052 m<sup>3</sup>) and Locust (8,249 m<sup>3</sup>). Other notable volumes obtained for the species Wamara, Shibadan, Crabwood, Tauroniro, Tatabu Aromata and Washiba, in that order. For Class 2 Logs, Baromalli (the primary plywood species) dominated with 58,189 m<sup>3</sup> or 73% Class 2 and 14.8% total logs. This was followed by Wallaba species logs with 10,780 m<sup>3</sup>. Other significant volumes obtained for Muneridan, Kereti and Monkey Pot. Logs of the Class 3 category were led by the species Darina (6,390 m<sup>3</sup>), followed by Burada, Limonaballi, Tonka Bean, Black Kakaralli, Bartaballi and Maho. Expanded production in these species was a response to their greater acceptance in the export market.

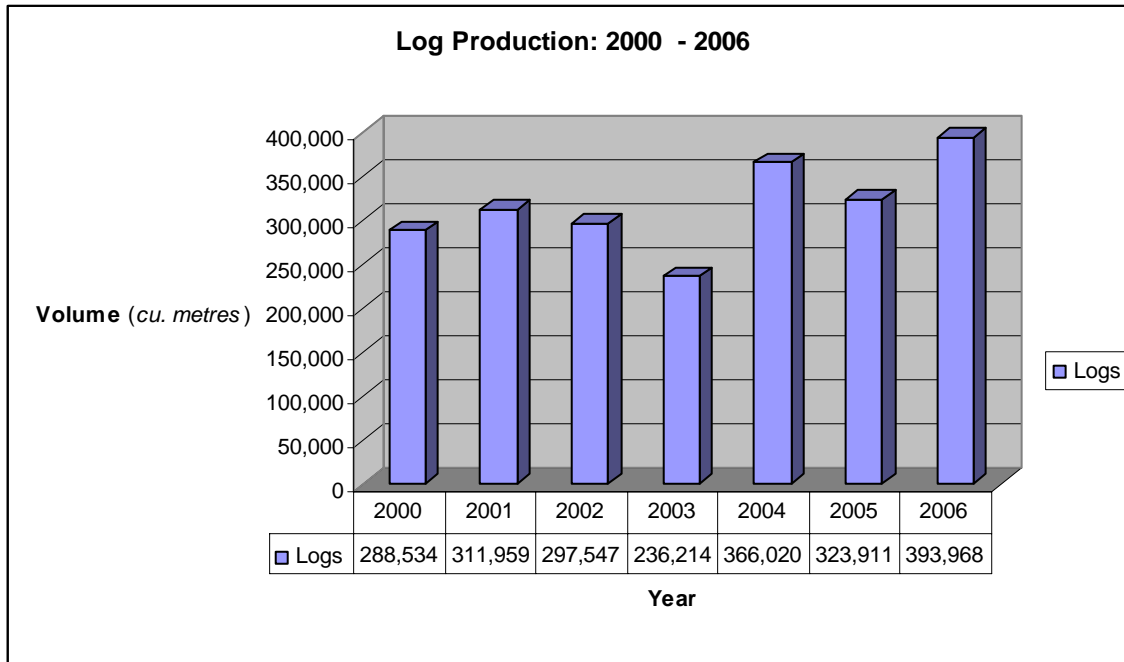
**Monthly Log Production.**

Examination of monthly volumes (see Fig 1, below) indicate that log production peaked in April with 46,458 m<sup>3</sup> or 11.8%, followed by September (45,434 m<sup>3</sup>). The lowest volumes obtained in January, June and December, consistent with rainfall and seasonal factors. Year 2006 improvement over year 2005 obtained in both the first and second semesters.

**Fig. 1.**



**Fig. 2.**



**Log Production by Regions and Forest Stations**

The region of **Essequibo**, which holds the majority State Forest Lands and allocated Production Areas, recorded 74.8% (294,845 m<sup>3</sup>) of total log production. Of the eleven (11) active Forest Stations in the region, Buckhall (96,950 m<sup>3</sup>) and Iteballi (57,683 m<sup>3</sup>) together accounted for 39.3% of national log production and 38.7% or 50,048 m<sup>3</sup> (Iteballi – 26,630 m<sup>3</sup>; Buckhall – 23,419 m<sup>3</sup>) of total Greenheart logs produced in 2006. Buckhall also produced the most Purpleheart with 23,419 m<sup>3</sup> or 47.4% of national total, contributing significantly to Essequibo’s dominance in this species, the region’s 43,097 m<sup>3</sup> representing 87.3% of all Purpleheart for 2006.

Essequibo is the primary region from which Barama Company Limited obtains logs. This is reflected in the 64,600 m<sup>3</sup> in Class 2 logs (81.4% of national Class 2 volume), of which Baromalli, the major Plywood species, alone totaled 57,428 m<sup>3</sup>, representing 98.7 % of all Baromalli logs for the year.

Essequibo’s second ranked station, Iteballi, surpassed each of the other two (2) regions, **Berbice** (44,963 m<sup>3</sup>) and **Demerara** (54,160 m<sup>3</sup>) and these two (2) volumes combined only just covered the top station in Essequibo (and nationally), Buckhall.

The most productive of Demerara’s four (4) stations was Mabura, with 37, 151 m<sup>3</sup> or 68.6% of the region’s total. Of this, Greenheart logs were 26,116 m<sup>3</sup> or 94.5% of all Greenheart (27,644 m<sup>3</sup>), and 48% of all logs, for this region.

For Berbice, the majority log volume derived from the station of New Amsterdam (17,232 m<sup>3</sup>). However, the primary Greenheart station was Bamboo Landing, with 3,029 m<sup>3</sup> or 66.2% of the regional total of 4,573 m<sup>3</sup>.

#### 4.1.2 Primary (Chainsawn) Lumber Production.

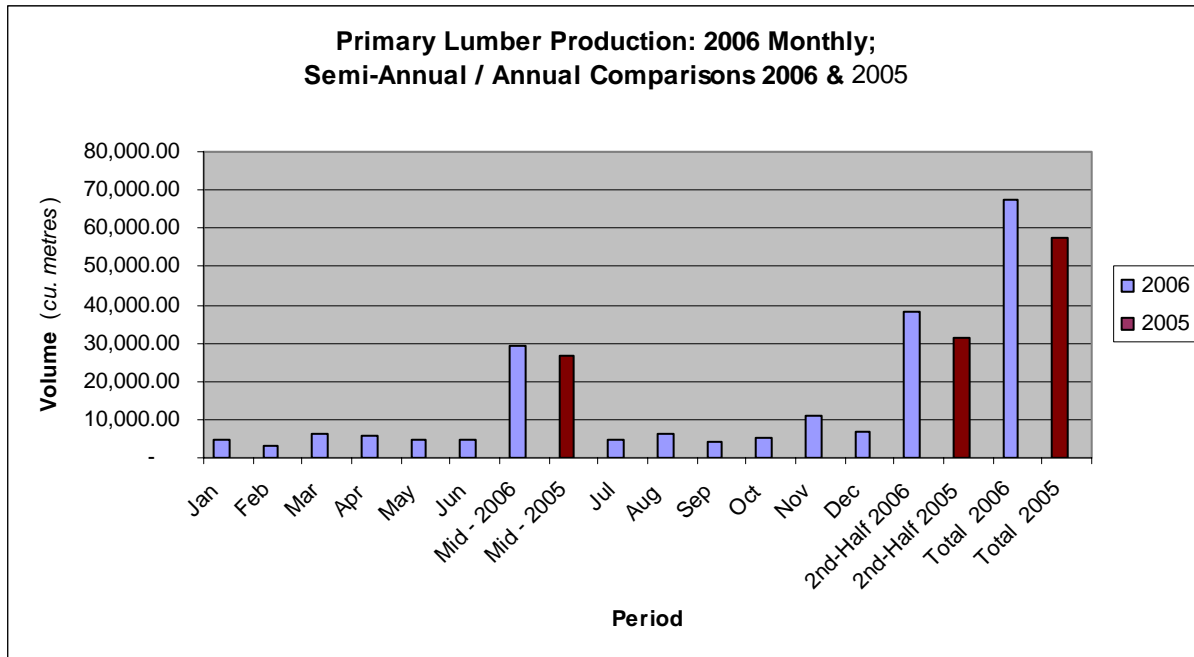
Recorded production of Primary (Chainsawn) Lumber for the year totaled 67,569 m<sup>3</sup> which was 17.0% greater than the previous year volume of 57,775 m<sup>3</sup> and the highest level for the past ten (10) years (*Appendix IX*, attached). Second semester production was 38,076 m<sup>3</sup> (or 56.4% of full year volume) and represented a 21.9% improvement over the 2005 corresponding period's 31,237 m<sup>3</sup> (or 54.1% of full volume).

The primary species were Kabukalli (11,666 m<sup>3</sup>), Tauroniro (9,939 m<sup>3</sup>), Purpleheart (9,115 m<sup>3</sup>), Soft Wallaba (6,086 m<sup>3</sup>), Greenheart (5,660 m<sup>3</sup>), Mora (3,653 m<sup>3</sup>) and Kereti (2,771 m<sup>3</sup>). Other notable species were Simarupa, Dalli, Shibadan and Bulletwood.

#### Monthly Production of Primary Lumber

The highest production was recorded in November with 10,996 m<sup>3</sup>, followed by December (6,847 m<sup>3</sup>), August (6,201 m<sup>3</sup>) and then March (6,052 m<sup>3</sup>). The other months recorded consistent levels (**Fig. 3**, below).

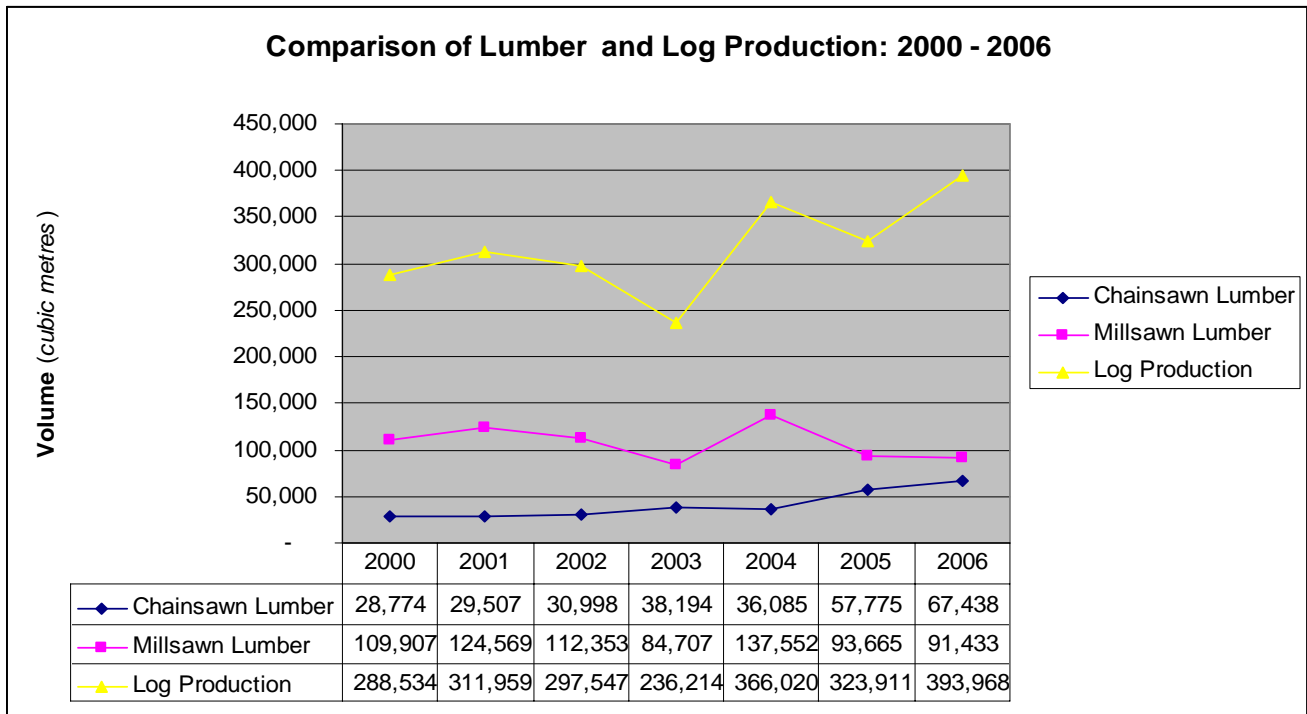
**Fig. 3. P**



**Annual Lumber Production: Chainsawn Lumber compared to Millsawn Lumber**

Chainsawn lumber production for the period 2000 – 2006 are shown in **Fig. 4**, below, compared to estimates of Millsawn lumber, which are also compared to annual log volumes. Millsawn Lumber is estimated from the annual residual volume from log production after log exports, assuming a 45% conversion rate, that is, 1 m<sup>3</sup> log yields 0.45 m<sup>3</sup> of Millsawn Lumber. While chainsawn lumber has increased over the years, millsawn lumber has fluctuated annually though volume changes in the last two (2) years have been far less proportionate with changes in log production, due partly to an exponential growth in log exports and reduced availability for domestic conversion.

**Fig. 4.**



**Primary Lumber by Regions and Forest Stations.**

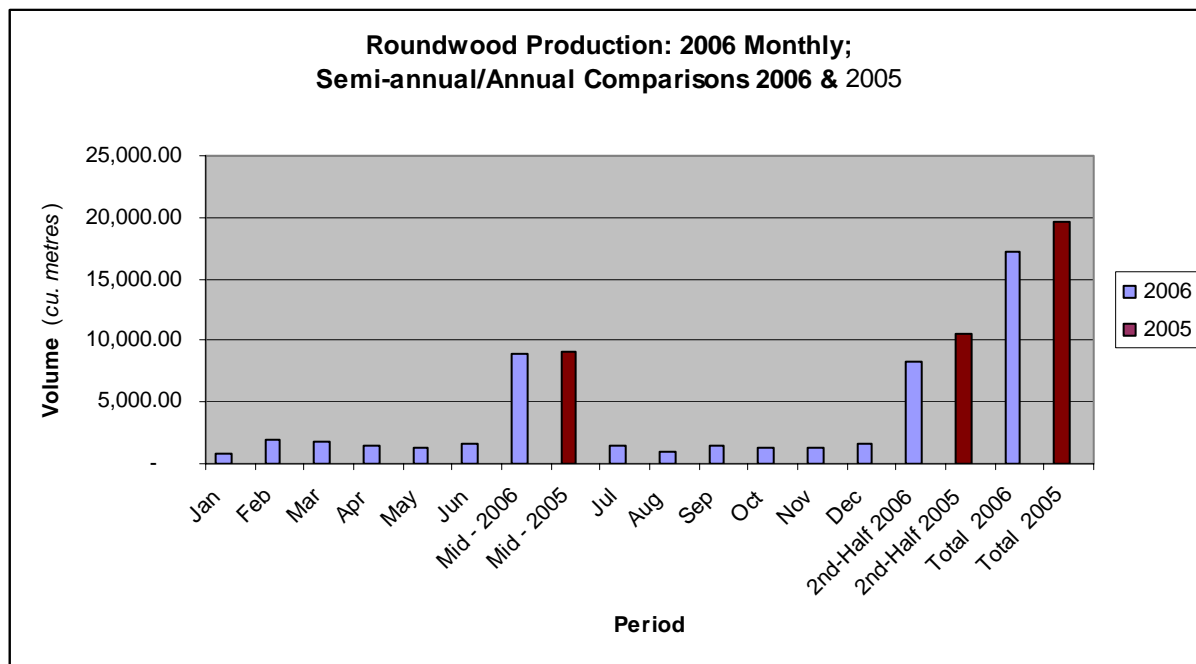
Regional volumes indicate the most productive region as Demerara with 41,602 m<sup>3</sup> or 61.6%, followed by Essequibo (14,559 m<sup>3</sup>) and Berbice (11,409 m<sup>3</sup>). The main producing stations were Linden (14,589 m<sup>3</sup>), Soesdyke (13,308 m<sup>3</sup>) and Georgetown (11,928 m<sup>3</sup>), all in Demerara, followed by the Berbice station of New Amsterdam (5,994 m<sup>3</sup>) and the Essequibo station of Arapiaco (4,938 m<sup>3</sup>).

**4.1.3 Roundwood Production**

Production of Piles, Poles, Posts and Spars are recorded under the product category Roundwood. Piles are primarily of the Greenheart species while Poles, Posts and Spars derive from the Wallaba species.

