FOREST SECTOR INFORMATION REPORT

Annual Review

2018

GUYANA FORESTRY COMMISSION

TABLE OF CONTENTS

ABBREVIATIONS

BOG	Bank of Guyana
CFO	Community Forestry Organisation
ECLAC	Economic Commission for Latin America and the Caribbean
EU	European Union
FLEGT	(European Union) Forest Law Enforcement, Governance and Trade
FoB	Free on Board Price
GDP	Gross Domestic Product
GFC	Guyana Forestry Commission
IFM	Independent Forest Monitoring
IMF	International Monetary Fund
ITTO	International Tropical Timber Organisation
LAC	Latin America and Caribbean
MRVS	Monitoring Reporting and Verification System for REDD+
REDD+	Reducing Emissions from Deforestation and Forest Degradation Plus
SFEP	State Forest Exploratory Permit
SFP	State Forest Permission
TSA	Timber Sales Agreement
VPA	Voluntary Partnership Agreement
WCL	Wood Cutting Lease
WEO	World Economic Outlook
WTO	World Trade Organisation

GLOSSARY OF TERMS

Dressed Lumber	Wood sawn lengthways from Logs, further processed by use of planes, 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, or pressed with mechanical pressure.
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 Lumber	This includes Chainsawn Lumber and Lumber emanating from Portable Mills converted in the forest and declared at first point of declaration as Primary Lumber.
Round Logs	A bole or a large branch after felling. Under the ITTO definition it is referred to as Industrial Roundwood.
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 (*Eperua falcata*) wood used to construct roofs and for panelling 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.

1.0 INTRODUCTION

The Forest Sector Information Report (FSIR) focuses on the performance of the Forestry Sector in Guyana for the year 2018 with a comparison done with the year 2017. 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.

It includes a summary of State Forest lands allocation across concession classes (with areas classified according to GFC designated use/size categories) for 2018 and the Forest Sector's contribution (as traditionally measured in official national statistics) to Guyana's real Gross Domestic Product (GDP) over the past four (4) years, using the new rebased and re-benchmarked series to year 2006.

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

In the core report, Production data compares the volumes of various forest products by product and species categories (where applicable), between 2017 and 2018, and across the Regions (as designated for GFC purposes, and corresponding to the three counties of Demerara, Berbice and Essequibo), by their respective sub-divisions referred to as Forest Stations.

Export data is analysed in terms of both volume and value for various product types. Detail analyses of destinational markets of Guyana forest products are outlined, along with international market prices.

The FSIR, further provides an Annex, with various tables, which allows for further interpretation of information given in the production and export section of the report.

2.0 EXECUTIVE SUMMARY

Total production of 385,653m^3 was recorded during the period January to December 2018.

Log production for 2018 was declared at 293,084m^3 followed by Lumber 44,607m^3, Roundwood 23,899m^3, Plywood 14,571m^3, and Splitwood 45.1m^3 were recorded. Other products including Fuelwood (comprising of Charcoal and Firewood), Wattles, Manicole Palm and Mangrove Bark were also produced in the year. Log Production of 293,084m^3 for the year recorded a marginal increase when compared to that of the previous year - by 4.3%. An increase in Class 3 Log production volume by 51% was supported by a 24.49% increase in Class 2, and a 4.48% in Special Category Greenheart Species.

Production of Primary Lumber declined by 6.95%, from 47,938m^3 in 2017 to 44,607m^3 in 2018. However, production of Special Category Lumber increased by 7.94%. Within this category, Greenheart lumber reflected the highest production volume, increasing by 22.38% over the 2017 total. Class 1 and Class 2 primary lumber declined by 13.29% and 10.53% respectively, when compared to 2017 totals. However, Class 3 lumber production increase by 9.19% when compared to the same of 2017.

Roundwood production for 2018 (23,899m^3), increased by 13.43% over 2017 Roundwood production of 21,070m^3. This increase was mostly influenced by larger volumes of both Greenheart and Kakaralli Piles (16,050m^3) harvested in 2018. Contribution to this increase was also given by the production of Wallaba Poles, for which the production volume level increased by 2.41% when compared to 2017.

Total forest sector export value from Forest Products was US$37.9M in 2018, whilst the total export value for 2017 was recorded at US$39.11M.

Total Export earnings declined by 3.09% when compared to 2017 export. Total Timber and Plywood declined in both volume and value by 6.89% and 3.51% respectively, whilst Value Added products and Other Non-timber forest products also recorded a decline by 14.37% in value. Logs export declined by 8.31% in volume and 9.12% in value. Sawnwood export volume fell by 10.62% whilst value declined by 7.75%. However, export of the other Timber and Plywood products such as Roundwood, Plywood and Splitwood recorded increases in both volume and value. Roundwood increased by 16.19% in volume and 31.19% in value whilst exports of Plywood increased by 11.92% in volume and in value by 16.24%. There were marginal increases in Splitwood by 0.55% in Volume and 7.6% in value over 2017.

3.0 ECONOMIC ENVIRONMENT

3.1 The International Economy

3.1.1 Economic Growth

A weakened global expansion was projected for 2018. Global growth for 2018 was projected to grow by 3.7%. However, weak performance in Asia and Europe stymied this growth prospects. Global economic growth is projected to grow at 3.5% in 2019 and 3.6% in 2020; 0.2% and 0.1% below projected 2018 mid-year projections. This is according to the World Bank's January 2019, Global Economic Prospects Report.

Economists were forced to revise down the global growth forecast for 2019 and 2020, partly due to expected negative effects of the tariff increase enacted in the United States and China as part of their growing trade war. The IMF noted that the prospects of the world two largest economies fighting global growth can further drop close to 1 percentage point. Further, the World Bank's Report contends that growth in other advanced economies will slow by 2.0% during 2019 and 1.7% in 2020.[1]

Growth prospects within the European Zone area is expected to be tempered from 1.8% in 2018 to 1.6% in 2019 and 1.7% in 2020. Growth rates were revised downwards for mainstream economies such as Germany and Italy due to weak industrial production that was brought about by the revised auto emission standard, followed by weak demand and high borrowing cost in Italy.

Within the United Kingdom, there is an uncertainty around the projected 1.5% growth that was announced in mid-2018. This projection according to the World Economic Outlook (WEO 2019) assumes a negative uncertainty about the Brexit outcome and the positive impacts from stimulus that was announced in the country's budget.

In North America, growth in the United States is expected to decline to 2.5% in 2019 and drop further to 1.8% in 2020. This is as a result of a slowed down fiscal stimulus even as the federal fund rate overshoots the neutral rate of interest. Economists say that the United States original projected expansion growth rate is above its estimated potential growth rate for both 2019 and 2020. Current account deficit is envisaged to widen as a result of strong demand growth which will increase rising imports.

Within Asia, growth is expected to drop from 6.5% in 2018 to 6.3% in 2019 and level at 6.4% in 2020. According to the World Economic Outlook Report 2019, these drops are as a result of higher US trade tariff despite fiscal stimulus by China and other Asian importers.

[1] World Economic Outlook. January 2019

China's economy is expected to slow as a result of financial regulatory tightening measures and trade tensions with the United States.

Japan's economy is expected to grow by 1.1% in 2019. This growth is as a result of the introduction of needed fiscal support coupled with measures to mitigate impacts from increase in consumption tax.

India's economy is projected to grow in 2019 as a result of lower oil prices along with slow monetary policy tightening due to rising inflation cost.

Growth in Latin America is expected to improve over 2019 and 2020 from 1.1% in 2018 to 2.0% in 2019 and up to 2.5% in 2020 despite lower projection announced in early 2018. Reduced growth prospect in Mexico during 2019-20 as a result of lower private investment coupled with the contraction in Venezuela's economy, were some of the factors that fuelled these concerns.

Argentina's economy is expected to contract in 2019 as a results of tighter policies that were aimed to reduce slow domestic demand. Brazil is currently still recuperating from the 2015-16 recession and is expected to return to normalcy in early 2020.

Growth in Sub Sahara Africa will increase from 2.9% in 2018 to 3.5% in 2019 and up to 3.6% in 2020. However reducing oil prices acted as a threat towards this growth prospects particularly in Nigeria and Angola.

Globally, over the next two years, economists posit, that difficult external conditions, rising US interest rates, volatile oil prices along with dollar appreciation and capital outflows will result in many emerging markets and developing economies being tested and derailed.

The International Monetary Fund, World Economic Report January 2019, contend that economies need strong fiscal policies to ensure that debt ratios remain manageable under new challenging external conditions, while also targeting subsidies and rationalizing recurrent expenditures as a measure to boost potential growth.[2]

3.1.2 Flows to Developing Countries

According to the ECLAC, the Latin American and the Caribbean economy is projected to grow by 1.7% in 2019, which is approximately 0.5% above projected 2018 estimates. This increase comes when the Latin American and the Caribbean region is confronting a complex scenario of less dynamic growth along with increased volatility of international financial markets. This is further coupled by structural weakening presently occurring in Venezuela, along with aggravated tension between the United States and China.

[2] World Economic Outlook. January 2019

It is forecast that Central America (excluding Mexico) will grow 3.3% in 2019, South America 1.4% and the Caribbean 2.1%. On a country level, the Caribbean island of Dominica is seen leading regional growth with a 9.0% expansion, followed by the Dominican Republic (5.7%), Panama (5.6%), Antigua and Barbuda (4.7%) and Guyana (4.6%). At the other extreme, Venezuela will suffer a -10% contraction in its economy, Nicaragua -2.0% and Argentina -1.8%. The region's biggest economies, Brazil and Mexico, are seen growing 2.0% and 2.1%, respectively.[3]

This projected growth in the region according to ECLAC, is expected to be of varying intensities between regions and sub-regions. This situation is as a results of individual impacts caused by international economic activities, along with components such as consumption, consumer demand and private and government investment.

ECLAC posits that for 2019, the greatest risk to regional growth would be the pace at which financial conditions will deteriorate. The preamble to this situation was recognised in 2018 when emerging markets within and outside of the Latin American and the Caribbean diaspora experienced reduction in external financing flows, together with increased sovereign risk levels as currencies depreciate against the US dollar.

For 2018, economic growth was led by domestic demand and this scenario is also expected to continue during 2019. Private consumption will remain as the primary agent of growth, whilst fixed investment will continue to recover.

3.2 International Forestry Environment

3.2.1 International Tropical Timber Market Summary

Africa's hardwood export that is of interest to Europe is considered stable and is expected to increase during 2019. This is as a result of reduced influence of larger EU operators, hence creating the environment for smaller buyers and millers to gain larger business opportunities.

Reports out of Ghana state that there is Forest Plantation Strategy for the period 2016-2040, which is aimed at restoring the country's deforested and degraded land. This strategy has led to the creation of Jobs for Ghana, where young people are employed to undertake re-afforestation. Further reports contend that there has been more than 26 million cultivated seedlings, with over 10 million trees planted.

Malaysia reports that Sawnwood accounted for half of all certified timber exports. Plywood and Mouldings

[3] ECLAC, https://www.cepal.org/en/pressreleases/economies-latin-america-and-caribbean-will-grow-17-2019-international-scenario-marked

accounted for the gamut of this export, whilst the Netherlands was the main destination for all Malaysia certified timber products.