Roundwood totaled 17,208 m<sup>3</sup> in 2006, 12.2% less than the 19,600 m<sup>3</sup> for 2005 and also falling behind year 2004 due primarily to a decline in Greenheart Piles (*Appendix X*). Greenheart Piles (9,228 m<sup>3</sup>) and Wallaba Poles (6,193 m<sup>3</sup>) together accounted for 89.6% of total. While Poles increased 23.2% (from 5,026 m<sup>3</sup> in 2005) this could not offset the 29.9% decline in Greenheart Piles (from 13,164 m<sup>3</sup> in 2005). The increase in pole volume would have been expected considering network expansion in the electricity industry (for example Guyana Power & Light Inc's Unserviced/Rural Areas Electrification program) and in the telephone industry (expansion of landline service by provider, Guyana Telephone and Telegraph Company Ltd). Other Piles totaled 463 m<sup>3</sup> and Wallaba Posts and Spars totaled 1,299 m<sup>3</sup> and 25 m<sup>3</sup>, respectively. Year 2006 month volumes and semi-annual/annual comparisons with year 2005 are shown below (**Fig. 5**).

**Fig. 5.**



The major roundwood region was Demerara with 11,023 m<sup>3</sup> (or 64.1%), including the most Greenheart Piles (5,534 m<sup>3</sup>) and Wallaba Poles (4,740 m<sup>3</sup>), the region's primary station being Soesdyke. Berbice recorded the majority Wallaba Posts, 804 m<sup>3</sup> or 61.8%, with 800 m<sup>3</sup> from Orealla station alone.

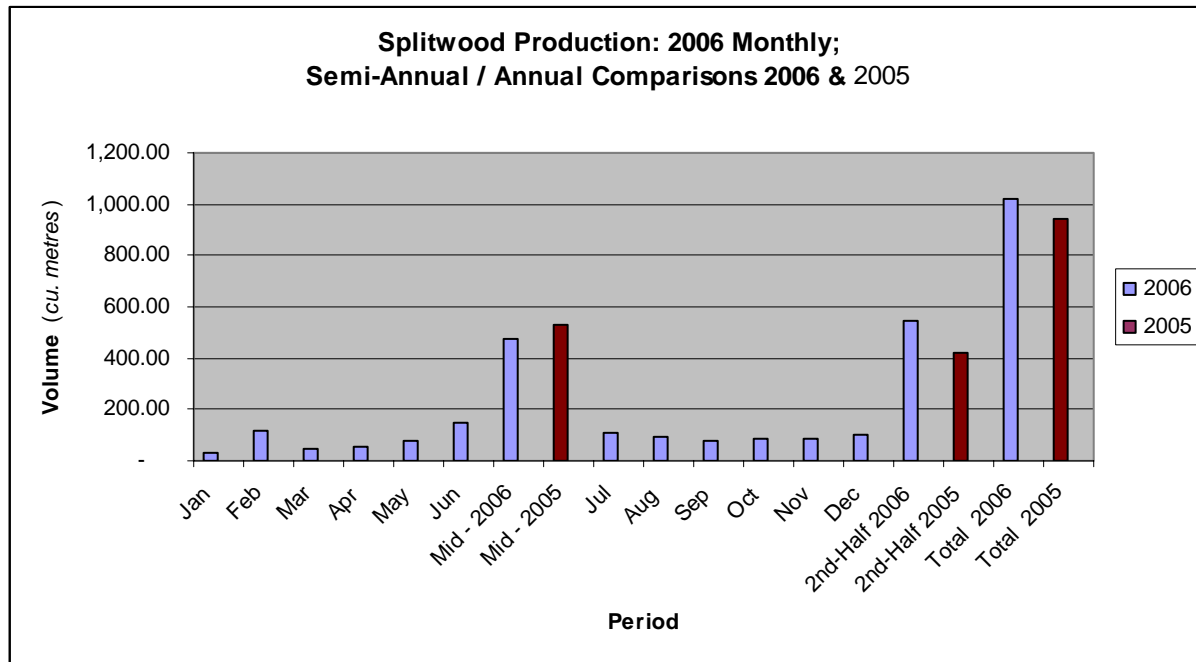
#### 4.1.4 Splitwood Production

Splitwood refers to Staves (Paling Staves; Vat Staves) and Shingles, all produced from Wallaba species. In Year 2006, primary Splitwood total was 1,021 m<sup>3</sup> compared to 946 m<sup>3</sup> for 2005, an increase of 7.9%, representing a recovery from steady decline over the previous several years. (*Appendix IX*). Paling Staves increased 30.2% from 702 m<sup>3</sup> in 2005 to 915 m<sup>3</sup> in 2006, while Shingles declined 56.7% from 243 m<sup>3</sup> the

previous year to 105 m<sup>3</sup> in 2006 (**Fig. 6**, below).

Demerara was also the main producing region for Splitwood with 792 m<sup>3</sup> (or 77.7%), 715 m<sup>3</sup> in Paling Staves and 77 m<sup>3</sup> in Shingles. Linden alone recorded 531 m<sup>3</sup> Splitwood. For Berbice, output was 181 m<sup>3</sup> Paling Staves, the station of Unamco accounting for 92 m<sup>3</sup>. Production in Essequibo (48 m<sup>3</sup>) derived from Arapiaco, Parika and Supenaam

**Fig. 6.**



#### 4.1.5 Fuelwood Production

Data covers the two (2) Fuelwood products of Charcoal and Firewood.

Charcoal volume fell 18.6% from the 2005 level, volume being 318,939 kg compared to 391,708 kg then. Annual levels have fluctuated over the past four (4) years and have not recovered to 2000 - 2002 levels (*Appendix IX*)

All charcoal derived in Demerara, the majority, 237,688 m<sup>3</sup> (or 74.5%) from Soesdyke station. While there were monthly fluctuations more consistent volumes prevailed in the second semester which also recorded the greater volume overall for the year (**Fig. 7**, below).

Fig. 7.

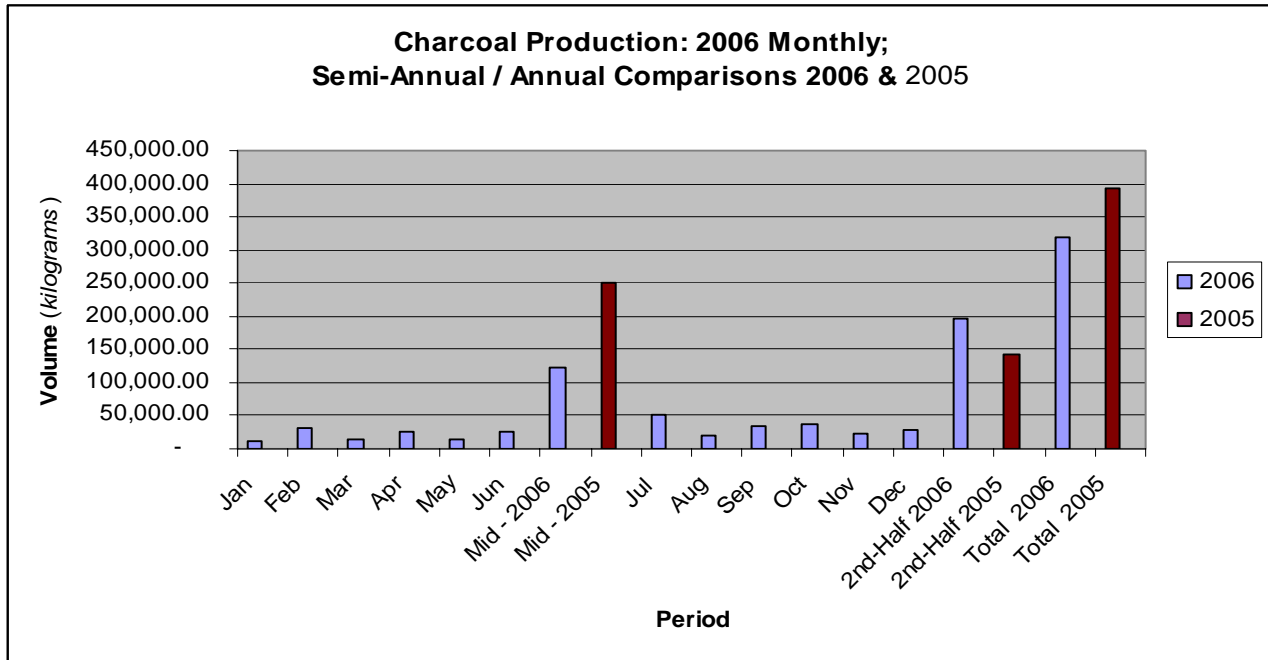
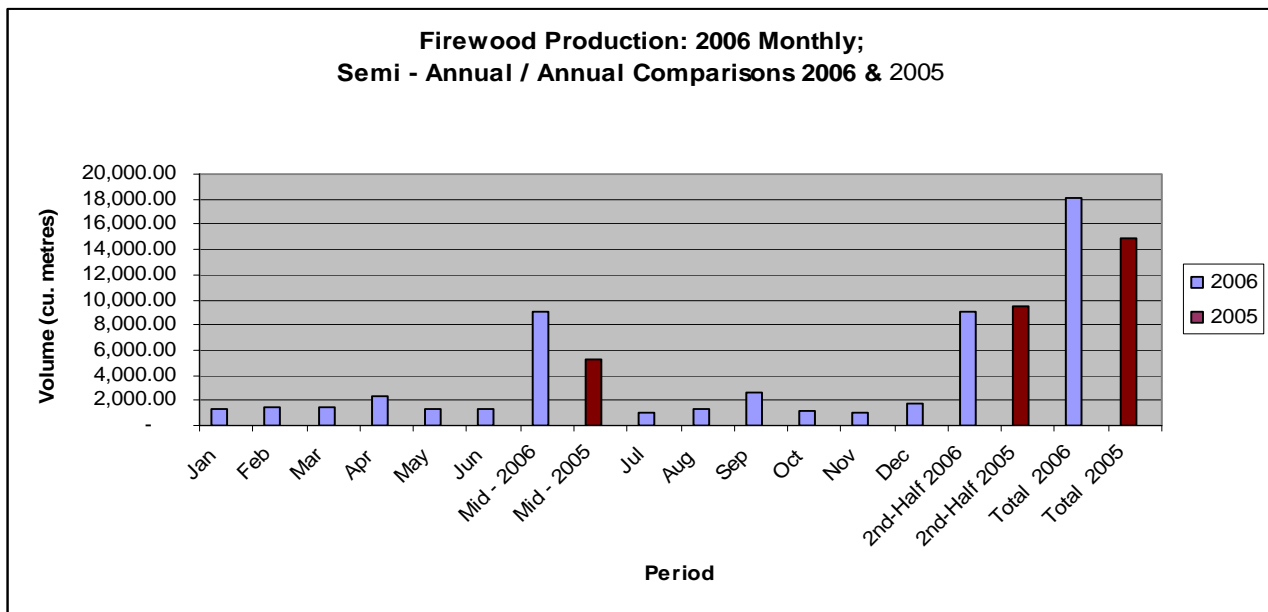


Fig. 8.



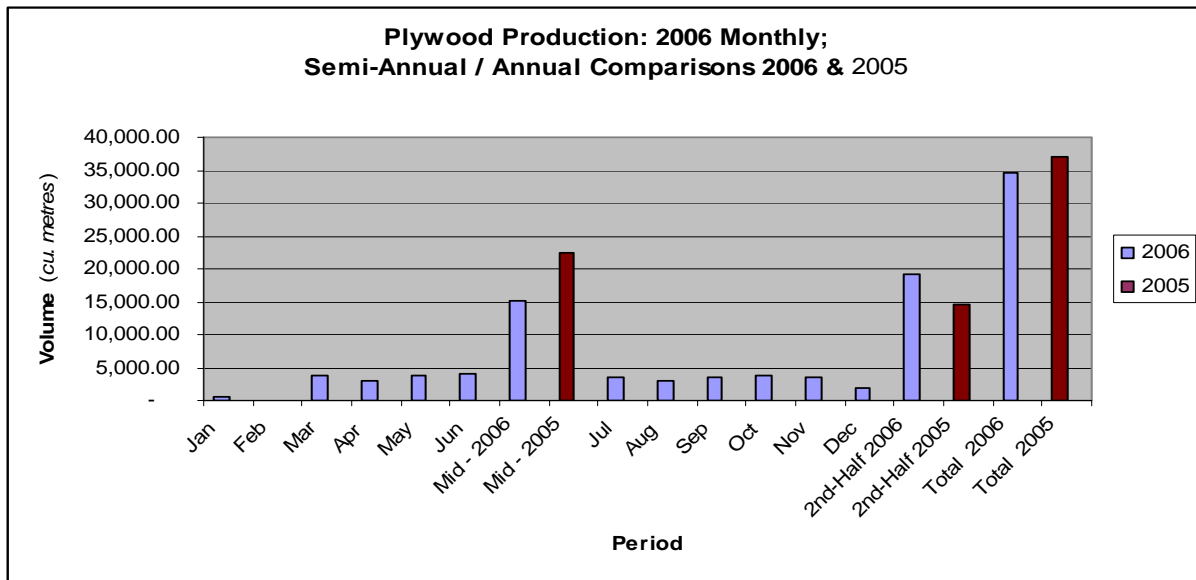
Firewood production increased 22.2%, moving from 14,823 m<sup>3</sup> in 2005 to 18,116 m<sup>3</sup> in 2006, the highest level for the past six (6) years (*Appendix IX*). Soesdyke was the main source, with 13,188 m<sup>3</sup> (72.8%), followed by Supenaam (4,416 m<sup>3</sup>). Production was evenly distributed between the first and second semesters of 2006 (**Fig. 8**, above).



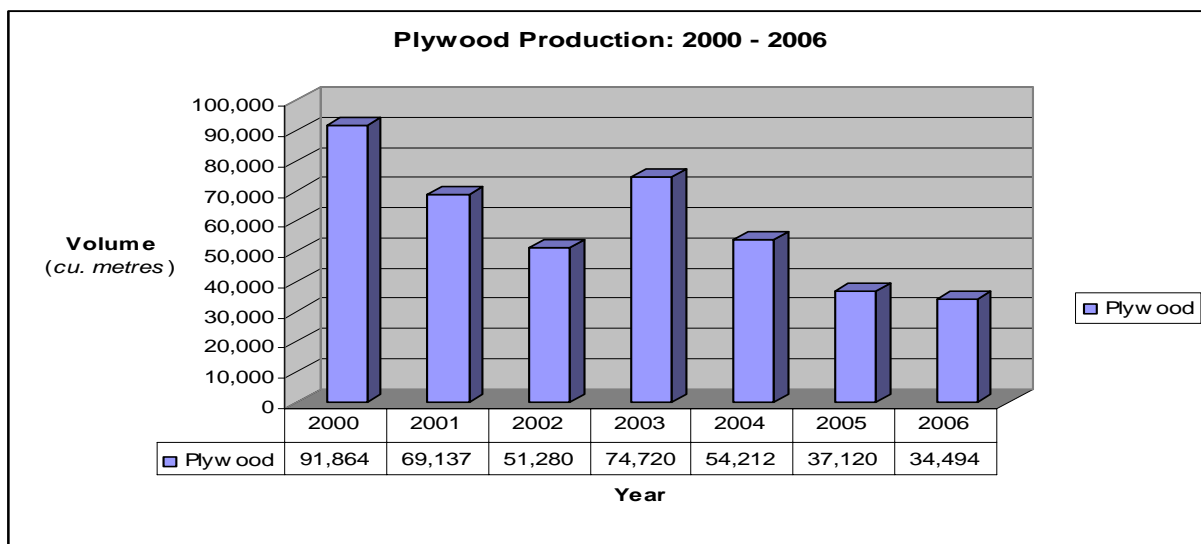
#### 4.1.6 Plywood Production

Plywood output fell from 37,120 m<sup>3</sup> to 34,494 m<sup>3</sup>, reflecting a decline of 7.1% from the 2005 level. This continued the decline which has set in since 2001, albeit there was some recovery in 2003 (**Fig. 10**, below). Compared to year 2000, the 2006 volume is a mere 37.5%. Nonetheless annual declines over the preceding five (5) years averaging 27% (except for 2003 when production recovered to reach 81% of the year 2000 level) seems to have been finally checked. Second semester performance for year 2006 outpaced the first (**Fig. 9**, below), responding to an improving export market. Further recovery is anticipated in 2007.