In Indonesia, wood exporters are being encouraged to target more North American markets. This approached was urged as a method of achieving a projected national target of US 5 billion over the next two years. This sentiment was urged after both Malaysia and the United States met on the maintaining of the Generalized System of Preferences for Indonesian wood products such as plywood which are raw material for many US industries.

The EU announced that its hardwood trade remains stable despite the uncertain political situation. Economic upturn within the Eurozone economies within the last few years has created an atmosphere of instability. The European community is anxiously awaiting the outcome of the Brexit negotiations in the UK, coupled with the fear of another global recession as an outcome from the trade war between China and the United States.

ITTO contends that European hardwood traders remain wary of this current situation, since they are unable to decide whether to build stock, take risk with other species or focus on well-known species that has offered the best margin.

3.2.2 Latin America

Latin America and the Caribbean economies is expected to grow by 1.7% in 2019. This percentage represents a dip by 0.01% from the previous announced prediction in November 2018 of 1.8% according to the Economic Commission for Latin America and the Caribbean (ECLAC).

These growth prospects are expected to be driven by economic rebound in the region's largest economy, Brazil. ECLAC posits that developed countries and emerging markets within the Latin America and the Caribbean region will experience reduced growth over the next few years due to volatility in international markets coupled with the current trade war between the United States and China.

Central America is predicted to grow 3.3%, whilst South America will grow by 1.4% and the Caribbean by 2.1% in 2019. The Largest growth prospects is recognised within the Caribbean Region. In the Caribbean, Antigua and Barbuda and Grenada grew by 5% in 2018 and the same prospect is expected during 2019. However, Dominica is predicted to lead the growth rate in the region with a projected 9% expected growth.

The two largest economies in the region (Brazil and Mexico) will grow by 2% and 2.1% respectively in 2019. Medium size economies such as Argentina, Venezuela and Nicaragua are expected to contract during 2019 by 1.8% and 2.0% respectively. The largest contraction is expected in the Venezuela economy, where it is predicted at 10% due to social and economic instability.

According to ECLAC, these projections recorded for the region, are done in a context of increasing uncertainty and medium-term risks, coupled with deterioration of the international financial environment. ECLAC stated that the high levels of corporate and sovereign debt accumulated over years of relaxed global financial conditions constitute a risk for some economies that are more exposed to changes in the financial arena.[4]

Taking into consideration these situations, economists posit that internal demand will play a pivotal role for economies within Latin America and Caribbean region. Given the different unique scenarios faced by each countries within the region, investment is expected to play a greater role, whilst private consumption will be the main driver for internal demand.

3.2.3 Market Trends for Guyana's Timber Exports

The main market destinations for Guyana's timber products for the year 2018 continue to be Asia, Europe, Latin America and the Caribbean, and North America. The Asian market accounted for 99% of all logs exported from Guyana; where the two main markets were China (71%) and India (19%) of total log value. The main species of log exported in 2018 were Wamara, Greenheart, Kabukalli, Darina, Muniridan, Purpleheart, Mora, Tatabu, Locust and Cow Wood.

Sawnwood export markets have predominantly been in the Latin American and Caribbean region (42.8%), North America (22.95%), Europe (20.75%), and Asia Pacific (13.39%). Smaller volumes were exported to Africa and South America. The Undressed category Lumber has seen the highest demand with (54.25%) of lumber export, whilst the Dressed Category lumber accounted for the remaining (45.75%) volume exported.

Europe and North America were the two main markets for Guyana's Undressed Lumber in 2018, whilst the Latin America/Caribbean Region, and North America markets accounted for the majority of Guyana's Dressed Lumber. The main exported species of both Dressed and Undressed Lumber were Greenheart, Purpleheart, Washiba, Mora, Darina, Kabukalli, Wamara, Locust, Tonka Bean, and Wallaba. The average FOB price for Guyana' Dressed Lumber has been between the range of USD$1,062 per m^3 and USD$880 per m^3.

The main markets for Guyana's Roundwood have been: North America, Latin American/Caribbean, Europe and Asia Pacific. Under the Roundwood category, three products have been exported: Piles (75%), Poles (24%) and Post (2%). The main species used were Wallaba (Poles and Post) and Greenheart (Piles). The average export prices for Wallaba Poles and Post were USD$851 per m^3 and USD$626 per m^3 respectively.

[4] https://www.cepal.org/en/publications/44327-preliminary-overview-economies-latin-america-and-caribbean-2018

Plywood exports remained fairly stable in 2018, with the majority being exported to Latin American/Caribbean (97%) and South America (3%). The markets in the Latin America/ Caribbean Region have been Belize, Dominica, and the Republic of Trinidad and Tobago. The lone market in South America has been French Guiana. The average export price for Plywood in the Latin American/Caribbean Region, in 2018, was USD$580 per m^3, whilst the average price in the South American market was US$526 per m^3.

The markets for Splitwood (Shingles) has been in the Latin America/ Caribbean (65%), North America (28%), Africa (6%) and Asia Pacific (1%) Region. The average price of Shingles was USD$1,304 per m^3.

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3.3 The Guyana Economy

3.3.1 Economic Growth

Guyana's real Gross Domestic Product (GDP) is expected to grow by 4.6% during 2019. This projection is based on a perceived steady growth in the global economy. This growth rate according to the Government of Guyana Budget 2019 is expected to be reflected in the major sectors. Agriculture, Fishing and Forestry are forecasted to grow by 3.9%; sugar production is expected to increase by 15.6% while rice is expected to grow steadily by 2.7% in 2019.

Inflation is expected to be 2.5%, however, there are expectations that there will be increase in inflationary pressure, with the economy drawing closer to first oil, which is slated to commence in 2020.

The IMF projected that Guyana's medium term prospect is deemed favourable. This is as a result of the commencement of first oil in 2020, since this has the prospect of bringing about sweeping changes in the country's economic portfolio. The IMF posits that the main direct effect on the domestic economy will be through higher fiscal revenue, and spill overs to supporting activities. The balance of payments will swing sharply from negative to positive, after 2020. The IFM outlines that oil revenue is expected to significantly improve the fiscal outlook, and is expected to place the public debt on a downward trajectory. This situation is further encouraged by foreign banks and investors with welcome progress made in the establishing of a comprehensive fiscal framework for managing oil wealth. Significant progress has been made in implementing the 2016 Financial Sector Assessment Program recommendations, including enhancing the supervisory power of the BoG and establishing an emergency liquidity assistance framework, a national payment system and a deposit insurance scheme. The IFM also noted the establishment of a Financial Stability Unit within the BoG to assess macro-financial vulnerabilities.

3.3.2 The Forest Sector

The GFC's work programme in 2018 included a number of key areas of work that have been prioritised under the National Forest Plan 2018. Some of the main programmes with areas of progress outlined, are presented below:

The Forest Sector has emerged successfully against a few challenges in 2018 and continues to be robust and show improvements when compared to 2017. Overall forest production (Logs, Roundwood and Primary Lumber) shows an increase of approximately 3% over 2017. A number of incentives were implemented in 2018, which were provided in the 2018 national budget and were aimed at assisting the continued growth and development of this important sector. These incentives included the removal of VAT on forest produce, allocation for commencement of a national forest inventory and development of a consolidated stockyard. In addition, measures were taken to increase the tariffs on imported pine lumber so as to further develop the local value added sub sector. These interventions will see medium and longer term growth as well in the sector.

At the policy level there have been several interventions and policy developments that will further support the development of the sector. These include Cabinet approval of the revised National Forest Plan and Policy Statement 2018, and the tabling and passage in Parliament of the new forestry regulations to support the Forest Act of 2011. On 23rd November, the Government of Guyana, through the GFC, initialled the Voluntary Partnership Agreement under the EU Forest Law Enforcement Governance and Trade Programme (VPA EU FLEGT). This will pave the way for further market access and a strong sense of Timber Legality into International markets. Associated with the new regulations are various Codes of Practice most notably the Code of Practice for Processing Operations which will further strengthen the local wood processing sector in terms of quality and standards. In 2018, Guyana continued to be a strong advocate and global leader in showing how forests can be a solution to the negative impacts of climate change. The Guyana Forestry Commission in 2017, reported the lowest levels of deforestation in the assessment done in 2018 for reporting period 2017 which concluded a national deforestation rate of 0.048% being at its lowest since the partnership commenced with the Kingdom of Norway in 2009. This indicates the strong forest governance commitment of our Government.

The outlook for 2019 looks promising. The sector is expected to continue its growth path in both production and export. The GFC and the sector will enter an implementation phase of the EU FLEGT VPA as well as the National Forest Plan and Policy. Inactivity or underutilized forest areas will be put to productive use thereby creating more job opportunities as well as contribution to national production, export and overall GDP. The GFC will continue its work on Forest and Climate Change its work on Forest Area Assessment and reporting on Deforestation and supporting the Government’s Green State Development Strategy.

1. *Community Forestry Development Advances in 2018*

Overall, 2018 was a fruitful year for the GFC’s Community Development Unit. The Unit was able to achieve its goals of establishing and supporting the work of Community Forestry Organizations and assisting these groups with the implementation of initiatives geared at fostering sustainable forest management practices. In 2019, emphasis will be placed on communities acquiring funding for agriculture based and value added activities, and improving forest governance by complying with the regulations under which the groups are governed.

Executing the activities under the FAO EU FLEGT Programme funded project "**Improving FLEGT readiness of 69 Community Forestry Organizations through increased awareness of related regulation"** formed part of the main activities for 2018. This project was done in collaboration with The National Insurance Scheme, Guyana Revenue Authority and Department of Labour. To date 388 participants from 38 Community Forestry Organizations participated the awareness sessions. These activities will continue into first half of 2019. Staff of GFC and representatives of the National Steering Committee for Community Forestry Organizations will also be engaged during this period.

The Unit has also been instrumental in providing guidance to students sponsored by GFC to read for a Certificate in Forestry at the Guyana School of Agriculture. Additionally, GFC facilitated with the application and communication process which resulted in two representatives of CFOs (Upper Berbice Forest and Agriculture Producers Association and Maria Elizabeth Three Friends Small Loggers & Farmers Association) being selected to participate in the international course offered by ACTO in Peru.

The Unit also supported the development and submission of business plans in aid of CFOs satisfying the requirements for the conversion of their groups from Friendly Societies to Cooperative Societies under the auspices of the Ministry of Labour, Human Services and Social Security. The Unit works closely with the Office of the Chief Co-ops Officers to guide CFOs in their administrative and financial management.

2. National Forest Plan and Policy 2018

The National Forest Plan and Policy was revised during the last quarter of 2017. Subsequently, the revised Plan and Policy were finalized and presented at Cabinet and approval was granted May 2018.

These form a key aspect of the natural resources sector whereby the revised Forest Plan and Policy will embrace REDD+ and its developments and impact, in an integrated manner.

3. Independent Forest Monitoring Assessment 2018

The GFC, continued the national level assessment programme of forest legality in Guyana and this has seen the conclusion of the assessment for year 2016 and 2017 completed, and made public. This programme is set to continue with the next assessment which will be for year 2018; this will be done in March 2019.