**Fig. 9.**



**Fig. 10.**



#### 4.1.7 NON-TIMBER FOREST PRODUCTS

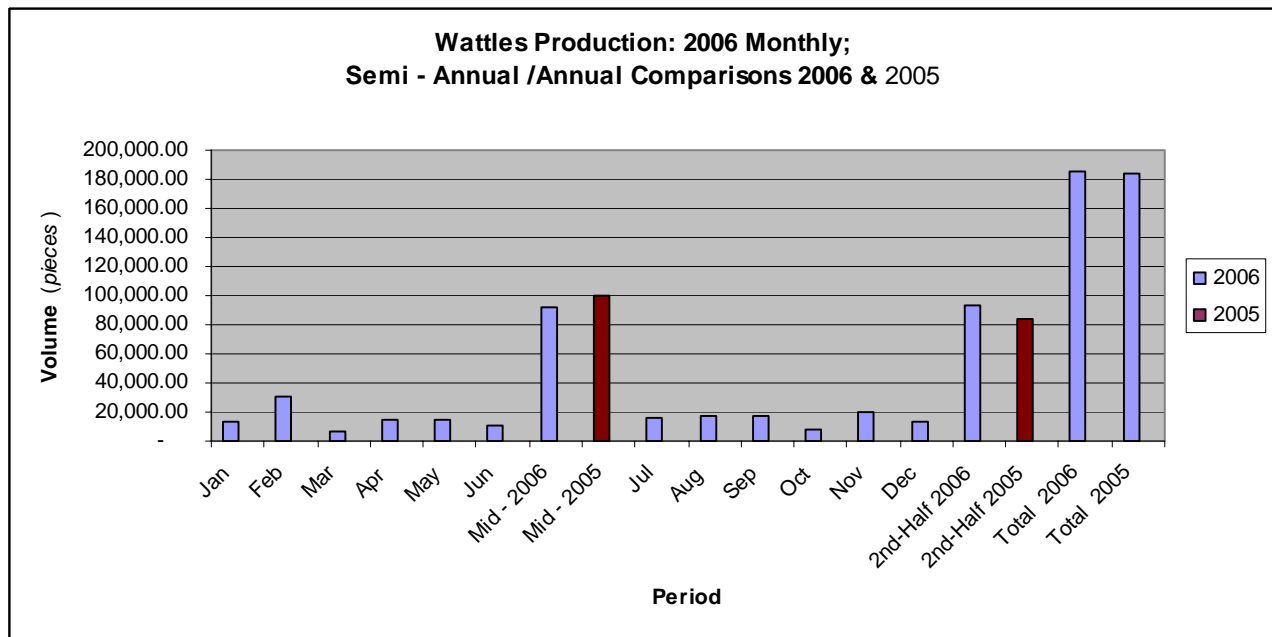
Non-Timber Forest Products (NTFP's) refer to a number of products other than primary and secondary timber products, deriving from forest resources. These include Wattles, Manicole Palm, Mangrove Bark, Palms, Latex (Balata), Liana Cane, Herbs, Wildlife and Eco-Tourism. While the Guyana Forestry Commission monitors all such extraction or activities in State Forests, production data presented here reports on Wattles, Manicole Palm (heart of palm) and Mangrove Bark

#### 4.1.8 Wattles Production

Wattles are saplings measuring less than 8 cm (3 inches) in diameter and are used as support structures in agricultural/farming activities and as form support for poured concrete in building construction. Production for 2006 totaled 185,515 pieces (pcs), representing marginal growth of 1% from 2005 (183,752 pcs). The majority production obtained in February (30,102 pcs), but the half-year performances were almost even. (Fig. 11, below).

Other than 130 pcs recorded at Buckhall, all production derived from Demerara with Soesdyke alone accounting for 183,335 pcs or 98.8% of the year's total.

**Fig. 11. Wattles Production for the Year 2006**



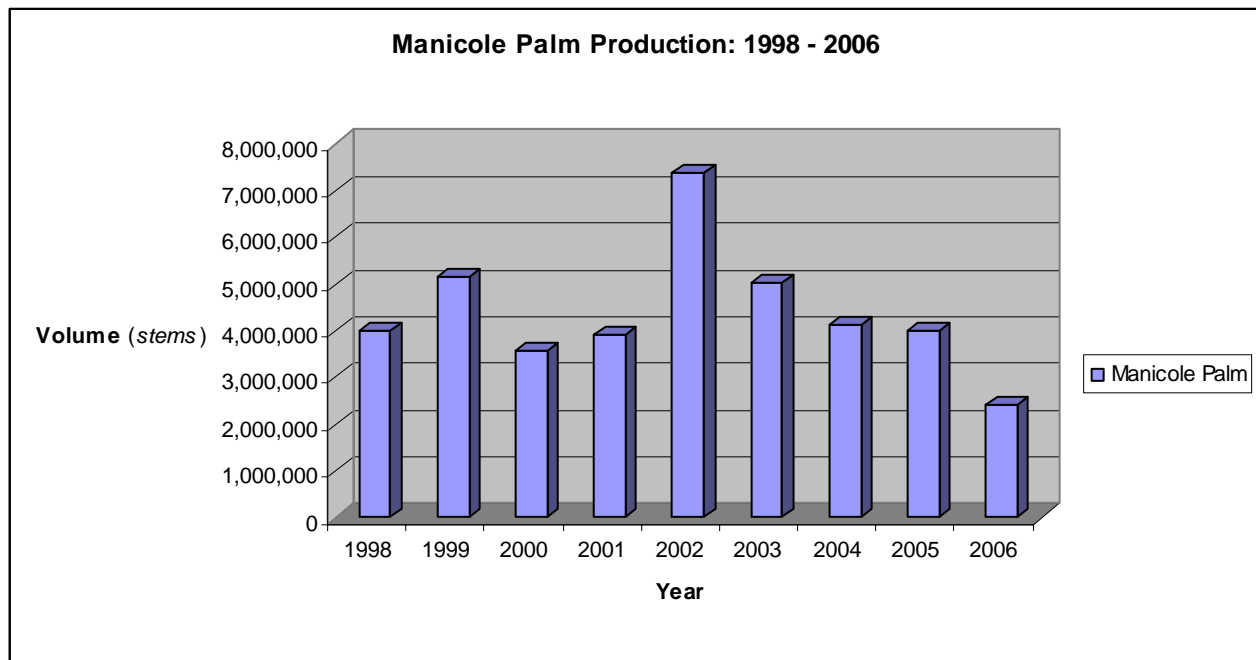
Wattles have shown exponential growth over the last seven (7) years (2000 – 2006) compared to an annual average of less than 5,000 pcs in the 1990's, jumping to 35, 438 in 2000 and climbing since to almost five (5) times this level by 2006 (Appendix IX).

#### 4.1.9 Manicole Palm Production

Manicole Palm (heart of palm) is produced mainly for export, being first extracted, processed and then canned. It is considered a delicacy, in Europe especially, and in North America. Domestic demand remains very small.

The sole producer in Guyana is Amazon Caribbean which extracts stems from its State Forest concession and also from Amerindian Reservations in the North West of Guyana. 2,425,746 stems were recorded for 2006, falling short of the 2005 level (4,007,579 stems) by 39.5%. Source stations were New Amsterdam (1,340,840 stems) and Mabaruma (1,066,591 stems). The 2006 decline is even more drastic considering that consistent annual levels averaging 4.2 million stems obtained among seven (7) of the preceding eight (8) years, the positive exception being 7.4 million stems in 2002 (**Fig. 12**, below).

**Fig. 12.**



#### 4.1.10 Mangrove Bark Production

Mangrove Bark is used for leather tanning activities primarily in Amerindian areas and production recent minimal production has recovered somewhat in 2006. 40,218 pieces were recorded for the year (38,918 pcs from Mabaruma and 1,300 pcs from Soesdyke) compared to 9,333 the previous year (*Appendix IX*).

## 4.2 Domestic Prices

Prices for forest products in the domestic market vary over time as well as among suppliers and across the three (3) forest Regions (Demerara, Essequibo and Berbice). Prices for Logs and Lumber also vary according to species demand.

Table 8, below, compares average price summaries for selected product groups between the years 2005 & 2006.

**Table 8: Average Domestic Prices for Timber & Plywood: Years 2005 – 2006**

YEAR	2005 Domestic	2006 Domestic	2005 Domestic	2006 ** Domestic
PRODUCT	G\$	G\$	US\$ equiv**	US\$ equiv**
<b>Logs</b>	19,278	<b>20,700</b>	96.39	103.5
<b>Sawnwood *</b>	58,606	<b>60,996</b>	293.03	304.98
<i>Dressed</i>	66,224	<b>68,925</b>	331.12	344.63
<i>Undressed</i>	55,090	<b>57,336</b>	275.45	286.68
<b>Roundwood</b>	40,589	<b>36,607</b>	202.95	183.04
<b>Splitwood</b>	21,187	<b>23,305</b>	105.94	116.53
<b>Fuelwood</b>	3,676	<b>4,376</b>	18.38	21.88
<b>Plywood</b>	53,011	<b>60,221</b>	265.01	301.11

N.B. \* Row indicates combined average for Dressed and Undressed Sawnwood

\*\* Exchange Rate: G\$200 = US

All domestic prices have risen from 2005 levels with the exception of roundwood, for which, both prices and production fell. For the others, supply increased in response to expanded domestic consumption and prices, except for plywood, for which, production was tied more to the export market, though domestic consumption and prices increased.

## 4.3 Employment

Table 9, below, compares employment numbers by forest sector activities for years 2005 and 2006. Total in 2006 of 25,889 persons represents an increase by 2,252 persons (or 9.5%) over the 23,637 for 2005. The lead activity continues to be logging which accounted for 54.5% in 2006, up from 51.7% in 2005, following an increase by 1,868 persons from 12,229 to 14,097. There were also increases in most other activities while numbers for Manicole Palm remained the same (658), as indicated by employer Amazon Caribbean. A marginal fall occurred for Plywood, from 712 in 2005 to 699 in 2006, and the primary employer, Barama

Company Limited, has advised that despite slowdown in output, most employees have been retained.

**Table 9: Forest Sector Employment: Years 2006 & 2005**

<b>Activity</b>	<b>Year 2005</b>	<b>Year 2006</b>	<b>% Increase/(Decrease)</b>
<b>Logging</b>	12,229	<b>14,097</b>	15.3
<b>Sawmilling</b>	4,051	<b>4,241</b>	4.7
<b>Timber Dealership</b> (Lumber Yards)	1,647	<b>1,825</b>	10.8
<b>Plywood</b>	712	<b>699</b>	(1.8)
<b>Manicole Palm</b>	658	<b>658</b>	0.0
<b>Other*</b>	4,340	<b>4,369</b>	0.7
<b>TOTAL</b>	<b>23,637</b>	<b>25,889</b>	<b>9.5</b>

\* Other: includes activities in Furniture, Building Components, Craft, Utensils/Ornaments, Firewood, Charcoal and Conservation.

It must be noted that organized forest activities in rural/hinterland and indigenous communities under community forestry associations are creating greater employment opportunities. Enabling conditions are provided by the GFC's Social Forestry/Social Development initiative. This includes capacity building, technical training in forest management, laws, etc, access to state forest concessions, and also promotes inter-agency co-operation to address wider social needs of beneficiary communities.

#### **4.4 Production Forecast: January – December 2007**

The forecast covers Logs and Primary Lumber. It considers production differentials over the past (5) years, factoring monthly, quarterly, semi-annual and annual trends to capture rainfall and other seasonal influences. Additionally, local and international growth projections, the continued expansion in Guyana's Engineering & Construction sector and a sustained favourable export market must be taken into account. For Logs, some adjustment has to be made for the impact of a restrictive Log Export Policy which may commence in 2008 for the major species. However, if the anticipated result of a growth in mill sawn lumber production and exports materializes, a disruption in log output may only occur in the first months following restrictions, as sawmill activities adjust.

Monthly projections for Logs and Lumber are outlined in *Table 10*, below.

Table 10: Monthly Logs and Lumber Projections for Year 2007

Month	Log Volume (m3)		Primary Lumber Volume (m3)	
	2006 Actual	2007 Projected	2006 Actual	2007 Projected
January	10,390	11,949	4,819	5,542
February	33,691	38,745	3,391	3,900
March	43,926	50,515	6,052	6,960
April	46,458	53,427	5,847	6,724
May	32,501	37,376	4,503	5,178
June	15,148	17,420	4,881	5,613
July	25,513	29,340	4,743	5,454
August	36,265	41,705	6,201	7,131
September	45,434	52,249	4,225	4,859
October	41,796	48,065	5,065	5,825
November	40,196	46,225	10,996	12,645
December	22,650	26,048	6,846	7,873
<b>TOTAL</b>	<b>393,968</b>	<b>453,063</b>	<b>67,569</b>	<b>77,704</b>

## 5.0 EXPORTS

Continued growth 4% – 5% in the world economy annually since 2003 has impacted positively on Guyana's forest products exports. This is reflected in increasing export volumes, values and unit prices for the major products, Logs and Sawnwood. And while the declining trend for Plywood has persisted, stabilisation and recovery has commenced over the latter half of 2006.

*Table 11*, overleaf, compares 2006 and 2005 volumes, values and relative percentage shares of value by product/species categories. *Appendix V* lists volumes and values for individual products for second semesters and full years 2006 and 2005.

The data indicate that Log export volumes have grown exponentially, Sawnwood and Splitwood volumes have increased steadily, Roundwood has fluctuated and Plywood's major decline leveled out. Export value totaled US\$59.5 M, 22.6% greater than for 2005 (US\$45.6 M). Performance over the second half-year (US\$33.4 M) similarly outpaced (by 23.9%) the previous year comparative period (US\$27.0 M).

The growth rate in 2006 exports is also way ahead of the 11.9% increase recorded for 2005 over 2004. While favourable world economic conditions, particularly strong economic growth in Guyana's major timber export regions of Asia/Pacific and Europe are definite factors, the establishment of the Forest Products Marketing Council Inc (December 2005), may have been instrumental in positively influencing this trend especially in Latin America and the Caribbean.

The major export earners were Logs and Sawnwood, accounting, respectively, for 37.4% (24.8% in 2005 and 13.4% in 2004) and 34.4% (36.4% in 2005 and 31.8% in 2004) of total export value. Asia/Pacific was the major destination region for logs, Latin America & the Caribbean, the major region for sawnwood. Plywood, realized 14.8% (23.3% in 2005 and 35.8% in 2004) of total export value, while Roundwood accounted for 3.8% (3.6% in 2005 and 5.9% in 2004). Splitwood exports contributed 2.0% of earnings compared to 2.2% in 2005 and 2.7% in 2004. Together, the above five (5) product groups were responsible for 92.4% of export value compared to 94.2% in 2005 and 89.6% in 2004. Other exported products such as Fuelwood; the NTFP's of Manicole Palm, Kuffa and Nibbi; Craft; Utensils/Ornaments, etc., reflected minimal, but also consistent shares of value.

For some species of logs, exports captured the majority production. This was evident for Purpleheart, Mora, Wamara, Shibadan, Tatabu, Kereti, Tonka Bean and Limonaballi (*Appendix VIII* attached). In the case of Purpleheart, the Furniture and Building Components sub-sectors would have been affected. These have the greatest potential for value-added exports. Nonetheless, exports of such and other secondary products have attained consistent combined values, totaling US\$4.3 M in 2006 following US\$4.3 M and US\$4.5 M in 2004 and 2005, respectively.

Table 11: Export Products Volumes, Values and Percentage Changes and Relative Shares

(Comparison of Years 2005 & 2006)

PRODUCT	Jan - Dec 2005				Jan - Dec 2006					
	Volume	Value	% Val <sub>1</sub>	% Val <sub>2</sub>	Volume	% Vol Chg	Value	% Val Chg	% Val <sub>1</sub>	% Val <sub>2</sub>
<b>TIMBER and PLYWOOD</b>	m3	US\$			m3		US\$			
<b>Logs</b>										
Greenheart	26,411.81	2,732,209.36	22.72	5.63	58,684.23	122.19	6,227,208.17	127.92	27.96	10.46
Purpleheart	35,274.75	4,455,751.76	37.05	9.18	45,728.59	29.64	7,148,541.51	60.43	32.09	12.01
Other Special Category	2,881.88	285,029.26	2.37	0.59	8,139.94	182.45	854,593.18	199.83	3.84	1.44
<b>Total Special Category Logs</b>	<b>64,568.44</b>	<b>7,472,990.38</b>	<b>62.14</b>	<b>15.39</b>	<b>112,552.76</b>	<b>74.32</b>	<b>14,230,342.86</b>	<b>90.42</b>	<b>63.89</b>	<b>23.90</b>
Class 1	36,390.60	3,265,974.37	27.16	6.73	54,421.99	49.55	5,796,925.43	77.49	26.02	9.74
Class 2	3,520.50	307,715.01	2.56	0.63	6,978.94	98.24	684,079.30	122.31	3.07	1.15
Class 3	11,287.32	978,915.32	8.14	2.02	16,828.84	49.10	1,563,137.89	59.68	7.02	2.63
<b>Total Other Class Logs</b>	<b>51,198.42</b>	<b>4,552,604.70</b>	<b>37.86</b>	<b>9.38</b>	<b>78,229.77</b>	<b>52.80</b>	<b>8,044,142.62</b>	<b>76.69</b>	<b>36.11</b>	<b>13.51</b>
<b>Total of Logs</b>	<b>115,766.86</b>	<b>12,025,595.08</b>	<b>100.00</b>	<b>24.77</b>	<b>190,782.53</b>	<b>64.80</b>	<b>22,274,485.48</b>	<b>85.23</b>	<b>100.00</b>	<b>37.41</b>
<b>Sawnwood</b>										
Greenheart	15,979.71	6,890,082.15	38.97	14.19	17,223.81	0.08	7,991,046.36	15.98	39.06	13.42
Purpleheart	10,160.31	4,876,485.70	27.58	10.04	10,414.71	0.03	5,487,376.77	12.53	26.82	9.22
Other Special Category	987.20	632,207.07	3.58	1.30	1,297.74	0.31	841,863.82	33.16	4.12	1.41
<b>Total Spec. Cat. Sawnwood</b>	<b>27,127.22</b>	<b>12,398,774.92</b>	<b>70.12</b>	<b>25.54</b>	<b>28,936.26</b>	<b>6.67</b>	<b>14,320,286.95</b>	<b>15.50</b>	<b>70.00</b>	<b>24.05</b>
Class 1	12,751.04	4,472,632.12	25.30	9.21	12,993.81	0.02	5,012,368.45	12.07	24.50	8.42
Class 2	585.74	225,909.48	1.28	0.47	972.45	0.66	374,542.68	65.79	1.83	0.63
Class 3	1,633.81	583,777.57	3.30	1.20	2,027.52	0.24	749,830.72	28.44	3.67	1.26
<b>Total Other Class Sawnwood</b>	<b>14,970.59</b>	<b>5,282,319.17</b>	<b>29.88</b>	<b>10.88</b>	<b>15,993.78</b>	<b>6.83</b>	<b>6,136,741.85</b>	<b>16.18</b>	<b>30.00</b>	<b>10.31</b>
<b>Total of Sawnwood</b>	<b>42,097.81</b>	<b>17,681,094.09</b>	<b>100.00</b>	<b>36.41</b>	<b>44,930.04</b>	<b>6.73</b>	<b>20,457,028.80</b>	<b>15.70</b>	<b>100.00</b>	<b>34.36</b>
<b>Roundwood</b>										
Greenheart Piles	6,091.15	1,260,726.05	71.38	2.60	7,910.05	29.86	1,536,940.45	21.91	67.17	2.58
Kakaralli Piles	225.35	61,205.35				61.22		14.37		



			3.47	0.13	363.30		70,001.96		3.06	0.12
Other Piles	181.96	46,958.58	2.66	0.10	-	(100.00)	-	(100.00)	-	-
Poles	2,069.44	310,342.57	17.57	0.64	4,781.66	131.06	592,274.70	90.85	25.89	0.99
Posts	413.92	87,035.90	4.93	0.18	459.81	11.09	88,486.02	1.67	3.87	0.15
Spars	-	-	-	-	8.49		375.00	-	0.02	0.00
<b>Total of Roundwood</b>	<b>8,981.82</b>	<b>1,766,268.45</b>	<b>100.00</b>	<b>3.64</b>	<b>13,523.31</b>	<b>50.56</b>	<b>2,288,078.13</b>	<b>29.54</b>	<b>100.00</b>	<b>3.84</b>
<b>Splitwood</b>	<b>2,198.27</b>	<b>1,056,137.84</b>	<b>100.00</b>	<b>2.18</b>	<b>2,381.79</b>	<b>8.35</b>	<b>1,217,928.41</b>	<b>15.32</b>	<b>100.00</b>	<b>2.05</b>
<b>Plywood</b>	<b>36,574.30</b>	<b>11,329,555.01</b>	<b>100.00</b>	<b>23.33</b>	<b>23,949.79</b>	<b>(34.52)</b>	<b>8,796,121.39</b>	<b>(22.36)</b>	<b>100.00</b>	<b>14.77</b>
<b>TOTAL TIMBER AND PLYWOOD</b>	<b>205,619.06</b>	<b>43,858,650.47</b>	<b>100.00</b>	<b>90.33</b>	<b>275,567.46</b>	<b>34.02</b>	<b>55,033,642.21</b>	<b>25.48</b>	<b>100.00</b>	<b>92.43</b>
<b>OTHER VALUE-ADDED PRODUCTS</b>										
Furniture (pieces)	46,235.00	3,480,307.08	76.69	7.17	59,246.00	28.14	3,031,145.64	(12.91)	70.64	5.09
Building Componentry * (pieces)	57,437.00	810,650.54	17.86	1.67	62,237.00	8.36	1,058,044.31	30.52	24.66	1.78
Mouldings (m)	184,490.78	247,006.21	5.44	0.51	116,819.66	(36.68)	201,539.06	(18.41)	4.70	0.34
<b>TOTAL OTHER VALUE-ADDED</b>		<b>4,537,963.83</b>	<b>100.00</b>	<b>9.35</b>			<b>4,290,729.01</b>	<b>(5.45)</b>	<b>100.00</b>	<b>7.21</b>
<b>OTHER PRODUCTS</b>										
Fuelwood (m <sup>3</sup> )	1,708.98	41,029.37	25.83	0.08	3,542.95	107.31	104,357.43	154.35	48.66	0.18
Non-Timber Forest Prod.* (pieces)	1,867.00	41,934.56	26.40	0.09	2,827.00	51.42	74,639.66	77.99	34.81	0.13
Other * (pieces)	12,858.00	75,857.94	47.76	0.16	8,037.00	(37.49)	35,447.49	(53.27)	16.53	0.06
<b>TOTAL OTHER PRODUCTS</b>		<b>158,821.87</b>	<b>100.00</b>	<b>0.33</b>			<b>214,444.58</b>	<b>35.02</b>	<b>100.00</b>	<b>0.36</b>
<b>TOTAL EXPORT VALUE</b>		<b>48,555,436.17</b>		<b>100.00</b>			<b>59,538,815.80</b>	<b>22.62</b>		<b>100.00</b>

\* a) Non - Timber Forest Products - includes Manicole Palm, Kufa, Nibbi items; Spindles, Other Builders' Joinery; Pre-Fabricated Houses;

b) Building Componentry - includes Doors, Door Components, Windows, Rails, c) Other - includes Craft, Wooden Utensils/Ornaments, Pre-fabricated Houses

<sup>1</sup> % of Product/Group Total Value

<sup>2</sup> % of Total Export Value for the Year

The major products Logs, Sawnwood, Roundwood and Plywood are now assessed in greater detail.

## 5.1 Log Exports

Log exports totaled 190,783 m<sup>3</sup>, that is, 64.8% higher than the previous year's 115,767 m<sup>3</sup>. Value increased by a greater proportion, 85.2%, totaling US\$22.3 M compared to US\$12.0 M in 2005. There have, therefore, been greater export opportunities both in terms of log volumes and higher unit prices on average, especially for the higher valued species such as Greenheart and Purpleheart.

Greenheart log exports totaled 58,684 m<sup>3</sup>, more than double (122.2% increase) the 2005 volume (26,412 m<sup>3</sup>). The 2006 exports also equated to 45% of total greenheart logs produced and 30.8% of total log exports. The export value of US\$6.2 M, was also over twice (127.9% increase) that of 2005 (US\$2.7 M), reflecting slightly higher prices and accounting for a higher share, 27.8%, of total log export value compared to 22.7% previously.

Purpleheart logs totaled 45,729 m<sup>3</sup> with value US\$7.1 M compared to 35,275 m<sup>3</sup> and US\$4.5 M in 2005, representing volume and value increases of 29.6% and 60.3%. The significantly higher average prices continued Purpleheart's status as the lead revenue species, despite being overtaken in volume by Greenheart. Purpleheart accounted for 32.1% of total log export earnings compared to 37.1% previously.

Together, all Special Category Log exports amounted to 59.0% of volume (55.8% in 2005), 63.9% of log earnings (62.1% in 2005) and 23.9% of all export value (15.4% in 2005). Special Category log volume and value increases over 2005 were 74.3% and 90.4%, respectively. Logs of the other species categories (Class 1, Class 2, Class 3) also generated significant export increase. Volume and value were 78,230 m<sup>3</sup> and US\$8.0 M, respectively, representing increases over the previous year by 52.8% and 76.7% and bearing out the price-induced disproportionately greater increase in value. Contribution to total log export value was 36.6% compared to 37.9% in 2005 indicating a consistent share over the two (2) years.

The dominance of Guyana's log market by the Asia/Pacific region derives particularly from India and China, two (2) economies with the strongest growth in the world over the past several years, driven by production and export of hi-tech goods and services and other value-added products, including timber derivatives. The latter affects the competitiveness of Guyana's value-added timber products, both because of price (with China/India's greater volumes and lower unit costs deriving from labour factors and economies of scale) and considering our domestic technology, capital, operational, managerial and market negotiation constraints. Hence the dominance of log exports and Guyana's dependence on locating niche markets for semi-processed and value-added items.

## 5.2 Sawnwood Exports

Sawnwood exports for the year totaled 44,930 m<sup>3</sup> and US\$20.5 M compared to 42,098 m<sup>3</sup> and US\$17.7 M in 2005, indicating volume increase of 6.7% and value increase by a disproportionately higher 15.7%. This was also driven by more favourable demand and price conditions.

Sawnwood exports of the Greenheart and Purpleheart species, together totaled 27,639 m<sup>3</sup> or 61.5% of total Sawnwood volume, and US\$13.5 M or 65.9% of value. Year 2005 levels were 26,140 m<sup>3</sup> and US\$11.8 M, indicating growth in 2006 by 5.7% volume and 14.4% value, thereby reflecting the improved prices.

Exports were primarily of Undressed Sawnwood, which totaled 35,302 m<sup>3</sup> (compared to 9,628 m<sup>3</sup> for Dressed Sawnwood) and US\$15.8 M (compared to US\$4.7 M for dressed sawnwood) and represented 78.6% volume and 77.2% of value. By comparison, for both 2005 and 2004 dressed sawnwood commanded the more equitable volume shares of 47.0% (19,804 m<sup>3</sup> out of 42,098 m<sup>3</sup>) and 46.3% (17,367 m<sup>3</sup> out of 37,509 m<sup>3</sup>) for the respective years. Values reflected the greater shares of 50.4% (US\$8.9 M out of US\$17.7 M) and 50.2% (US\$6.9 M out of US\$13.8 M) for 2005 and 2004, respectively. Dollar value gains in price for undressed sawnwood exceeded those for the dressed variety skewing exports towards the former. The major export market for sawnwood, obtained in the Latin America/Caribbean region, though there were significant exports to Europe, with sawnwood being Guyana's major timber product to that region. Exports to North America fell.

The major export species were Greenheart, Purpleheart, and Mora, though there were also significant volumes of Kabukalli, Locust and Burada.

## 5.3 Roundwood Exports

Roundwood exports were 13,523 m<sup>3</sup> valued at \$US2.3M, increasing, compared to 2005, by 50.1% volume (from 8,982 m<sup>3</sup>) and 29.5% value (from US1.8 M). Unlike the case with Logs and Sawnwood, this reflects lower unit prices. Domestic consumption of the major roundwood item, Greenheart Piles, declined by over 80% and prices fell more sharply inducing lower production (by 30%) but a shift to increased exports (by 30% from 6,092 m<sup>3</sup> to 7,910 m<sup>3</sup>) to partially offset earnings loss. The major producers of roundwood differ from the major log and sawnwood producers and are dependent on this product group. The pile decline occurred despite continued and even stronger growth in the Engineering & Construction sector and may be explained from piles being a first stage (foundation) input and the larger activities progressing from previous year (s).

Export of the other significant roundwood product, Wallaba Poles more than doubled, from 2,069 m<sup>3</sup> in 2005 to 4,782 m<sup>3</sup> in 2006. Value increased 90.9% from US\$0.31 M to US\$0.59 M

The major export destination for Roundwood continues to be North America, though volumes to the Latin America/Caribbean region have more than doubled between the two (2) years.

#### **5.4 Plywood Exports**

Plywood export volume decreased 34.5%, from 36,574 m<sup>3</sup> to 23,950 m<sup>3</sup>. This was despite an improvement in the average unit prices, following a slight fall in 2005. The export value fell from US\$11.3 M to US\$ 8.8 M,

The downward trend in plywood exports has obtained for several years, both in absolute volumes and value as well as relative share of total export value. Share of total export value has moved from 35.9% (With in 2004 (US\$15.5 M of US\$43.4 M total) to 23.3% in 2005, with a further reduction to 14.8% in 2006.

Prices have improved, however, especially over the latter half of 2006, and particularly so on exports to Europe. That region surpassed both Latin America/Caribbean and North America in 2006, just replacing the latter as the lead destination for Guyana's plywood.

#### **5.5 Other Value-Added Exports**

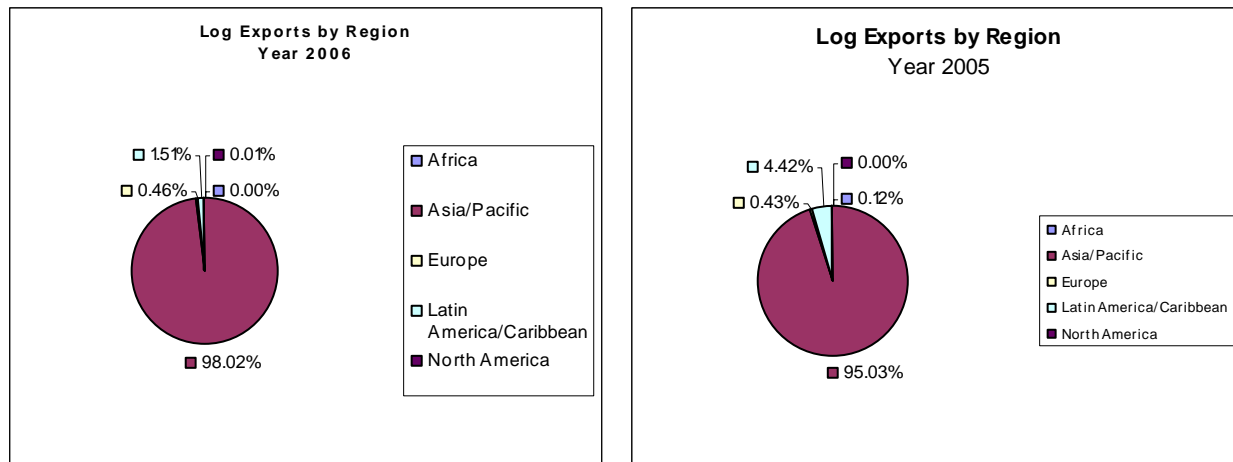
The combined value of Other Value-Added Products (that is, other than Plywood) was US\$4.3 M for the year compared to US\$4.5 M for 2005. This was due to a fall in Furniture exports from US\$3.5 M to US\$3.0 M, only partially offset by an increase for Building Componentry (doors, windows, rails, etc) from US\$0.8 M to US \$1.1 M. Nonetheless, values over the past three (3) years have been consistently higher than earlier years.

#### **5.6 EXPORTS BY DESTINATION**

This section examines exports of the individual products Logs, Sawnwood, Roundwood, Splitwood and Plywood, by their export destinations in terms of the international regions of Asia/Pacific, Europe, Latin America/Caribbean, North America and Africa. Summaries, by volume and values are presented in *Appendix VI and Appendix VII*, attached, and are discussed further below. Value comparisons, by the regions, are also included for Other Value-Added exports.

### 5.6.1 Log Exports by Destination

**Fig. 12. Log Exports by Destination: Comparison of Regional Distribution for Years 2006 & 2005**



The primary destination region for Log exports was Asia/Pacific which received 98.0% (187,013 m<sup>3</sup>) for the year, up from a 95.0% share (110,012 m<sup>3</sup>) for 2005. The region's volume increase of 77,001 m<sup>3</sup> was greater than the overall increase (75,016 m<sup>3</sup>) in log exports for 2006, as exports to Latin America/Caribbean fell. Europe's minimal share improved slightly, (**Fig. 12**, above)

The major importing countries in Asia/Pacific were India and China, the two fastest growing economies globally. Logs to India totaled 78,694 m<sup>3</sup> or 42.1% of exports to the region (41.2% of total log exports). The major species were Greenheart, Mora and Purpleheart. Exports to China totaled 77,796 m<sup>3</sup> or 41.6% of logs to the region (and 40.8% of total log exports). Again, the major species were Greenheart, Purpleheart and Mora.