As a background, in December 2017, the Soil Association Certification Ltd. (SAC) was contracted by the Guyana Forestry Commission (GFC) to perform the third and fourth independent assessments of Guyana's laws and regulations relevant to forests, in particular, the enforcement systems in place, and how they ensure legal compliance, against pre-specified, non-accredited criteria under the Guyana-Norway REDD-plus partnership. The SAC undertook the Third IFM Audit in Guyana from 17th January to 7th February 2018.

The Audit Report was finalised during 2018. The findings conclude that there were no major or minor non-compliances and identified that for all relevant indicators, the Audit Team found that the systems and procedures were operating effectively, and that satisfactory compliance with the specific indicators could be demonstrated.

While there were no non-compliances identified, the audit team raised specific Observations in relation to:

- the systems and procedures of the GFC;
- the interaction between the GFC and other agencies of government that are integral to the demonstration of legality; or
- the Indicators themselves.

The next audit will be done in March 2019.

4. Forest Area Assessment for Year 2017

During 2018, the GFC concluded the forest area assessment for year 2017. Deforestation for the period between 1 January 2017 and 31 December 2017 is estimated at 8 851 ha. This equates to an annualised deforestation rate of 0.048% which is lower than the change reported in the previous year (0.050%). This rate is the lowest of all annual periods from 2010 to present, assessed to date. As with previous assessments the deforestation values have been verified using an independent sample by the Durham University team. This process confirms the accuracy of GFC's mapped deforestation area.

The main deforestation driver for the current forest year reported is mining (sites), which accounts for 74% of the deforestation in this period. The majority (78%) of the deforestation is observed in the State Forest Area. The temporal analysis of forest changes post-1990 indicates that most of the change is clustered around existing road infrastructure and navigable rivers. In Year 7 (2017) the change has continued primarily near the footprint of historical change. The findings of this assessment assist to design REDD+ activities that aim to maintain forest cover while enabling continued sustainable development and improved livelihoods for Guyanese.

The table below summarises for the entire country, the total change and change expressed as a percentage of forest remaining. The forest area at the start of Year 7 is 18 44 million ha.

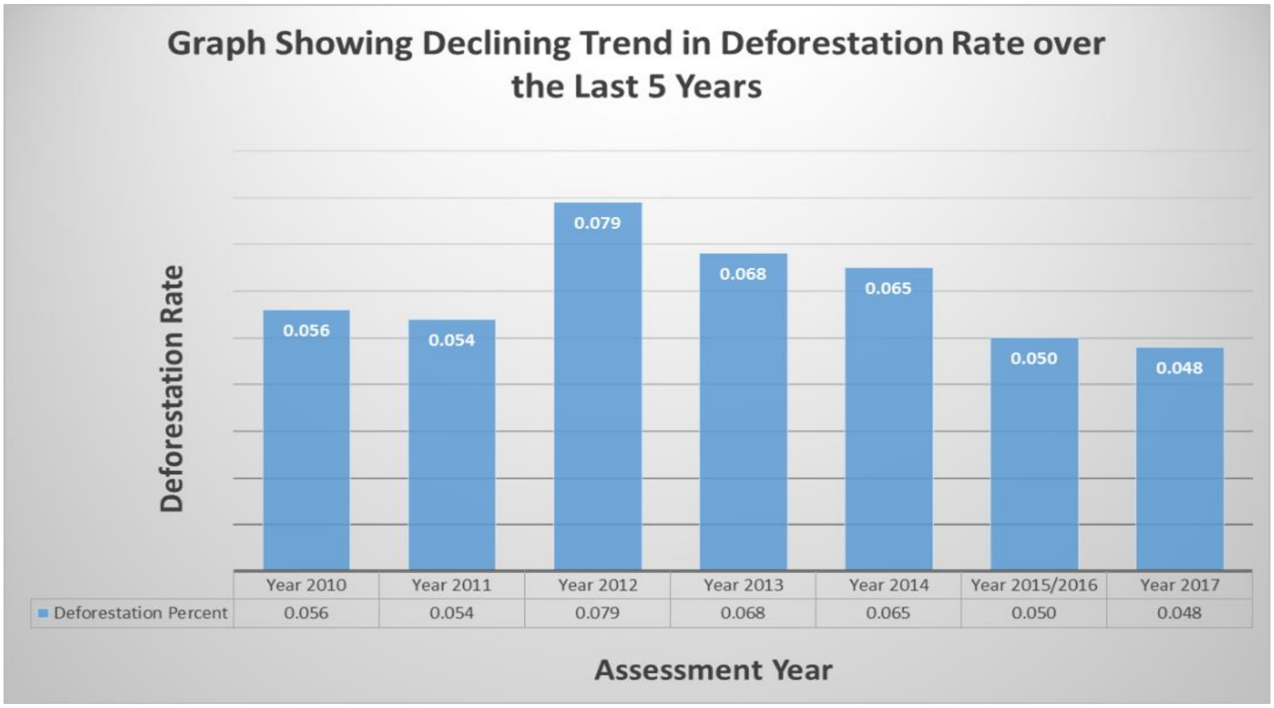
Reporting Period	Year	Years	Satellite Image Resolution	Forest Area ('000 ha)	Annualised Change	(%)
Initial forest area 1990	1990		30 m	18 473.39		
Benchmark (Sept 2009)	2009	19.75	30 m	18 398.48	74.92	0.021
Year 1 (Sept 2010)	2010	1	30 m	18 388.19	10.28	0.056
Year 2	2011	1.25	30 m & 5 m	18 378.30	9.88	0.054
Year 3	2012	1	5 m	*18 487.88	14.65	0.079
Year 4	2013	1	5 m	18 475.14	12.73	0.068
Year 5	2014	1	5 m	*18 470.57	11.98	0.065
Year 6	2015-16	2	10 m & 30 m	18 452.16	9.20	0.050
Year 7	**2017**	**1**	**10 m & 30 m**	**18 442.96**	**8.85**	**0.048**

***Continual forest area updates based on remapping, or introduction of higher resolution 5 m resolution imagery**

The trend shows that deforestation rates have increased since 1990 and peaked in 2012 (0.079%). Since 2012 (Year 3), there has been a steady decline in annual deforestation rates; with an annualised rate of 0.048% for Year 7, this assessment period.

Results for year 2017 deforestation assessment are presented below and show a continuing reduction on the rate of deforestation or loss of forest. The rate of deforestation for Year 2017 is 0.048%, which is a reduction from the year 2016 assessment which concluded on a deforestation rate of 0.05%.

The following figure shows the annualised deforestation trends for all change periods.



Annual Rate of Deforestation by Period from 1990 to 2017

5. Consultation & Outreach on the MRVS

Implementation of activities for 2018 included the conducting of consultation and outreach activities on REDD+. An Expert was contracted to conduct national outreach on REDD+ activities, specifically the MRVS and REDD+ related areas. The main objectives of these sessions were:

- To enable continuity of stakeholder engagement;
- To further advance the level of discussion, feedback and overall understanding of REDD+ implementation in Guyana, the MRVS and related REDD+ areas, to further strengthen the level of stakeholder knowledge and participation.

The twelve (12) workshops were attended by a total of three hundred and twenty-seven (327) persons with approximately 64% (208) participants being male. The largest Workshop was held in Mabaruma with fifty-two (52) participants. Approximately 42% (119) of participants were younger than thirty-five years of age. Of the total participants, eight-five (85) villages and communities were represented, fourteen (14) forestry associations, ten (10) processing facilities, and twenty-six (26) governmental and non-governmental agencies.

3.3.3 Contribution to GDP

In 2010, the Bureau of Statistics introduced a new series of Gross Domestic Product (GDP) rebased and re-benchmarked to year 2006, replacing the series based in 1988. The table below shows the trend of GDP over the past 9 years. This statistic is taken as a measure of primary production of Logs, Sawnwood, Roundwood and Splitwood. As such, total forest sector contribution that included added value forest products, (including plywood, furniture, and building components, etc.) tally to a higher percentage contribution. This additional aspect of forest sector contribution is recorded under the Manufacturing sector.

Table 1: Forestry and Agriculture Contribution to GDP

GDP at Constant 2006 Basic Prices (G$M)				Forestry's Sub Sector Contribution to:	
Year	GDP	Agriculture Sector	Forestry Sub Sector	GDP	Agriculture Sector
2008	286,732	61,277	8,927	3.11%	14.57%
2009	296,086	62,838	9,161	3.09%	14.58%
2010	309,382	63,490	10,238	3.31%	16.13%
2011	325,457	65,268	9,289	2.85%	14.23%
2012	342,630	67,637	8,886	2.59%	13.14%
2013	359,822	69,230	9,330	2.59%	13.48%
2014	373,849	73,167	10,633	2.84%	14.53%
2015	385,270	74,863	9,501	2.47%	12.69%
2016	398,230	67,140	6,911	1.74%	10.29%
2017	406,698	67,408	7,543	1.85%	11.19%
2018	423,528	68,390	7,683	1.81%	11.23%

Source: Bureau of Statistics 2015@Constant 2006 Prices

4.0 FORESTRY SECTOR STRUCTURE

4.1 Land Allocation Breakdown

State Forest Authorizations (SFAs – Small Concessions) are granted for 2 years for an area no more than 8,047 hectares; SFA-Large Concessions are granted up to a maximum of 40 years for areas in excess of 8,047 hectares. All leases are renewable subject to compliance with the terms of the agreement. State Forest Exploratory Permits (SFEPs) are granted for 3 years and is the precursor to a large concession.

Table 2: Forestry Land Allocation Table

CLASSIFICATIONS	COUNT	Area (Hectares)	% Total Allocation	% State Forest
PRODUCTION LANDS				
State Forest Permits (SFP)	515	2,014,743	43	17
State Exploratory Permits (SFEP)	4	1,009,687	21	8
Timber Sale Agreements (TSA)	14	1,656,294	36	13
Total Production Area Allocated		**4,680,724**	**100**	**38**
PERMANENT RESEARCH AND RESERVES				
GFC Forest Reserves	12	17,924.92		
Other Research & Reserves [Shell Beach, Kanuku Mountains)	2	733,291.72		
Total Research & Reserve Areas	**14**	**751,216.64**		
Total Forest Allocated		5,431,941		
Unallocated State Forest		7,134,059		
Total State Forest		**12,566,000**		
Iwokrama	1	371,610.44		
Kaieteur National Park	1	61,091.34		

Source: Guyana Forestry Commission

4.2 Other Forest Sector Licences

Sector activity licences are valid for one (1) calendar year only; continued activity at these operations requires annual renewals.

Table 3: Licences Issued 2018 & 2017

Licence Type	Comparison of the year 2017&2018 Licence Issuance					
	Year of Issuance	Division				
		Demerara	Berbice	Essequibo	Northwest	Total
Timber Dealer Export	Year 2017	55	26	12	0	93
	Year 2018	60	23	11	0	94
Import	Year 2017					0
	Year 2018	8	1	0	0	9
Lumber Yard	Year 2017	92	31	23	2	148
	Year 2018	92	37	21	2	152
Timber Dealer No Storage	Year 2017	7	1	10	1	19
	Year 2018	6	2	10	1	19
Sawpit Licence	Year 2017	83	53	86	18	240
	Year 2018	73	60	98	19	250
Sawmill Licence	Year 2017	94	46	57	2	199
	Year 2018	102	40	60	1	203
Firewood Licence	Year 2017	4	5	7	0	16
	Year 2018	4	5	8	0	17
Charcoal Licence	Year 2017	40	5	2	2	49
	Year 2018	41	3	1	2	47
Timber Depot	Year 2017	20	25	6	1	52
	Year 2018	24	27	4	0	55
Timber Path	Year 2017	2	3	1	0	6
	Year 2018	2	5	1	0	8
Permit to Erect	Year 2017	13	6	4	0	23
	Year 2018	11	3	10	0	24
Total	Year 2017	410	201	208	26	845
	Year 2018	423	206	224	25	878

*Import Licence is a new category of licence instituted by the GOG as a measure to capture the import of timber.