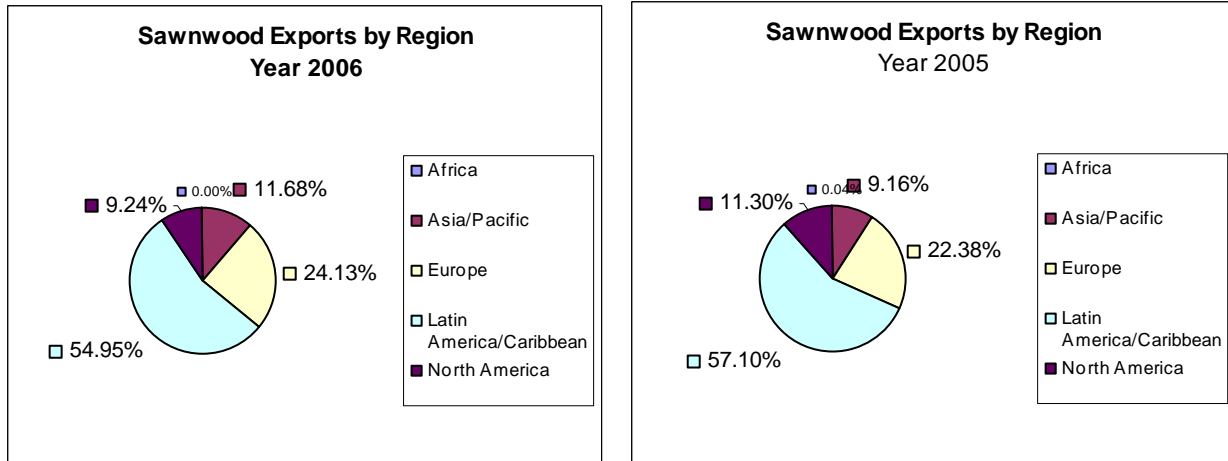
Other significant log export species were Bulletwood, Kabukalli, Wamara, Darina, Shibadan, Limonaballi, Soft Wallaba, Tatabu, Burada, Tonka Bean and Kereti.

### 5.6.2 Sawnwood Exports by Destination

The main export region continues to be Latin America/Caribbean though export volumes to Europe and Asia/Pacific have increased over 2005. Latin America/Caribbean absorbed 54.9 (24,687 m<sup>3</sup>) of Guyana's Sawnwood exports. Barbados alone received 52.5% of the region's total. The 2006 level to the region was marginally higher compared to the 2005 volume of 24,039 m<sup>3</sup> (57.1% share of all Sawnwood exports). Exports to Asia/Pacific improved from a 9.2% share (3,858 m<sup>3</sup>) to 11.7% (5,248 m<sup>3</sup>). Volume and relative share also improved for Europe from 9,423 m<sup>3</sup> (22.4%) to 10,844 m<sup>3</sup> (or 24.1%) while falling for North

America. (Fig. 13, below)

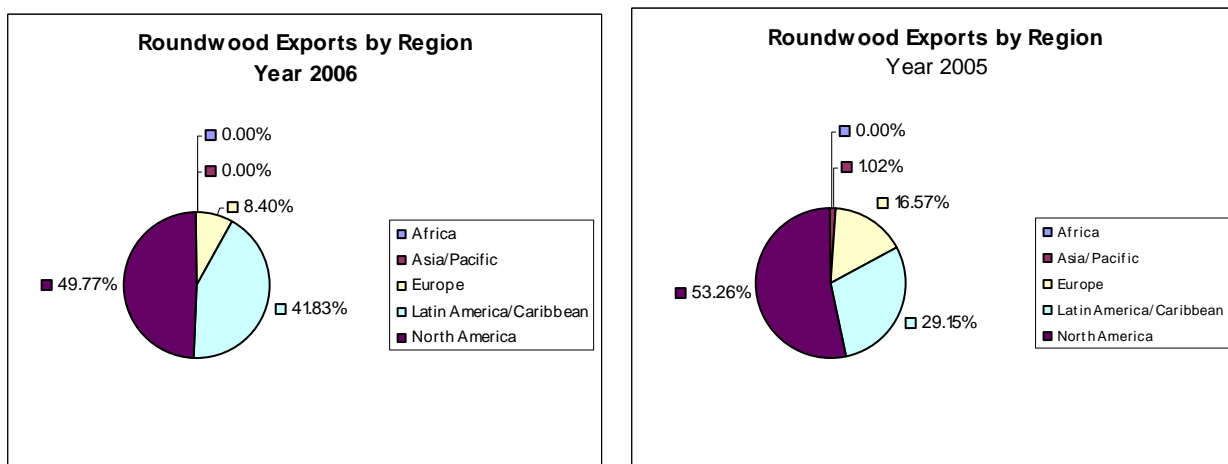
**Fig. 13. Sawnwood Exports by Destination: Comparison of Regional Distribution for Years 2006 & 2005**



**5.6.3 Roundwood Exports by Destination**

North America accounted for 49.8% or 6,731 m<sup>3</sup>, volume increasing 40.7% over 2005 (4,784 m<sup>3</sup>) but share dropping from 53.3% (Fig 14, below). Exports to Latin America/Caribbean more than doubled, from 2,618 m<sup>3</sup> to 5,656 m<sup>3</sup>, relative share climbing to 41.8% from 29.1% the previous year. The majority Poles went to Latin America/Caribbean, particularly Trinidad & Tobago, while the United States (North America region) was the primary importer of Greenheart Piles.

**Fig. 14. Roundwood Exports by Destination: Comparison of Regional Distribution for Years 2006 & 2005**

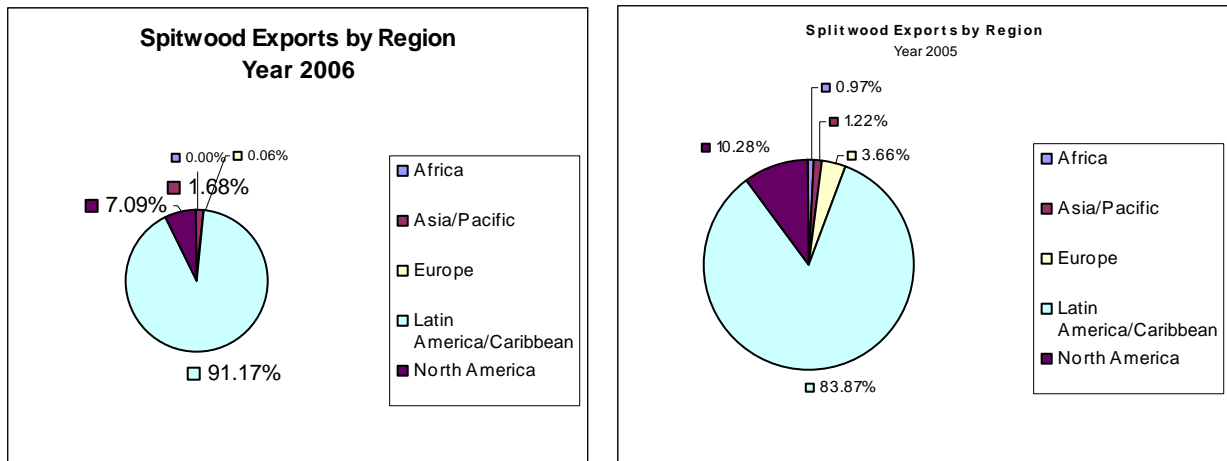


### 5.6.4 Splitwood Exports by Destination

The bulk of Splitwood exports went to the Latin America/Caribbean region which received 2,171 m<sup>3</sup> or 91.2% of total Splitwood exports (of 2,382 m<sup>3</sup>) for the year, up from 1,844 m<sup>3</sup> or 83.9% (of 2,198 m<sup>3</sup>) in 2005. These were spread among numerous Caribbean islands, however, Antigua & Barbuda, Turks & Caicos Islands and Barbados, together received 50.9% of the region's total in 2006.

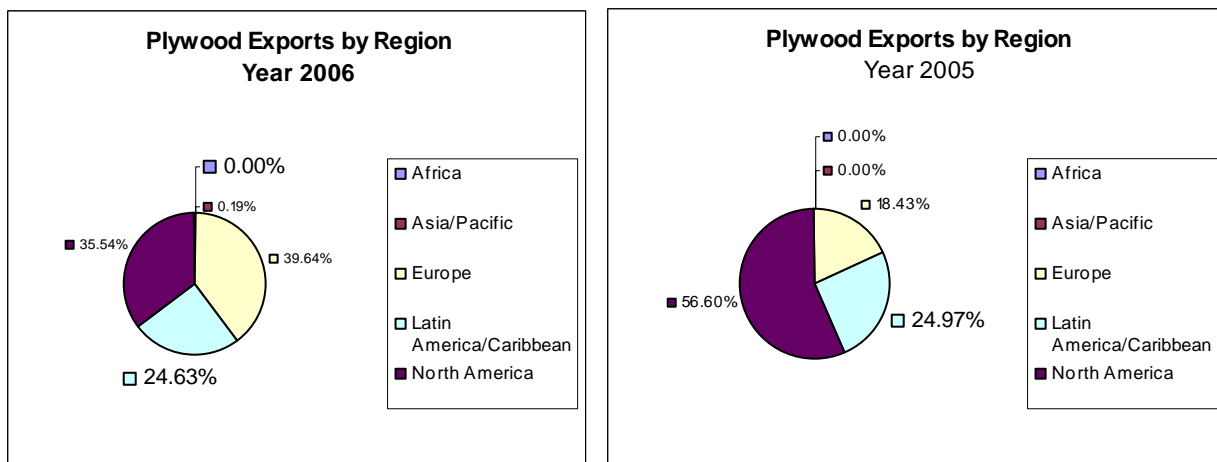
Exports to the other regions remain marginal (**Fig. 15**, below).

**Fig. 15. Splitwood Exports by Destination: Comparison of Regional Distribution for Years 2006 & 2005**



### 5.6.5 Plywood Exports by Destination

**Fig. 16. Plywood Exports by Destination: Comparison of Regional Distribution for Years 2006 & 2005**



Europe replaced North America as the lead export region for Guyana's Plywood, driven by higher prices. The region's share surged from 18.4% to 35.5% as volume increased 40.8% from 6,739 m<sup>3</sup> in 2005 to 9,493 m<sup>3</sup> in 2006. However, a drastic fall in exports to North America, the United States being the region's primary importer (97.6% share in 2005 and 99.7% share in 2006) and experiencing a slump in housing, ensured the product's decline of recent years persisted. Volume more than halved (58.9% decrease) from 20,702 m<sup>3</sup> in 2005 to 8,511 m<sup>3</sup> in 2006, the region's share of total plywood exports dropping from 56.6% to 35.5%. Exports to Latin America/Caribbean also decreased, by 35.4% from 9,134 m<sup>3</sup> in 2005 to 5,900 m<sup>3</sup> in 2006, relative share remaining stable however, at 24.6% in 2006 compared to 25.0% the previous year (**Fig.16**, above). The main European importer was the United Kingdom which absorbed 7,415 m<sup>3</sup> or 78.1% of the region's share and 31.0% of Guyana's total plywood exports. In Latin America/Caribbean, the major importers were Belize, Trinidad & Tobago and Suriname, together accounting for 89.6% of the region's plywood imports from Guyana.

## 5.7 EXPORT PRICES

Prices varied widely by products, species, product quality, destinations and dates. *Table 12*, below, summarizes average export prices for 2005 and 2006. These are also compared to domestic price averages for the respective years.

*Table 12: Average Prices for Timber & Plywood - Domestic and Export Markets -  
Years 2006 & 2005*

YEAR / MARKET	2005 Domestic	2006 Domestic	2005 ** Domestic	2005 Export	2006 Export	2006 ** Domestic
PRODUCT	G\$	G\$	US\$ equiv	US\$ (FOB)	US\$ (FOB)	US\$ equiv
Logs	19,278	<b>20,700</b>	96.39	125.88	<b>132.71</b>	103.5
Sawnwood *	58,606	<b>60,996</b>	293.03	420.00	<b>455.31</b>	304.98
<i>Dressed</i>	66,224	<b>68,925</b>	331.12	450.36	<b>485.09</b>	344.63
<i>Undressed</i>	55,090	<b>57,336</b>	275.45	393.02	<b>447.19</b>	286.68
Roundwood	40,589	<b>36,607</b>	202.95	216.65	<b>197.37</b>	183.04
Splitwood	21,187	<b>23,305</b>	105.94	480.5	<b>511.30</b>	116.53
Fuelwood	3,676	<b>4,376</b>	18.38	24.01	<b>29.45</b>	21.88
Plywood	53,011	<b>60,221</b>	265.01	309.77	<b>367.27</b>	301.11

N.B. \* Row indicates combined average for Dressed and Undressed Sawnwood

\*\* Exchange Rate: G\$200 = US\$1



On average, export prices have increased for most products, driving greater production and exports, especially for logs and sawnwood. For the latter, the absolute dollar increase for the undressed variety was greater than for the dressed variety, precipitating a shift to primarily undressed sawnwood exports. For Plywood, despite higher prices in 2006 volume lagged, failing to be picked up sufficiently after 2005 reductions and fluctuations in previous years. While roundwood prices fell, exports increased, partly to offset domestic declines in price, and particularly in consumption. Domestic prices reflect the above change patterns between 2005 and 2006, increases due primarily from responses to fuel price hikes and possibly based on the expanding demand from the Engineering & Construction sector. Levels remain below export prices, however.

## **5.8 EXPORT COMMISSION**

All exports of primary and secondary forest products (both Timber and Non-Timber products) have to first be authorized by the Guyana Forestry Commission in the form of an Export Permit. The GFC charges an Export Commission of 2% of export value based on invoices submitted with the export permit application. Some products are exempt from this charge, however. These are Furniture, Wooden Utensils/Ornaments, Crafts and Non-Timber Forest Products.

Export Commission for 2006 totaled US\$ 721,077 compared to US\$528,765 in 2005 (*Table 13* and *Table 14*, below), representing an increase of 36.4% (US\$192,312) though total export value increased by a smaller proportion, 22.6%. This is explained by a fall in the regular exempted component (furniture, etc) of total export value by 12.7% from US\$3.6 M to US\$3.1 M, but primarily from the decline in export value of waived Plywood. The latter dropped 23.2% from US\$11.2 M (or 23.1% of total exports) in 2005 to US\$ 8.6 M (or 14.5% of total exports) in 2006. Therefore, in addition to overall export value being higher for 2006 compared to 2005, the chargeable value was disproportionately higher, with a corresponding impact on export commission.

Table 13: Export Value and Commission

Monthly Comparison for Years 2006 &amp; 2005

(US\$)

Month	Export Value		Commission	
	2005	2006	2005	2006
January	1,869,376	2,780,044	20,904	34,376
February	4,093,650	3,597,393	26,888	47,015
March	5,287,600	5,112,214	50,242	60,907
April	3,519,403	3,994,576	36,367	62,759
May	2,872,777	5,165,857	34,874	57,502
June	3,937,742	5,464,150	49,586	61,341
<b>First Half-Year</b>	<b>21,580,549</b>	<b>26,114,234</b>	<b>218,861</b>	<b>323,901</b>
July	5,071,766	6,254,737	43,251	59,537
August	3,630,946	5,251,206	52,293	60,250
September	3,280,865	4,017,731	41,650	60,094
October	5,019,633	4,756,244	64,977	53,922
November	5,116,491	7,652,336	51,179	98,105
December	4,855,187	5,492,328	56,554	65,269
<b>Second Half-Year</b>	<b>26,974,887</b>	<b>33,424,582</b>	<b>309,904</b>	<b>397,177</b>
<b>Annual Total</b>	<b>48,555,436</b>	<b>59,538,816</b>	<b>528,765</b>	<b>721,077</b>

Table 14: Export Value and Commission

Comparison by Products/Product Groups for Years 2006 &amp; 2005

(US\$)

Product/Product Groups	Export Value		Commission	
	2005	2006	2005	2006
<b>Timber &amp; Fuelwood</b>				
Logs	12,025,595	22,274,485	121,800	239,901
Sawnwood	17,681,094	20,457,029	326,596	380,970
Roundwood	1,766,268	2,288,078	35,326	45,762
Splitwood	1,056,138	1,217,928	21,123	24,359
Fuelwood	41,029	104,357	821	2,087
<b>Total Timber &amp; Fuelwood Value-Added</b>	<b>32,570,125</b>	<b>46,341,878</b>	<b>505,665</b>	<b>693,078</b>
Plywood	11,329,555	8,796,121	1,966	2,950
Building Components*	1,057,657	1,259,583	21,135	25,050
<b>Chargeable Value-Added</b>	<b>12,387,212</b>	<b>10,055,705</b>	<b>23,100</b>	<b>28,000</b>
Furniture	3,480,307	3,031,146	-	-
<b>Total Value-Added</b>	<b>15,867,519</b>	<b>13,086,850</b>	<b>23,100</b>	<b>28,000</b>
<b>Other Products **</b>	<b>117,793</b>	<b>110,087</b>	<b>-</b>	<b>-</b>
<b>Annual Total</b>	<b>48,555,436</b>	<b>59,538,816</b>	<b>528,765</b>	<b>721,077</b>

\* includes Mouldings, Pre-fabricated Houses

\*\* includes Craft, Wooden Utensils and Ornaments and Non - Timber Forest Products

## **6.0 TIMBER PRODUCTS IMPORTED INTO GUYANA**

This section provides summary data on imports of Timber and Timber-based products, comparing semi-annual values for years 2005 and 2006. The information is derived from data obtained from the Guyana Revenue Authority (Customs and Trade Administration division) and is restricted to post-tariff values. (Table 15, below). Import volumes were not available.