5.0 PRODUCTION

The Production Table below shows the production level for various forest products over 2018. The production aspect is related to utilization of forest resources as reported based on Timber Products (Logs, Sawnwood, Roundwood, Splitwood, Plywood and Fuelwood) and Non-Timber products (Wattles and Manicole Palm).

Table 4: Forest Sector Production 2018

PRODUCTS		Unit	Jan-Dec 2018 Total	Jan-Dec 2017 Total	% Change over Jan-Dec '17
TIMBER PRODUCTS					
Logs		m^3			
Special Category					
	Greenheart		56,408.48	53,988.41	4.48
	Purpleheart		7,230.77	7,690.81	(5.98)
	Others		3,921.61	5,372.47	(27.01)
	Total Special Category Logs		**67,560.86**	**67,051.69**	**0.76**
Class 1			131,171.46	142,346.10	(7.85)
Class 2			64,545.14	51,848.90	24.49
Class 3			29,806.94	19,645.28	51.73
	Total Other Class Logs		**225,523.54**	**213,840.28**	**5.46**
Total Logs			**293,084.40**	**280,891.97**	**4.34**
Roundwood		m^3			
Greenheart Piles			15,335.24	12,531.08	22.38
Kakaralli Piles			715.54	713.54	0.28
Wallaba Poles			5,932.98	5,793.54	2.41
Posts			1,737.21	1,851.60	(6.18)
Spars			178.22	180.26	(1.13)
Total Roundwood			**23,899.19**	**21,070.01**	**13.43**
Primary (Chainsaw) Lumber		m^3			
Special Category					
	Greenheart		4,697.36	3,801.89	23.55
	Purpleheart		2,001.17	2,001.70	(0.03)
	Others		2,516.92	2,734.13	(7.94)
	Total Special Cat. Lumber		**9,215.45**	**8,537.72**	**7.94**
Class 1			20,032.02	23,101.40	(13.29)
Class 2			11,056.99	12,358.74	(10.53)
Class 3			4,303.07	3,940.95	9.19
	Total Other Class Lumber		**35,392.08**	**39,401.09**	**(10.17)**
Total Primary Lumber			**44,607.53**	**47,938.81**	**(6.95)**
Splitwood		m^3			
	Paling Staves		45.21	60.07	(24.75)
	Vat Staves		-	-	-
	Shingles		-	-	-
Total Splitwood			**45.21**	**60.07**	**(24.75)**
Fuelwood	Charcoal	m^3	10,394.00	10,226.94	1.63
	Firewood	m^3	13,622.81	16,923.27	(19.50)
Total Fuelwood		m^3	**24,016.81**	**27,150.20**	**(11.54)**
Plywood		m^3	**14,571.79**	**7,333.62**	**98.70**
NON - TIMBER FOREST PRODUCTS					
Wattles		pieces	**277,285.00**	**391,522.00**	(29.18)
Manicole Palm		pieces	**2,825,704.00**	**4,017,142.00**	(29.66)

5.1 Production Volumes

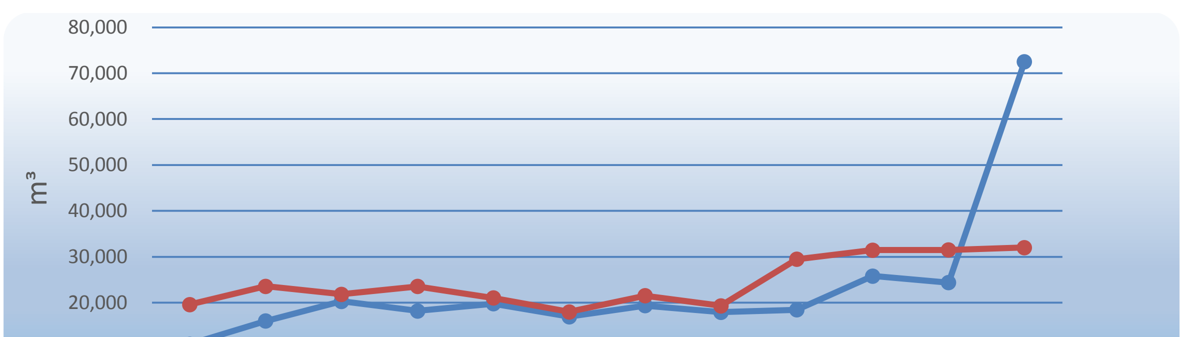
Table 4 presents production volumes for various primary Timber and Non-Timber forest products, together with Plywood, for the Year 2018 compared to 2017. Production declared at individual Forest Stations within the respective reporting districts (as per GFC designation) of Demerara, Essequibo, and Berbice, are shown in Appendices I – IV, attached. Total production of timber products (Logs, Primary Lumber, Roundwood, Splitwood, and Fuelwood) for the year 2018 was recorded at 385,653m^3, which is 2.27% higher than the 2017 level which was recorded at 377,111m^3. With the inclusion of Plywood, total timber and Plywood for 2018 was recorded at 400,225m^3 which is 4.1% greater than the 2017 level of 384,445m^3. Even though the production level for 2018 was higher than for 2017, a larger increase was expected but this was not fully realized owing to challenges in access to and from forest concessions, given the condition of several main and artery roads in the interior. 2018 showed higher production levels for Logs (by 4.34%), Roundwood (by 13.43%) and Plywood (by 98.7%) over 2017. Plywood is the most improved product for 2018, nearly doubling in production over the 2017 total volume.

5.2 Log Production

5.2.1 Log Production

A total of 293,084m^3 of Logs was recorded for 2018, 4.34% higher compared to production in 2017 (280,891m^3). Class 2 and Class 3 Logs were largely responsible for this increase in log production, followed to a lesser extent by Special Category Greenheart log production increasing by 4.48% when compared to the 2017 production level. This increased production level is owed to the higher volumes of Greenheart, Wamara, Baromalli, Kabukalli and Wallaba being harvested in 2018 than in 2017. Class 1 Logs along with Special Category Purpleheart and other species reflected decreases in the logs category.

Figure 1: Monthly Trends of Logs Production for 2017 and 2018



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2017	10,979	16,039	20,328	18,223	19,797	16,967	19,375	17,962	18,493	25,846	24,398	72,485	280,892
2018	19,625	23,588	21,851	23,577	21,060	18,016	21,557	19,360	29,506	31,470	31,521	32,044	293,176

Figure 1 compares monthly log production for years 2018 and 2017. Over the review period, log production remained above the compared 2017 production for most of the year except for December 2018. December 2018 did not see the bumper production level like in December 2017, which had marked the end of that concession lease period 2016 to 2017.

5.2.2 Log Production by GFC Reporting Regions and Forest Stations

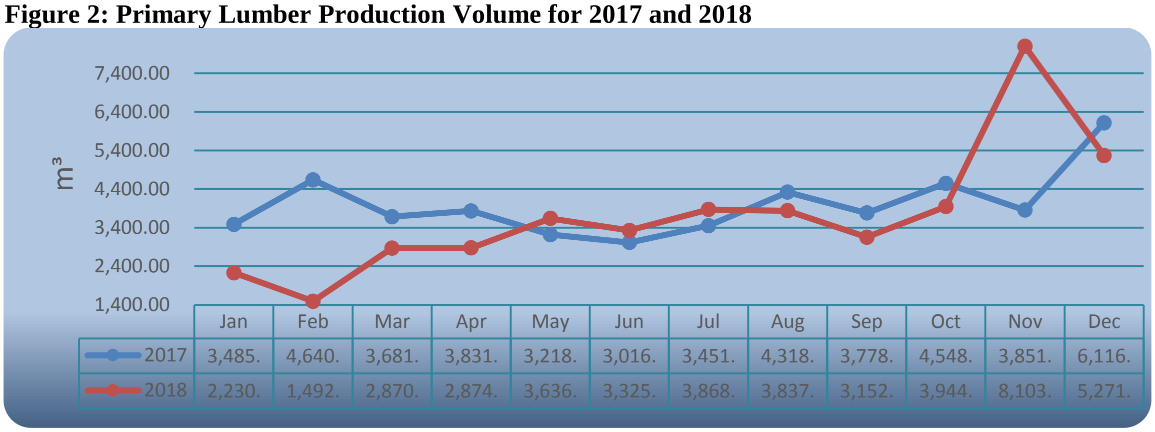
The largest production of logs was recorded in the county of Demerara, with 166,877m^3. The highest producing stations in Demerara were Soesdyke (50,753m^3), Linden (46,913m^3), and Georgetown (38,452m^3). Berbice reflected the second highest producing district with (69,303m^3), where the highest producing stations were Kwakwani (22,044m^3), Canje (16,794m^3), and Springlands (16,275m^3).

Essequibo, which holds the majority State Forest Lands and Allocated Production areas, produced 56,678m^3 (inclusive of North West). The largest production quantities came from Parika (27,071m^3), Winiperu (10,794m^3) and Iteballi (5,181m^3).

5.2.3 Monthly Production of Primary Lumber

Production of Primary Lumber for 2018 was 44,607m^3 or 6.95% less than the previous year's (47,938m^3). This was mostly due to low production in the earlier part of the year (Jan – Jun). The overall trend in Lumber production for the review period showed a steady output with small increases, however when compared to previous year, the results were indicative of lower volumes, except for the later parts of 2018. The primary species used for lumber production in 2018 were Kabukalli, Greenheart, Wallaba, Tauroniro Bulletwood, Purpleheart, Simarupa, Mora and Shibadan.

Figure 2: Primary Lumber Production Volume for 2017 and 2018



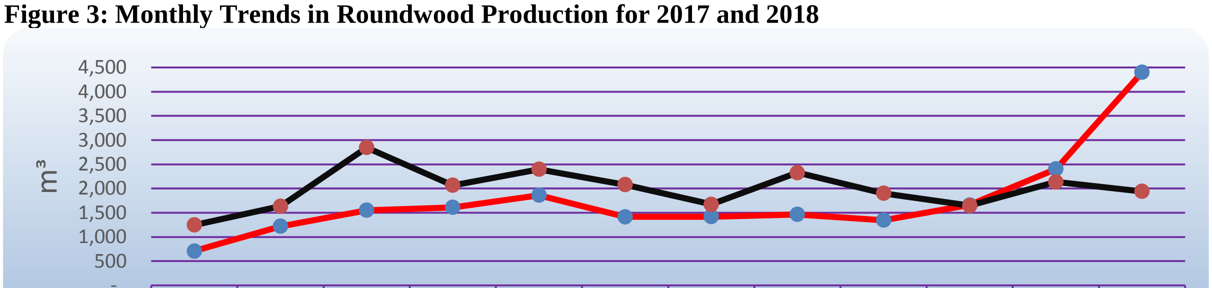
5.2.4 Primary Lumber by GFC Reporting Regions and Forest Stations

In 2018, GFC's Demerara stations declared the highest volume of Sawnwood, recording 22,527m^3 (50%) of national volume of Primary Lumber; this was followed by Essequibo (13,821m^3) and then Berbice (8,260m^3). The GFC Stations with the highest declared volume for 2018 were: Soesdyke (7,494m^3), Georgetown (6,993m^3) and Ituni (4,866m^3) in Demerara; in Essequibo was Supenaam (3,564m^3), Parika (2,424m^3); and Charity (1,833m^3) whilst Berbice stations were, Springlands (6,370M^3) and Canje 1,441m^3).

5.3 Roundwood Production

Production of Piles, Poles, Posts and Spars are recorded under the product category of Roundwood. Piles produced were primarily of the Greenheart species with few being Kakaralli, while Poles, Posts and Spars were derived mainly from the Wallaba species.

Figure 3: Monthly Trends in Roundwood Production for 2017 and 2018

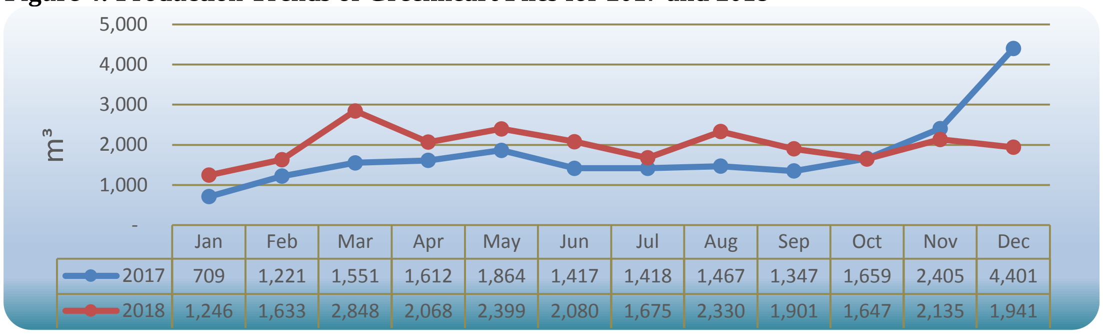


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2017	709	1,221	1,551	1,612	1,864	1,417	1,418	1,467	1,347	1,659	2,405	4,401
2018	1,246	1,633	2,848	2,068	2,399	2,080	1,675	2,330	1,901	1,647	2,135	1,941

The graph above shows Roundwood production for the year 2018 and 2017. The overall positive production trends of Roundwood for the period in review was indicative of the high demand from prevailing domestic housing market coupled with competitive export market and general price level.

Roundwood production for 2018 totalled 23,899m^3, 13.43% higher than the 21,070m^3 produced in 2017. The overall increase in Roundwood production was spread among the various products, but was mostly attributable to increase in the production of Greenheart Piles (from 12,531m^3 to 15,335 m^3). Other products increased similarly in terms of percentages with Wallaba Poles increasing by 2.4%; however Wallaba Post decreased by 6.18%.

Figure 4: Production Trends of Greenheart Piles for 2017 and 2018



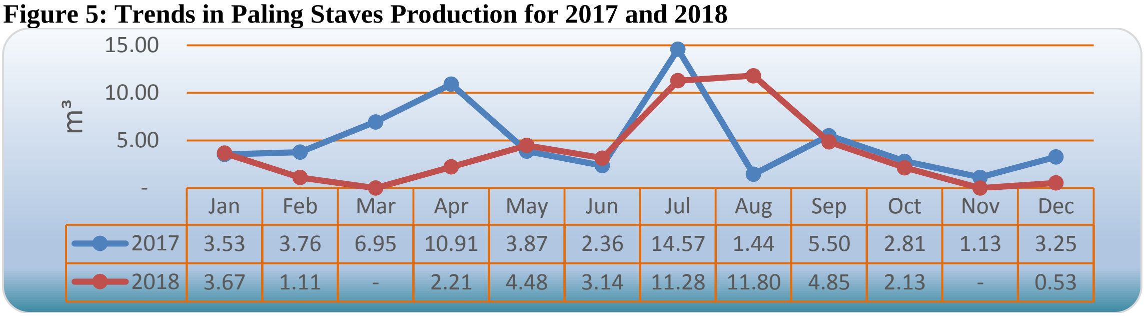
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2017	709	1,221	1,551	1,612	1,864	1,417	1,418	1,467	1,347	1,659	2,405	4,401
2018	1,246	1,633	2,848	2,068	2,399	2,080	1,675	2,330	1,901	1,647	2,135	1,941

The graph above represents trends in Greenheart Piles Production; 2018 saw a fluctuating trend with peaked production occurring in March and August 2018.

5.4 Splitwood Production

Splitwood refers to Staves (Paling Staves; Vat Staves) and Shingles (non-machine made), all usually produced from Wallaba species. For 2018, primary Splitwood production totalled 45.21m^3 compared to 60.07m^3 recorded for 2017 recording a decline of 24.75%. In this category, Paling staves was the only product the registered production.

Figure 5: Trends in Paling Staves Production for 2017 and 2018



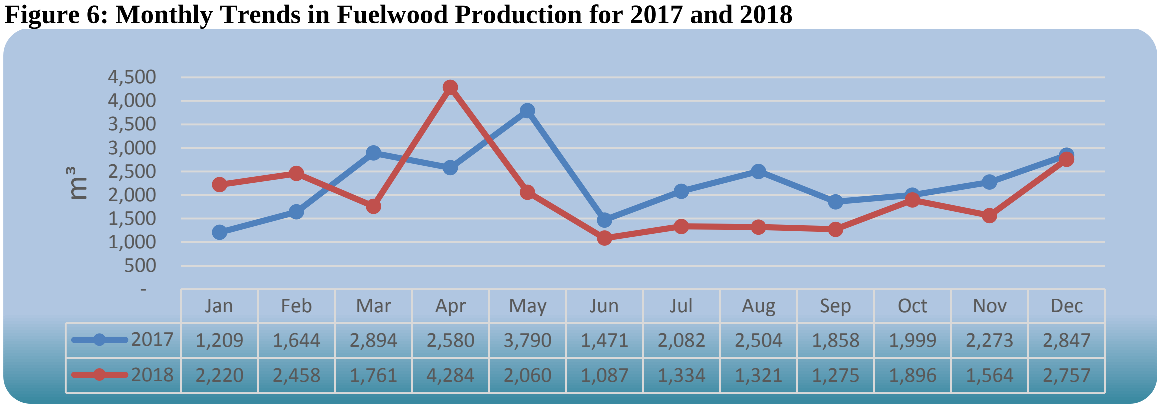
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2017	3.53	3.76	6.95	10.91	3.87	2.36	14.57	1.44	5.50	2.81	1.13	3.25
2018	3.67	1.11	-	2.21	4.48	3.14	11.28	11.80	4.85	2.13	-	0.53

The Graph above illustrates the monthly production level of Paling Staves produced in 2018 compared with 2017 level. In terms of production volume by region, Demerara remained the main district for the Splitwood production.

5.5 Fuelwood Production

There are two products are covered under this category namely: Charcoal and Firewood. The figure overleaf displays a visual representation of Fuelwood production for 2018 and a year 2017 comparison. The category saw an overall decline in year 2018 when compared to 2017, by 11.54%. This decrease was attributed to a decline in Firewood production. Firewood Production in 2018 recorded a decrease by 11.54% moving from 27,150m³ in 2017 to 24,016m³ in 2018. However, Charcoal increased by 1.63% when compared to 2017. The majority of Charcoal was produced in Demerara while small volumes were recorded in Berbice and Essequibo.

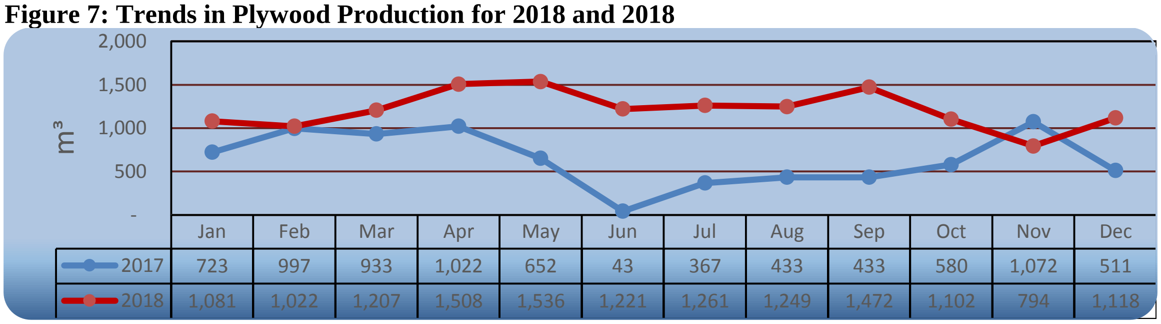
Figure 6: Monthly Trends in Fuelwood Production for 2017 and 2018



5.6 Plywood Production

Plywood production for 2018 recorded an increase by of 98.70% over 2017, moving from 7,333m³ in 2017 to 14,571 m³ recorded in 2018.

Figure 7: Trends in Plywood Production for 2018 and 2018



The line Graph above shows Plywood production for the year 2018 and that of the corresponding period of 2017. Production for 2018 remained above that of 2017 with the exception of November which showed a decline.