Consistent with the growth in building construction noted earlier in the report, imports of Plywood and Building Components have increased. Plywood imports have more than doubled (from US\$46.8 M to US\$104.7 M) while values have almost tripled for Building Components (from G\$22.8 M to G\$67.6 M). While there were the traditional majority imports in the final semester in both the years, the changes between the comparative 2005 and 2006 half-year periods were consistent with the overall annual pattern noted above.

Imports of Furniture were comparable semi-annually and annually between 2005 and 2006, again with majority imports over the respective final semesters. G\$111.5 M obtained in 2005 and G\$109.5 M in 2006. These were office, bedroom, school and laboratory furniture, and confirm a consistent domestic demand for sophisticated products.

Overall, imports totaled G\$291.7 M in 2006 compared to G\$204.1 M in 2005, a 42.9% increase. Mid-year values were US\$109.7 M in 2006 compared to US\$71.1 M in 2005, and respective final semester values were US\$182.01 M and US\$133.0 M.

While imports of wood (Sawnwood, Splitwood, and Roundwood) were minimal, the comparatively high Plywood import values translate to 756 m<sup>3</sup> for year 2005 and 1,425 m<sup>3</sup> for 2006, based on average export prices for the respective periods. These are equivalent to 2.0% and 4.1% of respective domestic production volumes. These translate to augmenting domestic supply (after exports) by 138.5% in 2005 and 13.5% in 2006. Contributions to domestic plywood consumption (of local plus import supplies) were 58.1% in 2005 but just 11.9% in 2006. The domestic market absorbed greater production in 2006 compared to 2005.

Table 15: **WOOD and WOOD PRODUCTS IMPORTS:**

Semi - Annual Import Values for Years **2006 & 2005**

(G\$M)

PRODUCT	PERIOD					
	Year 2005			Year 2006		
	Jan - Jun 2005*	Jul - Dec 2005*	Total 2005	Jan - Jun 2006	Jul - Dec 2006*	Total 2006
<b>Plywood</b>	20.70	26.14	<b>46.84</b>	41.68	63.01	<b>104.69</b>
<b>Shingles</b>	0.19	-	<b>0.19</b>	-	0.69	<b>0.69</b>
<b>Wood</b> Sawnwood(i.t.r. or dressed); Piles, spit poles, pickets, stakes, sticks.	1.02	1.09	<b>2.11</b>	0.41	0.03	<b>0.44</b>
<b>Prefabricated Wooden Buildings</b>	-	12.58	<b>12.58</b>	0.35	-	<b>0.35</b>
<b>Building Componentry</b> Windows, French Windows & Frames; Doors, Frames & Thresholds	13.04	9.77	<b>22.81</b>	37.45	30.10	<b>67.55</b>
<b>Furniture</b>	30.68	80.81	<b>111.49</b>	27.75	81.75	<b>109.50</b>
<b>Tools, Tool Bodies/Handles; Broom &amp; Brush Bodies/Handles</b>	0.55	0.82	<b>1.37</b>	1.51	0.34	<b>1.85</b>
<b>Ornaments, Plaques, Frames</b>	0.80	0.99	<b>1.79</b>	0.29	1.39	<b>1.68</b>
<b>Other</b>	4.11	0.76	<b>4.87</b>	0.22	4.70	<b>4.92</b>
<b>Total</b>	<b>71.09</b>	<b>132.96</b>	<b>204.05</b>	<b>109.66</b>	<b>182.01</b>	<b>291.67</b>

\* Import Data available for 5 months only

Source: Customs & Trade Administration, Guyana Revenue Authority

## **REFERENCES**

**Bank of Guyana**, Research Dept. *Statistical Bulletin*, December 2006 ([www.bankofguyana.org.gy](http://www.bankofguyana.org.gy)).

**Bank of Guyana**, Research Dept. *Statistical Bulletin*, September 2006

**Bank of Guyana**, *Annual Report 2005* ([www.bankofguyana.org.gy](http://www.bankofguyana.org.gy)).

**Forest Products Marketing Council of Guyana Inc**, *Quarterly Market Report, October to December 2005 and 2005 Annual Review*

**Forest Products Marketing Council of Guyana Inc**, *Export Report June 2006*.

**Guyana Forestry Commission**, June 1999, *Market Summary, 1998*.

**Guyana Forestry Commission**, *Quarterly Market Reports* (issues covering 2003 -2005 period).

**Guyana Forestry Commission**, Fact Sheet 2005

**International Monetary Fund**, *World Economic Outlook*, September 2006 ([www.imf.org](http://www.imf.org)).

**International Monetary Fund**, *Regional Economic Outlook- Western Hemisphere*, November 2006 ([www.imf.org](http://www.imf.org)).

**International Tropical Timber Organization**, *Annual Review and Assessment of the World Timber Situation, 2005*.

**International Tropical Timber Organization**, *Status of Tropical Forest Management 2005, Summary Report* (Tropical Forest Update 2006/1).

**International Tropical Timber Organization**, *Tropical Timber Market Report* (fortnightly volumes, various issues in 2006).

**Lachlan Hunter**, *The Forestry Sector in Guyana* (Guyana Forestry Commission, November 2001).

## **APPENDIX**

Appendix 1: Total Production Volume by Region for the Year 2006

PRODUCTS	Unit	Berbice	Demerara	Essequibo	TOTAL
<b>TIMBER PRODUCTION</b>					
<b>Logs</b>	m <sup>3</sup>				
Special Category					
Greenheart		4,573.05	27,643.89	97,242.71	129,459.65
Purpleheart		2,132.91	4,153.65	43,096.73	49,383.29
Other Special Category		1,928.93	509.27	7,503.87	9,942.07
<b>Total Special Category Logs</b>		<b>8,634.89</b>	<b>32,306.81</b>	<b>147,843.31</b>	<b>188,785.01</b>
Class 1		21,308.46	9,164.17	57,993.20	88,465.83
Class 2		6,225.44	8,515.88	64,600.17	79,341.49
Class 3		8,794.18	4,173.46	24,408.24	37,375.88
<b>Total Other Class Logs</b>		<b>36,328.08</b>	<b>21,853.51</b>	<b>147,001.61</b>	<b>205,183.20</b>
<b>Total Logs</b>		<b>44,962.97</b>	<b>54,160.32</b>	<b>294,844.92</b>	<b>393,968.21</b>
<b>Roundwood</b>	m <sup>3</sup>				
Greenheart Piles		1,813.88	5,534.45	1,879.28	9,227.61
Kakaralli Piles		21.96	301.46	87.42	410.84
Mora piles		52.00	-	-	52.00
Wallaba Poles		435.53	4,740.18	1,017.74	6,193.45
Posts		803.51	434.99	60.65	1,299.15
Spars		-	11.98	13.17	25.15
<b>Total Roundwood</b>		<b>3,126.88</b>	<b>11,023.06</b>	<b>3,058.26</b>	<b>17,208.20</b>
<b>Primary (Chainsaw) Lumber</b>	m <sup>3</sup>				
Special Category					
Greenheart		1,224.38	3,005.24	1,430.26	5,659.88
Purpleheart		1,056.26	3,279.64	4,778.69	9,114.59
Other Special Category		627.84	431.92	599.50	1,659.26
<b>Total Special Category Lumber</b>		<b>2,908.48</b>	<b>6,716.80</b>	<b>6,808.45</b>	<b>16,433.73</b>
Class 1		6,231.34	24,212.03	4,194.98	34,638.35
Class 2		1,993.80	6,246.86	2,275.44	10,516.10
Class 3		275.13	4,426.45	1,279.69	5,981.27
<b>Total Other Class Lumber</b>		<b>8,500.27</b>	<b>34,885.34</b>	<b>7,750.11</b>	<b>51,135.72</b>
<b>Total Primary Lumber</b>		<b>11,408.75</b>	<b>41,602.14</b>	<b>14,558.56</b>	<b>67,569.45</b>
<b>Splitwood</b>	m <sup>3</sup>				
Paling Staves		180.84	714.65	19.98	915.47
Vat Staves		0.01	-	-	0.01
Shingles		-	77.09	28.13	105.22
<b>Total Splitwood</b>		<b>180.85</b>	<b>791.74</b>	<b>48.11</b>	<b>1,020.70</b>
<b>Fuelwood</b>					
Charcoal	kg	-	318,938.94	-	318,938.94

Firewood	m <sup>3</sup>	-	13,649.12	4,466.97	<b>18,116.09</b>
<b>NON - TIMBER FOREST PRODUCTS</b>					
Wattles	pieces	-	185,385.00	130.00	<b>185,515.00</b>
Manicole Palm	stems	1,340,840.00	-	1,084,906.00	<b>2,425,746.00</b>
Other NTFP's (Mangrove Bark, Balata)	pieces	-	1,300.00	38,918.00	<b>40,218.00</b>



Appendix II: Total Production - by Station in DEMERARA for Year 2006

PRODUCTS	Unit	Georgetown	Linden	Mabura	Soesdyke	TOTAL
<b>TIMBER PRODUCTION</b>						
<b>Logs</b>						
Special Category	m <sup>3</sup>					
Greenheart		1,484.94	16.05	26,116.39	26.51	27,643.89
Purpleheart		135.64	317.97	3,676.46	23.58	4,153.65
Other		67.86	348.53	70.11	22.77	509.27
<b>Total Special Category Logs</b>		<b>1,688.44</b>	<b>682.55</b>	<b>29,862.96</b>	<b>72.86</b>	<b>32,306.81</b>
Class 1		4,351.02	475.10	3,289.49	1,048.56	9,164.17
Class 2		619.26	5,299.16	316.71	2,280.75	8,515.88
Class 3		213.49	107.13	3,682.20	170.64	4,173.46
<b>Total Other Class Logs</b>		<b>5,183.77</b>	<b>5,881.39</b>	<b>7,288.40</b>	<b>3,499.95</b>	<b>21,853.51</b>
<b>Total Logs</b>		<b>6,872.21</b>	<b>6,563.94</b>	<b>37,151.36</b>	<b>3,572.81</b>	<b>54,160.32</b>
<b>Roundwood</b>	m <sup>3</sup>					
Greenheart Piles		702.12	854.03	1,818.15	2,160.15	5,534.45
Kakaralli Piles		9.80	-	-	291.66	301.46
Mora piles		-	-	-	-	-
Wallaba Poles		1,414.36	1,046.86	-	2,278.96	4,740.18
Posts		295.54	51.05	-	88.40	434.99
Spars		0.32	1.67	-	9.99	11.98
<b>Total Roundwood</b>		<b>2,422.14</b>	<b>1,953.61</b>	<b>1,818.15</b>	<b>4,829.16</b>	<b>11,023.06</b>
<b>Primary (Chainsaw) Lumber</b>						
Special Category	m <sup>3</sup>					
Greenheart		596.82	1,549.90	148.39	710.13	3,005.24
Purpleheart		2,113.66	420.45	136.48	609.05	3,279.64
Other		224.79	123.94	41.17	42.02	431.92
<b>Total Special Category Lumber</b>		<b>2,935.27</b>	<b>2,094.29</b>	<b>326.04</b>	<b>1,361.20</b>	<b>6,716.80</b>
Class 1		6,041.82	8,908.42	1,094.64	8,167.15	24,212.03
Class 2		1,790.80	2,664.21	113.11	1,678.74	6,246.86
Class 3		1,160.47	922.24	242.48	2,101.26	4,426.45
<b>Total Other Class Lumber</b>		<b>8,993.09</b>	<b>12,494.87</b>	<b>1,450.23</b>	<b>11,947.15</b>	<b>34,885.34</b>
<b>Total Primary Lumber</b>		<b>11,928.36</b>	<b>14,589.16</b>	<b>1,776.27</b>	<b>13,308.35</b>	<b>41,602.14</b>
<b>Splitwood</b>	m <sup>3</sup>					
Paling Staves		68.69	458.15	56.64	131.17	714.65
Vat Staves		-	-	-	-	-
Shingles		-	72.85	-	4.24	77.09
<b>Total Splitwood</b>		<b>68.69</b>	<b>531.00</b>	<b>56.64</b>	<b>135.41</b>	<b>791.74</b>
<b>Fuelwood</b>						
Charcoal	kg	9,594.00	63,310.50	8,346.00	237,688.44	318,938.94
Firewood	m <sup>3</sup>	21.74	439.00	-	13,188.38	13,649.12
<b>NON - TIMBER FOREST PRODUCTS</b>						
Wattles	pieces	1,550.00	500.00	-	183,335.00	185,385.00
Manicole Palm	stems	-	-	-	-	-
Other NTFP's (Mangrove Bark, Balata)	pieces	-	-	-	1,300.00	1,300.00

Appendix III: Total Production by Stations in BERBICE for Year 2006

PRODUCTS	Unit	Bamboo Landing	New Amsterdam	Orealla	Springlands	Unamco	TOTAL
<b>TIMBER PRODUCTION</b>							
<b>Logs</b>	m <sup>3</sup>						
Special Category							
Greenheart		3,029.31	41.35	4.07	5.99	1,492.33	4,573.05
Purpleheart		325.85	504.05	1,150.82	26.67	125.52	2,132.91
Other		52.13	791.23	517.80	95.39	472.38	1,928.93
<b>Total Special Category Logs</b>		<b>3,407.29</b>	<b>1,336.63</b>	<b>1,672.69</b>	<b>128.05</b>	<b>2,090.23</b>	<b>8,634.89</b>
Class 1		645.88	10,877.06	4,317.23	3,197.55	2,270.74	21,308.46
Class 2		11.92	2,256.99	2,324.50	1,243.10	388.93	6,225.44
Class 3		75.87	2,761.34	3,647.28	1,738.40	571.29	8,794.18
<b>Total Other Class Logs</b>		<b>733.67</b>	<b>15,895.39</b>	<b>10,289.01</b>	<b>6,179.05</b>	<b>3,230.96</b>	<b>36,328.08</b>
<b>Total Logs</b>		<b>4,140.96</b>	<b>17,232.02</b>	<b>11,961.70</b>	<b>6,307.10</b>	<b>5,321.19</b>	<b>44,962.97</b>
<b>Roundwood</b>	m <sup>3</sup>						
Greenheart Piles		1,665.50	17.70	-	-	130.68	1,813.88
Kakaralli Piles		-	9.97	11.99	-	-	21.96
Mora Piles		-	52.00	-	-	-	52.00
Wallaba Poles		-	20.41	28.37	-	386.75	435.53
Posts		3.02	0.40	799.69	0.40	-	803.51
Spars		-	-	-	-	-	-
<b>Total Roundwood</b>		<b>1,668.52</b>	<b>100.48</b>	<b>840.05</b>	<b>0.40</b>	<b>517.43</b>	<b>3,126.88</b>
<b>Primary (Chainsaw) Lumber</b>	m <sup>3</sup>						
Special Category							
Greenheart		17.86	47.54	4.54	-	1,154.44	1,224.38
Purpleheart		39.47	581.34	0.66	10.23	424.56	1,056.26
Other		-	137.14	42.22	396.57	51.91	627.84
<b>Total Special Category Lumber</b>		<b>57.33</b>	<b>766.02</b>	<b>47.42</b>	<b>406.80</b>	<b>1,630.91</b>	<b>2,908.48</b>
Class 1		159.86	4,275.69	458.76	30.03	1,307.00	6,231.34
Class 2		36.84	795.10	590.95	96.29	474.62	1,993.80
Class 3		-	157.41	27.10	36.67	53.95	275.13
<b>Total Other Class Lumber</b>		<b>196.70</b>	<b>5,228.20</b>	<b>1,076.81</b>	<b>162.99</b>	<b>1,835.57</b>	<b>8,500.27</b>
<b>Total Primary Lumber</b>		<b>254.03</b>	<b>5,994.22</b>	<b>1,124.23</b>	<b>569.79</b>	<b>3,466.48</b>	<b>11,408.75</b>
<b>Splitwood</b>	m <sup>3</sup>						
Paling Staves		-	6.10	75.68	7.03	92.03	180.84
Vat Staves		-	0.01	-	-	-	0.01
Shingles		-	-	-	-	-	-