5.7 Non-Timber Forest Products

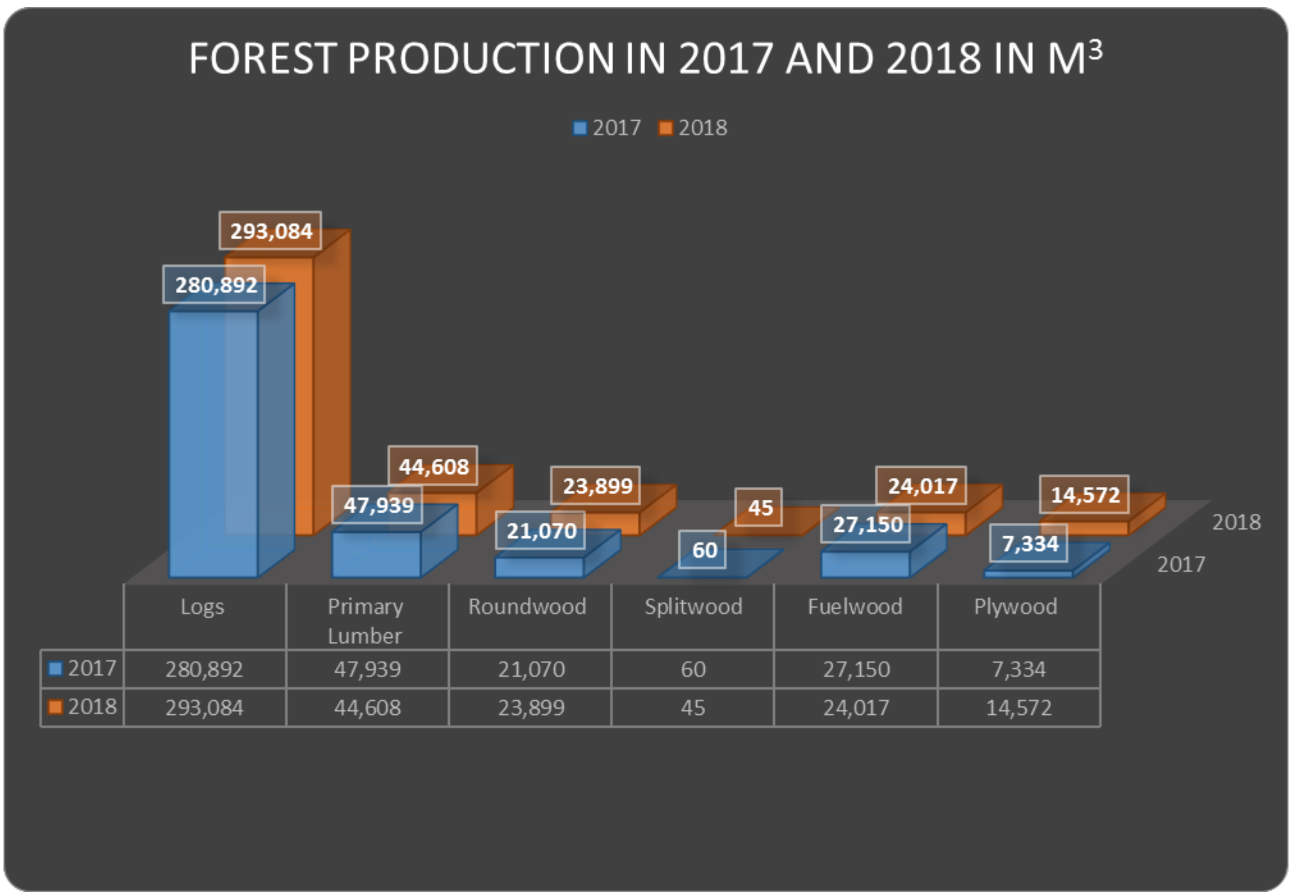
Non-Timber Forest Products (NTFP's) refer to a number of products other than primary and secondary timber products, derived from forest resources. These include Wattles, Manicole Palm, Mangrove Bark, Palms and Latex (Balata). The quantities mentioned in this summary are for Manicole Palm, and Wattles. Manicole Palm (Heart of Palm) for 2018 totalled 2,825 pieces, representing a decrease by 29.66% over that of the 2017 volume of 4,017,142 pieces.

Wattles output also recorded a decrease in 2018 by 29.18% over 2017. Production of at the end of December 2018 was recorded as 277,285 pieces, as against its year to date 2017 quantity of 391,522 pieces.

5.8 Comparative Production Volume Analysis

The Graph below shows the general trend of forest production by product categories for 2017 and 2018. Over the period 2018, there has been a general increase in all the products except for Primary Lumber and Splitwood.

Figure 8: Production Volume Analysis for 2017 and 2018



	Logs	Primary Lumber	Roundwood	Splitwood	Fuelwood	Plywood
2017	280,892	47,939	21,070	60	27,150	7,334
2018	293,084	44,608	23,899	45	24,017	14,572

6.0 Employment & Domestic Prices

6.1 Employment

Table 5: Employment estimates for the Forestry Sector for 2017 and 2018

Activity	2017	2018	%Change
Logs	10,595	10,625	**0.2**
Sawmilling	4,640	4,690	**1.1**
Timber Dealership (Lumberyards)	1,400	1,415	**1.1**
Plywood	250	230	**(8)**
Manicole Palm	462	450	**(2.6)**
Other*	2,250	2,230	**(0.8)**
Total	**19,597**	**19,640**	**0.22**

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

During 2018, employment within the sector increased marginally in the main sub sectors. Several concessions in the SFEP phase are gaining more momentum in their operations and this has expanded the logging sector on the large concession side as compared to 2017. Sawmilling and Timber Dealership (Lumberyards), also increased over the review period and signalled in the latter cases by increases in number of licences issued in most categories in 2018 over that of 2017. There was a decrease in the employment in the Manicole Palm/Cabbage sub sector as the main company involved has reduced the number of sub-contractors that have been employed in sourcing cabbage.

6.2 Domestic Prices

Table 6: Average Domestic Price for Timber and Plywood 2014-2018

PRODUCT	*Year*									
	2014		***2015***		***2016***		***2017***		***2018***	
	G$	**US$**	**G$**	**US$**	**G$**	**US$**	**G$**	**US$**	**G$**	**US$**
Logs	47,150	230	44,290	215	37,080	180	36,400	175	35,910	171
Sawnwood *	141,450	690	144,200	700	140,080	680	143,520	690	135,030	643
Dressed	147,600	720	152,440	740	154,500	750	161,200	775	156,660	746
Undressed	118,900	580	121,540	590	117,420	570	117,520	565	110,040	524
Roundwood	83,025	405	85,490	415	92,700	450	91,520	440	96,600	460
Splitwood	51,250	250	51,500	250	49,440	240	54,080	260	57,750	275
Fuelwood	6,560	32	7,210	35	7,210	35	8,320	40	8,820	42
* Row indicates combined average for Dressed and Undressed Sawnwood										
** Average 2015 Exchange Rate: G$210 =S$1										

Domestic prices increased marginally for Roundwood, Splitwood and Fuelwood in 2018 as compared to 2017. Prices of Logs and Dressed and Undressed Lumber decreased in 2018 when compared to 2017.

Undressed Lumber recorded a marginal decrease for the period under review to US$524/$m^3$ when compared to the 2017 level of US$565/$m^3$.

Roundwood recorded a percentage increase by 5% when compared to 2017. Splitwood average prices increased also over their 2017 level by 6%.

7.0 EXPORTS

7.1 Exports Summary

In this section, the various categories of forest products exported are examined and an analysis of their impact on the forest sector in 2018 is presented. Table 7 compares export performances for 2018 against their comparative 2017 levels, categorised by product and category, where applicable.

Total export value for 2018 was recorded at US$37.9M which is 3.09% lower than the 2017 level when the total export value for forest products was recorded at US$39.1M. The highest revenue earner of all forest products was Sawn Lumber recording US$15.2M for 2018. This was followed by Logs which recorded US$13.3M for 2018. The most improved product in terms of export revenue for 2018 was Roundwood which increased in value by 31% (from US$2.4M in 2017 to US$3.2M in 2018) over the 2017 value.

Log export declined in both volume and value, from 88,624m^3 in 2017 to 81,259m^3 in 2018. This translates to an 8.31% and a 9.12% drop in volume and value respectively.

Sawnwood recorded the largest volume decline in 2018 with 15,683m^3 exported when compared to the 2017 volume of 17,545m^3, a 10.62% decrease in volume, which translated to a 7.75% reduction in value. The decline in volume was largely attributed to a decrease within the Undressed Lumber category, by 17.74%.

Roundwood export increased however, by 16.19% in volume coupled with a 31.19% increase in value. During 2018 the quantity of 5,539m^3 of Roundwood was exported, as against 4,767m^3 exported for 2017. This resulted in a total value earning of US$3.2M during 2018 as against the value of US$2.42M recorded for 2017.

Splitwood consists of Shingles and Paling Staves. Shingles was the only product within this category that was exported over the review period, and recorded a 0.5% increase in export volume and a 7.66% increase in value during 2018.

Over the review period, Plywood export increased by 11.92% and 16.24% in volume and value respectively, when compared to 2017 totals.

Fuelwood export decreased in both volume and value by 6.93% and 15.06% respectively. Other Value added Timber products recorded an increase in value by 66.34%, whilst Other Non-Timber forest products recorded a decline in value by 14.37%, both when compared to 2017 levels.

Table 7: Forest Sector Export 2018 and Comparative 2017

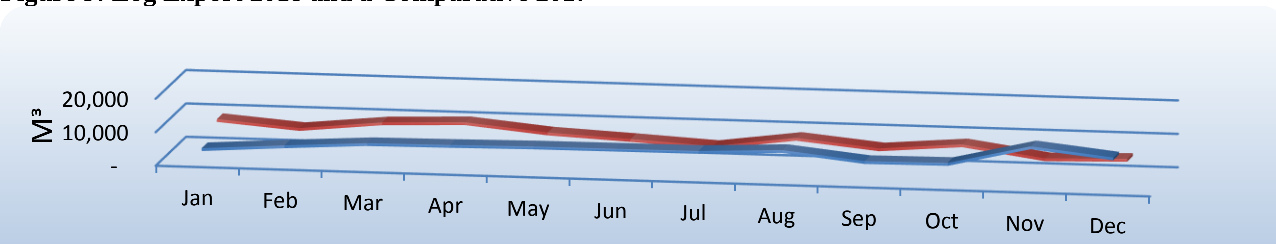
PRODUCT	Jan-Dec 2018		Jan-Dec 2017		% Change Over	
	Volume	Value	Volume	Value	Jan-Dec 2017	
	m^3	US$	m^3	US$	% Vol	% Val
Logs	**81,259.05**	**13,302,121.63**	**88,624.25**	**14,637,006.04**	**(8.31)**	**(9.12)**
Sawnwood	**15,683.10**	**15,219,780.39**	**17,545.88**	**16,497,649.40**	**(10.62)**	**(7.75)**
Dressed	*7,175.35*	*8,304,238.14*	*7,203.96*	*8,556,714.25*	**(0.40)**	**(2.95)**
Undressed	*8,507.75*	*6,915,542.25*	*10,341.92*	*7,940,935.15*	**(17.74)**	**(12.91)**
Roundwood	**5,539.20**	**3,180,230.34**	**4,767.21**	**2,424,130.31**	**16.19**	**31.19**
Greenheart Piles	*3,866.44*	*1,805,136.70*	*3,796.37*	*1,791,123.30*	**1.85**	**0.78**
Kakaralli Piles	*267.69*	*136,696.18*	-	-		
Other Piles	-	-	-	-	-	-
Poles	*1,305.38*	*1,173,152.73*	*837.09*	*559,447.51*	**55.94**	**109.70**
Posts	*99.69*	*65,244.73*	*119.82*	*70,934.50*	**(16.80)**	**(8.02)**
Spars	-	-	*13.93*	*2,625.00*	-	-
Splitwood	**4,049.76**	**3,880,271.03**	**4,027.59**	**3,604,325.79**	**0.55**	**7.66**
Paling Staves	-	-	-	-	-	-
Shingles	4,049.76	3,880,271.03	4,027.59	3,604,325.79	**0.55**	**7.66**
Plywood	**2,924.83**	**1,588,463.25**	**2,613.42**	**1,366,589.84**	**11.92**	**16.24**
Veneer	**20.90**	**8,322.76**				
TOTAL TIMBER & PLYWOOD	**109,476.85**	**37,179,189.40**	**117,578.34**	**38,529,701.38**	**(6.89)**	**(3.51)**
Furniture (pcs)	**288.00**	**69,661.98**	**61.00**	**19,145.13**	**372.13**	**263.86**
Indoor Furniture	276.00	57,714.98	60.00	18,935.13	**360.00**	**204.80**
Outdoor/Garden Furniture	12.00	11,947.00	1.00	210.00	**1,100.00**	**5,589.05**
Building Componentry (pcs)	**9,096.00**	**357,833.08**	**15,916.00**	**214,860.00**	**(42.85)**	**66.54**
Doors	1,050.00	212,567.09	291.00	111,684.27	**260.82**	**90.33**
Door Components	51.00	4,074.20	79.00	2,055.88	**(35.44)**	**98.17**
Windows	577.00	113,513.25	377.00	76,457.10	**53.05**	**48.47**
Other Builder's Joinery (pcs)	12,050.00	15,704.52	15,153.00	23,562.75	**(20.48)**	**(33.35)**
(m^3)	-	-	-	-	-	-
Rails (pcs)	457.00	11,365.02	-	-		
Wattels (pcs)	300.00	144.00	-	-		
Spindles (pcs)	13.00	465.00	108.00	1,100.00		
Mouldings (m)	**16,397.63**	**39,823.12**	**12,092.03**	**35,805.29**	**35.61**	**11.22**
Pre-Fabricated Houses (pcs)	-	-	2.00	11,130.00	-	-
OTHER** (than Plywood) **VALUE ADDED	**17,440.17**	**467,318.18**	**28,071.03**	**280,940.42**	**(37.87)**	**66.34**
Fuelwood (m^3)	**5,492.84**	**227,859.21**	**5,901.73**	**268,250.60**	**(6.93)**	**(15.06)**
Charcoal	6,936.27	226,839.96	7,677.85	266,850.60	**(9.66)**	**(14.99)**
Firewood	25.37	1,019.25	31.01	1,400.00	**(18.19)**	**(27.20)**
Other (pcs)	**2,468.00**	**9,063.56**	**6,260.00**	**12,394.54**	**(60.58)**	**(26.87)**
Wooden Ornaments & Utensils	1,238.00	6,037.00	3,005.00	7,646.89	**(58.80)**	**(21.05)**
Craft	5,029.00	3,026.56	3,803.00	4,747.65	**32.24**	**(36.25)**
Non - Timber Forest Products (pcs)	**12,137.00**	**20,181.05**	**4,130.00**	**19,597.74**	**193.87**	**2.98**
OTHER PRODUCTS		**257,103.82**		**300,242.88**		**(14.37)**
TOTAL EXPORT VALUE		**37,903,611.40**		**39,110,884.68**		**(3.09)**

7.1.1 Log Exports

This Section provides a detailed outline of the various aspect of forest product exports in 2018.

Log export volume for the period January to December 2018 totalled 81,259m³, with a corresponding value of US$13.30M. This is compared to the 2017 total of 88,624m³ in volume and US$14.63M in value, and represents a decrease in value by 9.12%, and 8.31% in volume.

Figure 9: Log Export 2018 and a Comparative 2017



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2017	3,883	5,481	6,911	7,134	7,445	7,529	7,618	8,663	6,124	6,323	12,044	9,468
2018	8,288	6,348	8,803	9,606	7,297	6,114	4,777	7,980	5,596	7,560	4,147	4,743

The Line Graph above shows the trend of log export volumes during 2018. April 2018 recorded the peak export level for the year.

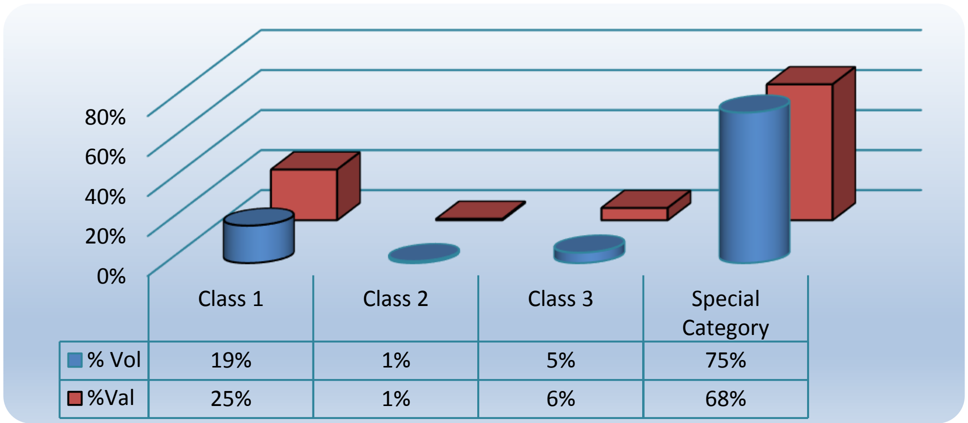
7.1.2 Sawnwood Exports

Sawnwood exports for 2018 totalled 15,683m³ with a value of US$15.21M. This is compared with 17,545m³ in volume and US$16.49M, for the previous year. Export volume declined by 10.62% whilst export value declined by 7.75%.

The decline in Sawnwood revenue was as a result of lower volume of Undressed Lumber exported in 2018. The main export markets for Sawnwood remain in the Latin America/Caribbean region and North America, whilst export to the Asian pacific region continued to show improvement during 2018.

The graph below shows the percentage share of various categories of Sawnwood exports and their contribution to the Product total.

Figure 10: Sawnwood Export by Percentage Volume and Value



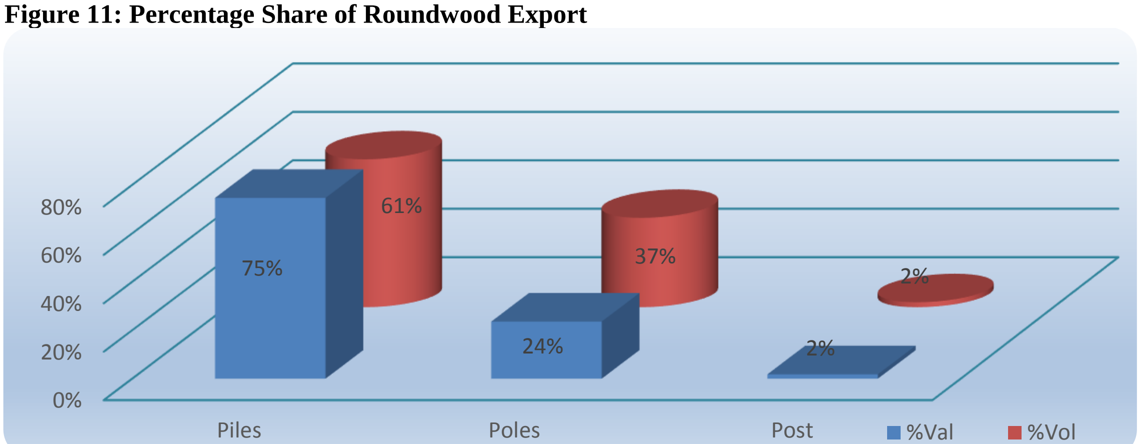
Special Category Sawnwood contributed the largest percent share of all Sawnwood lumber exports, accounting for 75% of volume and 68% in value. This was followed by Class 1 Lumber with share amounting to 19% of volume and 25% of value.

7.1.3 Roundwood Exports

Roundwood exports increased in both volume and value during 2018 when compared to 2017. Within the Roundwood category, there are three sub products that are exported over the review period, namely Piles, Poles, and Post.

Piles accounted for the largest percentage share of all Roundwood products, with a 61% volume export and a value amount of 75% of total Roundwood export. The export of Poles accounted for 37% of Roundwood export and contributed 24% of Roundwood export revenue.

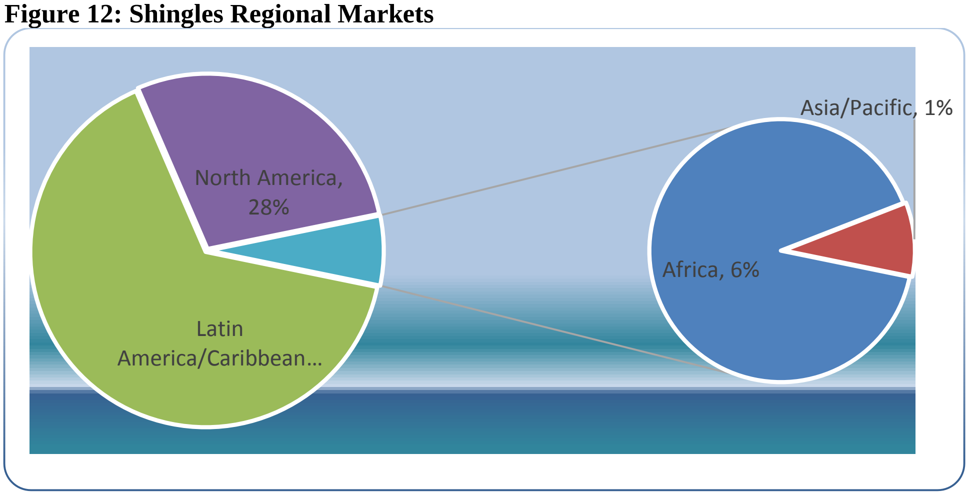
Figure 11: Percentage Share of Roundwood Export



7.1.4 Splitwood Exports

In 2018, Shingles was the only type of Splitwood exported. Splitwood was exported to the four regions: Latin America and the Caribbean, North America, Africa and Asia Pacific. Splitwood exports increased both in volume by 0.55% and 7.66% in value.

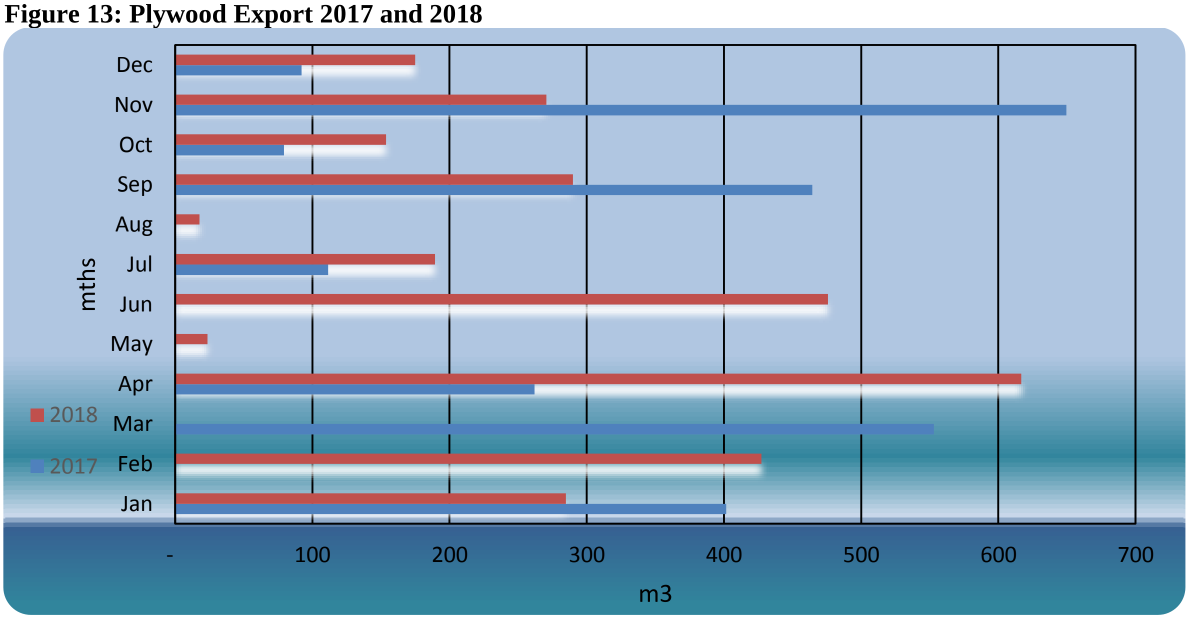
Figure 12: Shingles Regional Markets



7.1.5 Plywood Exports

Plywood exports for the year 2018 recorded higher volumes as a result of higher production. Plywood exports for 2018 totalled 2,924m^3 in volume and US$1.58M in value, an increase over 2017 by 12% in volume and 16% in value.