<b>Total Splitwood</b>			<b>6.11</b>	<b>75.68</b>	<b>7.03</b>	<b>92.03</b>	<b>180.85</b>
<b>Fuelwood</b>							
Charcoal	kg	-	-	-	-	-	-
Firewood	m <sup>3</sup>	-	-	-	-	-	-
<b>NON - TIMBER FOREST PRODUCTS</b>							
Wattles	pieces	-	-	-	-	-	-
Manicole Palm	stems	-	1,340,840.00	-	-	-	<b>1,340,840.00</b>
Other NTFP's (Mangrove Bark, Balata)	pieces	-	-	-	-	-	-

Appendix IV: Total Production by Stations in ESSEQUIBO for Year 2006

PRODUCTS	Unit	Anarika	Arapiaco	Bartica	Buckhall	Iteballi	Mabaruma	Manaka	Parika	Port Kaituma	Supenaam	Winiperu	TOTAL
<b>TIMBER PRODUCTION</b>													
<b>Logs</b>	m <sup>3</sup>												
Special Category													
Greenheart		12,322.87	16.40	6,655.94	23,418.61	26,629.89	-	14,540.39	2,360.53	-	6,463.17	4,834.91	97,242.71
Purpleheart		1,321.79	2,046.83	1,128.35	18,966.64	4,033.12	-	3,248.45	2,580.49	314.05	7,856.74	1,600.27	43,096.73
Other		61.18	854.94	132.19	1,432.74	169.44	-	143.62	308.84	3,605.37	645.21	150.34	7,503.87
<b>Total Special Category Logs</b>		<b>13,705.84</b>	<b>2,918.17</b>	<b>7,916.48</b>	<b>43,817.99</b>	<b>30,832.45</b>	<b>-</b>	<b>17,932.46</b>	<b>5,249.86</b>	<b>3,919.42</b>	<b>14,965.12</b>	<b>6,585.52</b>	<b>147,843.31</b>
Class 1		766.00	3,072.43	2,712.64	16,990.95	13,367.75	-	7,101.62	5,916.83	3,760.51	2,844.49	1,459.98	57,993.20
Class 2		97.19	2,922.49	2,534.39	31,426.89	10,357.23	-	12,966.23	1,251.58	1,377.04	1,021.03	646.10	64,600.17
Class 3		328.98	822.77	1,548.76	4,714.66	3,125.29	-	1,313.89	1,483.79	7,679.93	2,922.29	467.88	24,408.24
<b>Total Other Class Logs</b>		<b>1,192.17</b>	<b>6,817.69</b>	<b>6,795.79</b>	<b>53,132.50</b>	<b>26,850.27</b>	<b>-</b>	<b>21,381.74</b>	<b>8,652.20</b>	<b>12,817.48</b>	<b>6,787.81</b>	<b>2,573.96</b>	<b>147,001.61</b>
<b>Total Logs</b>		<b>14,898.01</b>	<b>9,735.86</b>	<b>14,712.27</b>	<b>96,950.49</b>	<b>57,682.72</b>	<b>-</b>	<b>39,314.20</b>	<b>13,902.06</b>	<b>16,736.90</b>	<b>21,752.93</b>	<b>9,159.48</b>	<b>294,844.92</b>
<b>Roundwood</b>	m <sup>3</sup>												
Greenheart Piles		562.95	29.56	17.16	-	23.27	-	770.93	237.57	-	66.29	171.55	1,879.28
Kakaralli Piles		3.34	10.00	-	-	-	-	74.08	-	-	-	-	87.42
Mora Piles		-	-	-	-	-	-	-	-	-	-	-	-
Wallaba Poles		-	80.64	37.36	-	-	-	765.78	133.29	-	0.67	-	1,017.74
Posts		-	-	-	-	-	-	-	48.62	-	12.03	-	60.65
Spars		-	-	0.68	-	-	-	-	8.41	-	4.08	-	13.17
<b>Total Roundwood</b>		<b>566.29</b>	<b>120.20</b>	<b>55.20</b>	<b>-</b>	<b>23.27</b>	<b>-</b>	<b>1,610.79</b>	<b>427.89</b>	<b>-</b>	<b>83.07</b>	<b>171.55</b>	<b>3,058.26</b>
<b>Primary (Chainsaw) Lumber</b>	m <sup>3</sup>												
Special Category													
Greenheart		-	51.89	873.22	-	-	-	-	383.61	44.86	75.87	0.81	1,430.26
Purpleheart		2.41	1,953.24	74.29	122.41	-	32.07	-	336.33	202.54	1,931.01	124.39	4,778.69
Other		-	206.51	2.78	7.83	-	44.07	-	95.63	17.95	185.21	39.52	599.50
<b>Total Special Category Lumber</b>		<b>2.41</b>	<b>2,211.64</b>	<b>950.29</b>	<b>130.24</b>	<b>-</b>	<b>76.14</b>	<b>-</b>	<b>815.57</b>	<b>265.35</b>	<b>2,192.09</b>	<b>164.72</b>	<b>6,808.45</b>
Class 1		-	1,895.60	82.02	-	-	448.19	-	1,068.58	54.83	515.91	129.85	4,194.98
Class 2		-	285.62	21.07	-	-	5.89	-	1,194.99	13.13	713.88	40.86	2,275.44
Class 3		-	544.78	59.39	-	-	0.71	-	352.75	7.95	236.30	77.81	1,279.69
<b>Total Other Class Lumber</b>		<b>-</b>	<b>2,726.00</b>	<b>162.48</b>	<b>-</b>	<b>-</b>	<b>454.79</b>	<b>-</b>	<b>2,616.32</b>	<b>75.91</b>	<b>1,466.09</b>	<b>248.52</b>	<b>7,750.11</b>
<b>Total Primary Lumber</b>		<b>2.41</b>	<b>4,937.64</b>	<b>1,112.77</b>	<b>130.24</b>	<b>-</b>	<b>530.93</b>	<b>-</b>	<b>3,431.89</b>	<b>341.26</b>	<b>3,658.18</b>	<b>413.24</b>	<b>14,558.56</b>
<b>Splitwood</b>	m <sup>3</sup>												
Paling Staves		-	-	-	-	-	-	-	2.36	-	17.62	-	19.98
Vat Staves		-	-	-	-	-	-	-	-	-	-	-	-

Shingles		-	11.69	-	-	-	-	-	16.44	-	-	-	28.13
<b>Total Splitwood</b>		-	<b>11.69</b>	-	-	-	-	-	<b>18.80</b>	-	<b>17.62</b>	-	<b>48.11</b>
<b>Fuelwood</b>													
Charcoal		-	-	-	-	-	-	-	-	-	-	-	-
Firewood	m <sup>3</sup>	-	-	-	-	-	-	-	50.75	-	4,416.22	-	<b>4,466.97</b>
<b>NON - TIMBER FOREST PRODUCTS</b>										-			
Wattles	pieces	-	-	130.00	-	-	-	-	-	-	-	-	<b>130.00</b>
Manicole Palm	stems	-	-	-	-	-	1,066,591.00	-	-	-	-	18,315.00	<b>1,084,906.00</b>
Other NTFP's (Mangrove Bark, Balata)	pieces	-	-	-	-	-	38,918.00	-	-	-	-	-	<b>38,918.00</b>

Appendix V: Export Volumes and Values by Product - 2nd Semester and Year - End Comparisons 2005 & 2006

PRODUCT	Jul - Dec 2005		Jul - Dec 2006		Jan - Dec 2005		Jan - Dec 2006	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value
	m <sup>3</sup>	US\$	m <sup>3</sup>	US\$	m <sup>3</sup>	US\$	m <sup>3</sup>	US\$
<b>Logs</b>	<b>75,027.41</b>	<b>8,074,413.66</b>	<b>110,714.16</b>	<b>13,338,574.13</b>	<b>115,766.86</b>	<b>12,025,595.08</b>	<b>190,782.53</b>	<b>22,274,485.48</b>
<b>Sawnwood</b>	<b>21,567.34</b>	<b>9,448,833.98</b>	<b>24,158.16</b>	<b>11,191,021.18</b>	<b>42,097.81</b>	<b>17,681,094.09</b>	<b>44,930.04</b>	<b>20,457,028.80</b>
<i>Dressed</i>	9,319.36	4,382,241.52	3,348.37	1,630,194.65	19,803.89	8,919,039.00	9,628.29	4,670,401.44
<i>Undressed</i>	12,247.98	5,066,592.46	20,809.79	9,560,826.53	22,293.92	8,762,055.09	35,301.75	15,786,627.36
<b>Roundwood</b>	<b>5,262.62</b>	<b>936,548.90</b>	<b>6,236.97</b>	<b>1,095,601.63</b>	<b>8,981.82</b>	<b>1,766,268.45</b>	<b>13,523.31</b>	<b>2,288,078.13</b>
Greenheart Piles	3,647.80	701,146.49	3,709.25	739,258.55	6,091.15	1,260,726.05	7,910.05	1,536,940.45
Kakaralli Piles	57.50	12,902.85	47.39	11,626.74	225.35	61,205.35	363.30	70,001.96
Other Piles	-	-	-	-	181.96	46,958.58	-	-
Poles	1,298.41	168,157.48	2,239.88	294,691.58	2,069.44	310,342.57	4,781.66	592,274.70
Posts	258.91	54,342.08	231.96	49,649.76	413.92	87,035.90	459.81	88,486.02
Spars	0.00	0.00	8.49	375.00	-	-	8.49	375.00
<b>Splitwood</b>	<b>1,087.36</b>	<b>562,484.17</b>	<b>1,448.83</b>	<b>760,290.50</b>	<b>2,198.27</b>	<b>1,056,137.84</b>	<b>2,381.79</b>	<b>1,217,928.41</b>
Paling Staves	0.09	14.00	60.07	21,653.75	0.09	14.00	60.07	21,653.75
Shingles	1,087.27	562,470.17	1,388.76	738,636.75	2,198.18	1,056,123.84	2,321.72	1,196,274.66
<b>Plywood</b>	<b>18,451.43</b>	<b>5,627,252.88</b>	<b>12,734.16</b>	<b>5,097,530.37</b>	<b>36,574.30</b>	<b>11,329,555.01</b>	<b>23,949.79</b>	<b>8,796,121.39</b>
<b>TOTAL TIMBER &amp; PLYWOOD</b>	<b>121,396.16</b>	<b>24,649,533.59</b>	<b>155,292.28</b>	<b>31,483,017.81</b>	<b>205,619.06</b>	<b>43,858,650.47</b>	<b>275,567.46</b>	<b>55,033,642.21</b>
<b>Furniture</b> (pcs)	<b>21,104.00</b>	<b>1,542,172.52</b>	<b>14,558.00</b>	<b>1,109,197.77</b>	<b>46,235.41</b>	<b>3,480,307.08</b>	<b>59,246.00</b>	<b>3,031,145.64</b>
Indoor Furniture	2,061.00	44,260.58	7,010.00	478,580.33	2,264.00	57,015.88	31,411.00	821,802.40
Outdoor/Garden Furniture	19,043.00	1,497,911.94	7,548.00	630,617.44	43,971.41	3,423,291.20	27,835.00	2,209,343.24
<b>Building Componentry</b> (pcs)		<b>492,074.23</b>		<b>592,888.71</b>		<b>805,246.14</b>		<b>1,058,044.31</b>
Doors	5,589.00	424,325.27	4,019.00	399,491.79	9,150.00	689,136.98	9,539.00	811,439.45
Door Components	0.00	0.00	320.00	18,064.70	393.00	8,300.92	323.00	20,464.70
Windows	30,725.00	42,182.95	37,387.00	98,323.09	31,233.00	59,612.33	38,293.00	121,853.13
Other Builder's Joinery	25.00	187.50	336.00	21,224.97	700.00	11,042.50	506.00	31,424.97
(m <sup>3</sup> )	-	-	384.49	23,479.99	-	-	384.49	23,479.99
Rails	101.00	1,523.98	-	-	901.00	2,099.98	64.00	213.00
(m <sup>3</sup> )	0.27	255.00	5.01	9,799.37	0.27	255.00	21.51	11,056.39
Spindles	10,605.50	23,599.53	6,430.00	22,504.80	15,058.50	34,798.43	13,106.00	38,112.68
<b>Mouldings</b> (m)	<b>114,605.51</b>	<b>163,755.92</b>	<b>52,989.77</b>	<b>80,857.82</b>	<b>184,490.78</b>	<b>247,006.21</b>	<b>116,819.66</b>	<b>201,539.06</b>

<b>Pre-Fabricated Houses</b> (pcs)	-	-	-	-	<b>1.00</b>	<b>5,404.40</b>	-	-
<b><i>R(than Plywood) VALUE ADDED</i></b>		<b>2,198,002.67</b>		<b>1,782,944.30</b>		<b>4,537,963.83</b>		<b>4,290,729.01</b>
<b>Fuelwood</b> (m <sup>3</sup> )	<b>1,353.29</b>	<b>28,823.79</b>	<b>2,223.33</b>	<b>61,088.96</b>	<b>1,708.98</b>	<b>41,029.37</b>	<b>3,542.95</b>	<b>104,357.43</b>
Charcoal*	1,314.71	28,711.23	2,197.43	60,918.96	1,670.40	40,916.81	3,505.27	104,037.43
Firewood	38.58	112.56	25.90	170.00	38.58	112.56	37.68	320.00
<b>Other</b> (pcs)	<b>8,843.37</b>	<b>64,185.72</b>	<b>5,385.00</b>	<b>29,883.78</b>	<b>12,858.37</b>	<b>75,857.94</b>	<b>8,037.00</b>	<b>35,447.49</b>
Wooden Ornaments & Utensils	4,534.00	6,862.13	2,457.00	16,084.28	5,091.00	7,825.63	3,374.00	19,478.53
Craft	4,309.37	57,323.59	2,928.00	13,799.50	7,767.37	68,032.31	4,663.00	15,968.96
<b>Non - Timber Forest Products</b> (pcs)	<b>1,440.00</b>	<b>34,341.69</b>	<b>2,199.00</b>	<b>67,647.24</b>	<b>1,867.00</b>	<b>41,934.56</b>	<b>2,827.00</b>	<b>74,639.66</b>
<b><i>OTHER PRODUCTS</i></b>		<b>127,351.20</b>		<b>158,619.98</b>		<b>158,821.87</b>		<b>214,444.58</b>
<b>TOTAL EXPORT VALUE</b>		<b>26,974,887.46</b>		<b>33,424,582.09</b>		<b>48,555,436.17</b>		<b>59,538,815.80</b>

\* Production Tables record Charcoal measured in Kilograms (kg) instead of cubic metres (m<sup>3</sup>) ; 1 m<sup>3</sup> = 131.3 kg

Appendix VI: Export Volume by Region for selected Timber and Value - Added Products

Comparison of Years 2005 & 2006

(cubic metres)

PRODUCT	YEAR	Africa	Asia & Pacific	Europe	Latin America & Caribbean	North America
<b>Logs</b>						
Special Category	2006	-	111,626.30	846.46	80.00	-
Other Classes		-	75,386.73	23.13	2,807.28	12.63
<b>Total Logs</b>	2006	-	<b>187,013.03</b>	<b>869.59</b>	<b>2,887.28</b>	<b>12.63</b>
	2005	140.00	110,011.76	500.00	5,115.10	-
<b>Sawnwood</b>						
Dressed	2006	-	337.56	161.57	8,921.50	207.66
Undressed		-	4,910.12	10,682.06	15,765.52	3,944.05
<b>Total Sawnwood</b>	2006	-	<b>5,247.68</b>	<b>10,843.63</b>	<b>24,687.02</b>	<b>4,151.71</b>
	2005	18.87	3,858.17	9,423.29	24,039.44	4,758.04
<b>Roundwood</b>	2006	-	-	<b>1,136.41</b>	<b>5,656.27</b>	<b>6,730.64</b>
	2005	-	91.62	1,488.40	2,617.98	4,783.72
<b>Splitwood</b>	2006	-	<b>40.00</b>	<b>1.52</b>	<b>2,171.40</b>	<b>168.87</b>
	2005	21.24	26.76	80.49	1,843.75	226.03
<b>Plywood</b>	2006	-	<b>46.44</b>	<b>9,492.64</b>	<b>5,899.52</b>	<b>8,511.17</b>
	2005	-	-	6,739.23	9,132.93	20,702.16

Appendix VII: Export Value by Region for selected Timber and Value - Added Products

Comparison of Years 2005 & 2006

(US\$)

PRODUCT	YEAR	Africa	Asia & Pacific	Europe	Latin America & Caribbean	North America
<b>Logs</b>						
Special Category	2006	-	14,060,715.08	160,827.78	8,800.00	-
Other Classes		-	7,762,701.41	5,099.93	274,328.32	2,012.96
<b>Total Logs</b>	2006	-	<b>21,823,416.49</b>	<b>165,927.71</b>	<b>283,128.32</b>	<b>2,012.96</b>
	2005	12,000.00	11,503,132.63	80,000.00	430,462.45	-
<b>Sawnwood</b>						
Dressed	2006	-	140,906.47	84,573.23	4,337,978.55	106,943.19
Undressed		-	2,234,311.10	4,588,292.31	7,491,055.37	1,472,968.58
<b>Total Sawnwood</b>	2006	-	<b>2,375,217.57</b>	<b>4,672,865.54</b>	<b>11,829,033.92</b>	<b>1,579,911.77</b>
	2005	6,800.75	1,605,496.55	3,815,526.29	10,491,726.78	1,761,543.72
<b>Roundwood</b>	2006	-	-	<b>190,981.77</b>	<b>724,931.85</b>	<b>1,372,164.51</b>
	2005	-	37,847.25	300,460.86	429,844.37	998,115.97
<b>Splitwood</b>	2006	-	<b>19,500.00</b>	<b>149.99</b>	<b>1,115,894.67</b>	<b>82,383.75</b>
	2005	11,499.97	5,399.90	34,641.90	862,441.30	142,154.77
<b>Plywood</b>	2006	-	<b>4,643.80</b>	<b>3,944,202.68</b>	<b>2,199,433.60</b>	<b>2,647,841.31</b>
	2005	-	-	2,210,786.47	3,117,677.82	6,001,090.72
<b>Other Value - Added</b>	2006	-	-	<b>2,151,577.26</b>	<b>2,074,110.72</b>	<b>65,041.03</b>
	2005	-	8,609.92	2,487,351.60	1,983,402.56	58,599.75



Appendix VIII: Logs and Sawnwood Production and Exports by Species : Years 2006 & 2005

SPECIES	LOGS (m3)				SAWNWOOD (m3)			
	Year 2006		Year 2005		Year 2006		Year 2005	
	Production Volume	Export Volume	Production Volume	Export Volume	Production Volume	Export Volume	Production Volume	Export Volume
<b>Special Cat.</b>								
Brown Silverballi	753.31	90.00	1,108.87	300.67	87.29	6.04	77.47	-
Bulletwood	8,976.78	8,027.58	2,904.73	2,572.47	1,276.20	630.26	591.73	235.51
Greenheart	129,459.65	58,684.23	102,414.04	26,411.81	5,659.88	17,223.81	5,292.23	15,979.71
Letterwood	8.80	-	1.39	-	-	-	-	2.70
Purpleheart	49,383.29	45,728.59	41,128.34	35,274.75	9,114.59	10,414.72	6,535.46	10,160.35
Red Cedar	203.18	22.36	57.48	8.74	295.76	661.44	473.33	748.95
<b>Total Spec. Cat.</b>	<b>188,785.01</b>	<b>112,552.76</b>	<b>147,614.85</b>	<b>64,568.44</b>	<b>16,433.73</b>	<b>28,936.27</b>	<b>12,970.22</b>	<b>27,127.22</b>
<b>Total Class 1</b>	<b>88,465.84</b>	<b>54,421.99</b>	<b>70,351.45</b>	<b>36,390.59</b>	<b>34,638.35</b>	<b>12,993.81</b>	<b>30,918.30</b>	<b>12,751.04</b>
<b>Total Class 11</b>	<b>79,341.50</b>	<b>6,978.94</b>	<b>82,614.56</b>	<b>3,520.49</b>	<b>10,516.10</b>	<b>972.44</b>	<b>9,185.77</b>	<b>585.76</b>
<b>Total Class 111</b>	<b>37,375.99</b>	<b>16,828.84</b>	<b>23,330.24</b>	<b>11,287.32</b>	<b>5,981.26</b>	<b>2,027.52</b>	<b>4,700.92</b>	<b>1,633.82</b>
<b>TOTAL</b>	<b>393,968.34</b>	<b>190,782.53</b>	<b>323,911.10</b>	<b>115,766.84</b>	<b>67,569.44</b>	<b>44,930.04</b>	<b>57,775.21</b>	<b>42,097.84</b>

- Sawnwood production quotes Primary (Chainsawn) Lumber only; Exports include Millsawn Lumber

Appendix IX : Primary Products and Plywood Production Volumes for the  
Years 1998 - 2006

ts	Unit	1998	1999	2000	2001	2002	2003	2004	2005	2,006
<b>s</b>	m <sup>3</sup>	<b>386,673</b>	<b>435,365</b>	<b>288,534</b>	<b>311,959</b>	<b>297,547</b>	<b>236,214</b>	<b>366,020</b>	<b>323,911</b>	<b>393,968</b>
<b><i>Other Forest Products</i></b>										
<b>Chainsawn Lumber</b>	m <sup>3</sup>	<b>23,633</b>	<b>25,078</b>	<b>28,774</b>	<b>29,507</b>	<b>30,998</b>	<b>38,194</b>	<b>36,085</b>	<b>57,775</b>	<b>67,569</b>
<b>Roundwood</b>										
Greenheart Piles	m <sup>3</sup>	11,358	9,515	7,262	5,767	9,089	9,136	10,714	13,164	9,228
Kakaralli Piles	m <sup>3</sup>	759	418	810	935	480	2,035	898	484	411
Mora Piles	m <sup>3</sup>	0	55	88	121	78	0	6	0	52
Wallaba Poles	m <sup>3</sup>	3,856	5,693	8,002	3,207	3,161	1,665	5,189	5,026	6,193
Posts	m <sup>3</sup>	3,437	9,694	10,693	9,228	1,758	1,896	1,216	855	1,299
Spars	m <sup>3</sup>	44	36	....	40	8	21	15	70	25
<b>Total Roundwood</b>	m <sup>3</sup>	<b>19,454</b>	<b>25,411</b>	<b>26,855</b>	<b>19,298</b>	<b>14,574</b>	<b>14,753</b>	<b>18,038</b>	<b>19,599</b>	<b>17,208</b>
<b>Splitwood</b>										
Paling Staves	m <sup>3</sup>	825	1,085	1,010	1,013	562	1,009	687	703	915
Vat Staves	m <sup>3</sup>	10	4	0	0	0	0	0	0	0
Shingles	m <sup>3</sup>	68	94	27	58	77	16	283	243	105
<b>Total Splitwood</b>	m <sup>3</sup>	<b>903</b>	<b>1,183</b>	<b>1,037</b>	<b>1,071</b>	<b>639</b>	<b>1,025</b>	<b>970</b>	<b>946</b>	<b>1,020</b>
<b>Fuelwood</b>										
Charcoal	kg	460,872	165,441	472,164	521,928	914,916	388,524	207,195	391,708	318,938
Firewood	m <sup>3</sup>	10,467	13,618	21,335	11,247	13,402	13,594	15,434	14,823	18,116
<b>Plywood</b>	m <sup>3</sup>	<b>....</b>	<b>86,599</b>	<b>91,864</b>	<b>69,137</b>	<b>51,280</b>	<b>74,720</b>	<b>54,212</b>	<b>37,120</b>	<b>34,494</b>
<b><i>Non - Timber Products</i></b>										
Wattles	pcs	5,050	4,885	35,438	62,246	82,372	94,358	111,765	183,752	185,515
Manicole Palm	stem	3,983,087	5,148,301	3,571,161	3,929,136	7,366,533	5,027,986	4,140,729	4,007,579	2,425,746
Mangrove Bark	pcs	35,822	65,648	30,091	21,090	4,354	17,317	5,749	9,333	40,218

## MAJOR TIMBER SPECIES AND USES

Classification	Species (Local Names)	Species (Scientific Names)	Major Uses	
Special Category	Greenheart	<i>Chlorocardium rodiei</i>	Boat building, marine work, piling, general heavy construction, flooring, heavy furniture, turnery and finishing rods.	
	Purpleheart	<i>Peltogyne venosa</i>	Building construction, flooring, bridging, boat building – keels, transoms, canoes, coach building, furniture, turnery, inlay, tool handles, sticks, bows, and veneer.	
	Brown Silverballi	<i>Licaria cannella</i>	Boat building, canoes, furniture, interior work, and general carpentry.	
	Red Cedar	<i>Cedrela odorata</i>	Furniture, cabinet work, panelling, boats, coffins and cigar boxes.	
	Letterwood	<i>Brosimum guianense</i>	Inlay, turnery, sticks, tool handles and bows for archery.	
	Bulletwood	<i>Manilkara bidentata</i>	General heavy construction, house framing, sleepers, mill rollers, wheel spokes, fencing, axe and tool handles, turnery.	
Class 1	Crabwood	<i>Carapa guianensis</i>	General construction, interior work, carpentry, furniture, and turnery, plywood and veneer.	
	Yellow Silverballi	<i>Aniba hypoglauca</i>	Boat planking, canoes, furniture, cabinet work, and interior construction.	
	Itikiboraballi	<i>Swartzia xanthopetala</i>	Inlay turnery, cabinet work, walking sticks, bag-pipes and tool handles.	
	Locust	<i>Hymenaea courbaril</i>	Ship-building, general construction, carriage buildings, tool handles, furniture and croquet mallets.	
	Tatabu	<i>Diploptropis purpurea</i>	Boat-building, house framing, and flooring, furniture and turnery, interior work, carriage-building, tool handles, and sleepers.	
	Determa	<i>Ocotea rubra</i>	Boat and carriage building, masts, furniture, carving, interior work, and general carpentry.	
	Wamara	<i>Eperua grandiflora</i>	Furniture, cabinet work, parquet flooring, turnery, inlay, tool handles, walking sticks, and bows for archery.	
	Kabukalli	<i>Goupia glabra</i>	Heavy construction, house framing, flooring, decking, punt bottoms, canoes, railway sleepers, paving blocks, furniture and decorative plywood.	
	Shibadan	<i>Aspidosperma album</i>	Fuel and Plywood.	
	Tauroniro	<i>Humiria balsamifera</i>	Heavy construction, piling, bridges, house framing, flooring, wheelwright work, furniture, sleepers, counters, work bench tops.	
	Manniballi	<i>Moronobea coccinea</i>	Heavy construction house sills, machinery frames, flooring, furniture and sheet piling.	
	Washiba	<i>Tabebuia</i> sp.	Bridges, house framing, sleepers, tool handles, rollers' walking sticks, and fishing rods.	
	Hakia	<i>Tabebuia serratifolia</i>	Bridges, house framing, sleepers, tool handles, rollers' walking sticks, and fishing rods.	
	Dalli	<i>Virola</i> spp.	Match boxes, coffins, inside boarding, carpentry, packing cases, plywood, slack cooperage chip board and concrete shuttering.	
	Suya	<i>Pouteria speciosa</i>	Interior boarding, carpentry, and plywood.	
	Ulu	<i>Trattinickia demerarae</i>	Inside boarding, cupboard linings, canoes and plywood.	
	Simarupa	<i>Quassia simarouba</i>	Interior construction, furniture, shelves, drawer linings, shoe heels, plywood, paper pulp, toys, box shooks.	
	Aromata	<i>Clathrotropis branchyptetala</i>	Furniture, house framing, boat building, flooring and sleepers.	
	Mora	<i>Mora excelsa</i>	Building construction especially flooring, framing and siding, boat building especially ribs, stems, knees, transoms, and decking, sleepers, furniture, turnery, wagon building; wheelwright-work, naves and felloes, croquet mallets.	
	Morabukea	<i>Mora gonggrijpii</i>	Heavy construction, sleepers, flooring and siding, heavy furniture, boat timbers, truck bodies.	
	Hububalli	<i>Loxopterygium sagotii</i>	Panelling, furniture and cabinet work.	
	Class 2	Baromalli	<i>Catostemma commune</i>	Dry cooperage, interior work, box shooks, paper pulp, and plywood.
		Dukalli	<i>Parahancornia fasciculata</i>	Carpentry, interior work, furniture, door and window stock, concrete shuttering, match boxes and plywood.
		Kereti Silverballi	<i>Lauraceae</i> spp	Shuttering, temporary buildings, box making, and plywood.
		Kurahara	<i>Calophyllum lucidum</i>	Boat planking, canoes, punt mast and furniture.
		Wabaima	<i>Licaria cannella</i>	Heavy construction, flooring, furniture, boat building (planking), bridge decking, musical instruments.
		Karohoro	<i>Schefflera decaphylla</i>	Match splints, drums, canoes, interior construction and plywood.
Baradan		<i>Ocotea tomentella</i>	Canoes, box shooks, concrete shuttering and plywood.	
Ubudi		<i>Anarcadium giganteum</i>	Interior work and plywood.	
Kirikua		<i>Iryanthera macrophylla</i>	Oars, interior construction, box shooks, utility plywood, slack cooperage and concrete shuttering.	
Kurokai		<i>Protium decandrum</i>	Masts, spars, house framing and plywood.	
Maporokan		<i>Inga alba</i>	Interior work, fuel and cheap plywood.	
Monkey Pot		<i>Lecythis zabuajo</i>	General construction, furniture, turnery and wheel spokes.	
Manni		<i>Symphonia globulifera</i>	Utility wood, paper, pulp, plywood, cooperage, railway sleepers, sheet piling, packing cases, general carpentry, flooring, furniture and fuel.	
Pakuri		<i>Platonia insignis</i>	Piling, boat building, furniture, turnery, house framing, flooring, panelling, tight cooperage and general carpentry.	
Yaruru (Yarula)		<i>Aspidosperma excelsum</i>	Paddles, axe and tool handles, walking sticks, fishing rods and fuel.	
Muneridian		<i>Siparuna</i> spp.		
Wallaba		<i>Eperua falcata</i>	Pillar trees, roundwood framing, fence posts, transmission poles, sleepers,	

		<i>Eperua grandiflora</i>	paling and vat staves, shingles, charcoal, particle board and firewood.
Class 3	Burada	<i>Parinari campestris</i>	Heavy construction, flooring.
	Duka	<i>Tapirira marchandi</i>	Interior construction, furniture, box shooks and plywood.
	Dukuria	<i>Sacoglottis cydonioides</i>	Heavy construction.
	Fukadi	<i>Terminalia amazonia</i>	House framing, framing, constructional work, railway sleepers and plywood.
	Inyak	<i>Antonia ovata</i>	Interior work, furniture and boxes.
	Limonaballi	<i>Chrysophyllum pomiferum</i>	Heavy construction and fuel.
	Suradan	<i>Hyeronima alchorneoides</i>	Boat-framing, railway sleepers, heavy construction, truck building, wheel spokes, furniture, plywood and gun stocks.
	White Cedar	<i>Tabebuia insignis</i>	Paddles, shovel handles, and interior work, packing cases and cheap furniture.
	Futui	<i>Jacaranda copaia</i>	Coffins, box shooks, matches, concrete shuttering and interior construction.
	Halchiballi	<i>Pera schomburgkiana</i>	Fuel and utility plywood.
	Haiariballi	<i>Alexa imperatricis</i>	Interior construction, packing cases and plywood.
	Huruasa	<i>Abarema jupunba</i>	Fuel and plywood.
	Iteballi	<i>Vochysia schomburgkii</i>	Carpentry and furniture.
	Kakaralli	<i>Eschweilera alata</i>	Piling, house framing, mine lagging, posts and sleepers.
	Kauta	<i>Licania laxiflora</i>	Light gauge railway sleepers, roof shingles, mine timbering, fuel and charcoal.