Figure 13: Plywood Export 2017 and 2018



7.1.6 Other Value-Added Exports

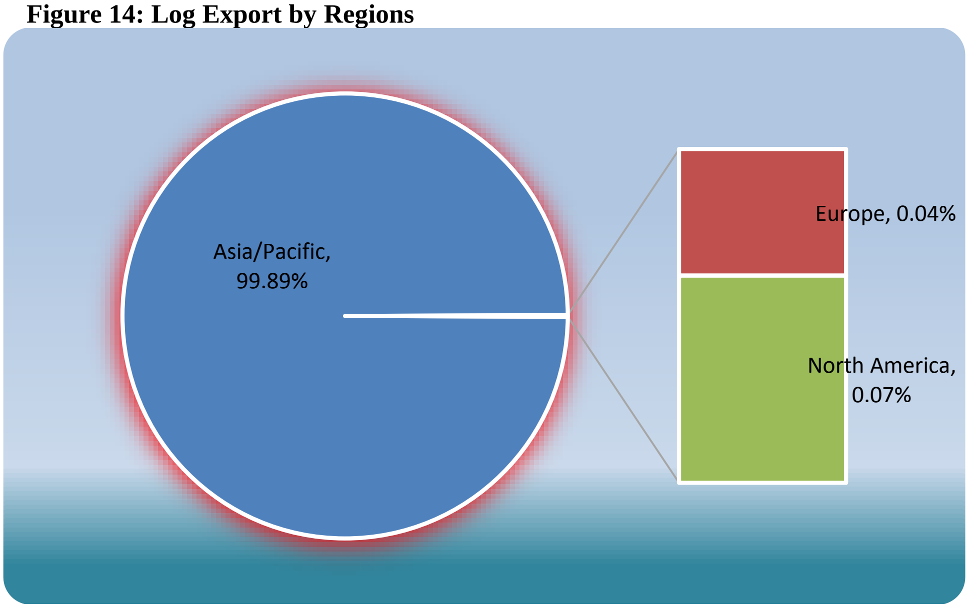
Export revenue from Other Value-Added Products (value-added items other than Plywood) for 2018 increased by 66% (from US$280,000 to US$467,000 when compared to the previous year. This increase in value was mostly fuelled by an increase in Doors and Furniture exports.

7.2 Exports by Destination

This section examines exports of the timber 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, respectively, are presented in Appendix V and Appendix VI.

7.2.1 Log Exports by Destination

Figure 14: Log Export by Regions

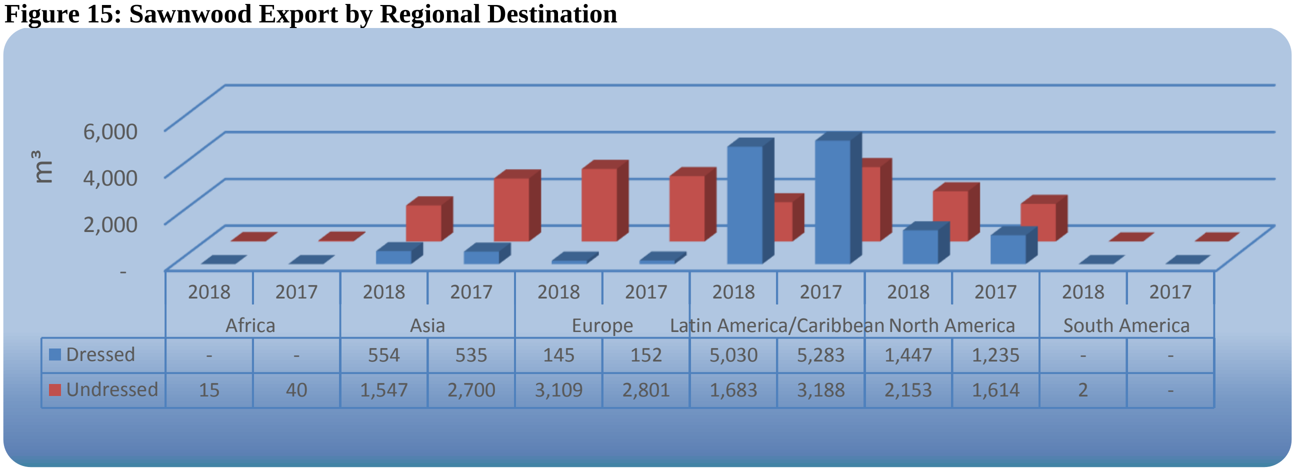


The Pie chart shows the percentage outline of Guyana's Log exports by region. As can be seen, volumes amounting to 99% of all Log exports went to Asia/Pacific region and accounting for 99% of Log export revenues. The remaining 0.11% was shared between North America and Europe. Individually, China accounts for 71% of total log export, followed by India 19%. Within the Asia Region, the other destinations for logs have been Japan, Singapore, and Vietnam. Logs exported to Europe and North America went exclusively to Slovenia and the United States respectively.

7.2.2 Sawnwood/Lumber Exports by Destination

The Latin America/Caribbean (LAC) region continued to be the main destination for Guyana's Sawnwood consuming 6,712m^3 at a market value of US$6.56M, and accounted for 43% of all Sawnwood exported. The categories of lumber exported comprised of dressed lumber (7,175m^3, US$8.30M) and undressed lumber (8,507m^3, US$6.91M).

Figure 15: Sawnwood Export by Regional Destination

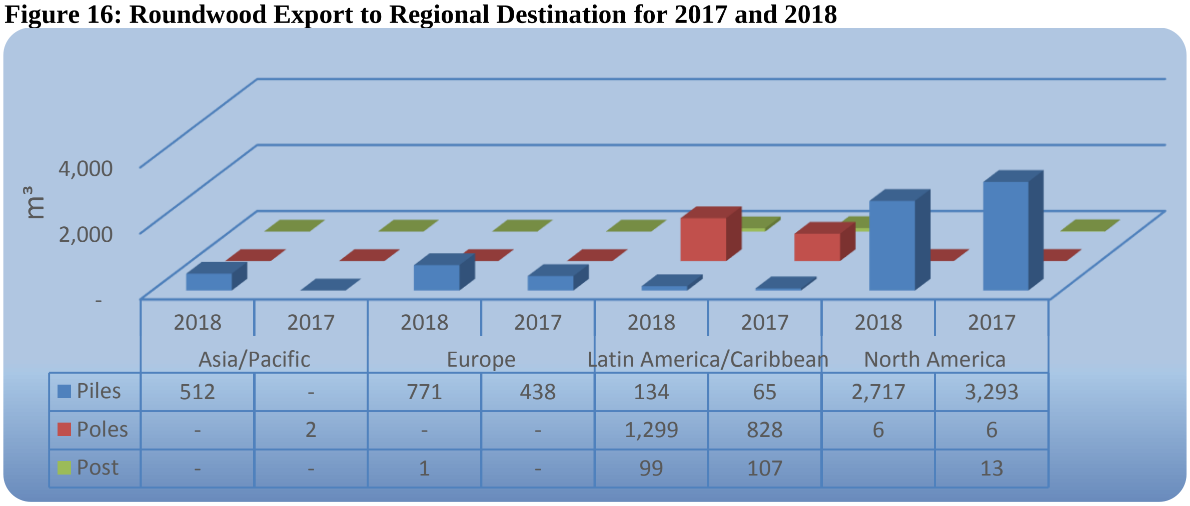


Sawnwood export to the LAC regions were to sixteen destinations; however, the main destinations within this region have been Barbados, Dominica, Trinidad and Tobago, Grenada and Jamaica, whilst smaller quantities went to the remaining destinations. Increases in both Dressed and Undressed Sawnwood exports to North America were recorded during 2018, whilst a decrease was evident for exports of this category, to Europe.

7.2.3 Roundwood Exports by Destination

The graph below provides a comparison between 2018 and 2017 for Roundwood exports across the various regions. Roundwood volume amounting to 5,539m^3 at a value of US$3.18M was exported to these regions in 2018, and showed an increase of 16.19% in volume and 31.19% in value, when compared to 2017 exports.

Figure 16: Roundwood Export to Regional Destination for 2017 and 2018

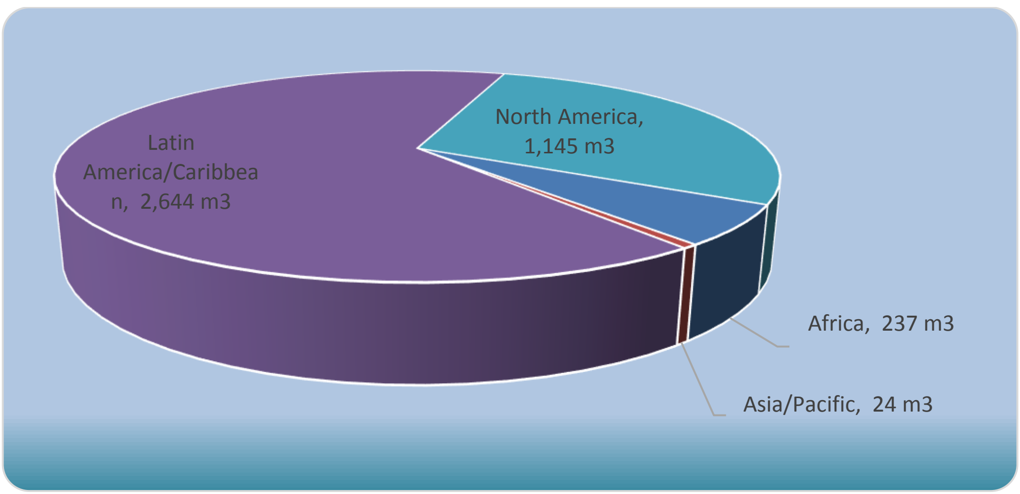


A robust increase was evident in the LAC region in the consumption in Roundwood, more specifically, a notable increase in demand for Wallaba Poles. Overall, the largest export volumes of Roundwood product went to North America, of which Piles was the main export product. Export to this region accounted for 49% of total Roundwood export.

7.2.4 Splitwood Exports by Destination

Shingles totalling 4,049m³ and valued at US$3.88M, was the only form of Splitwood exported during 2018.The majority was exported to the Latin America/Caribbean region (65% of all Shingles exported). The leading markets within this region were the French West Indies, Jamaica, and the British Virgin Island, which accounted for 48%, 19%, and 9% of the region's total.

Figure 17: Splitwood Exports to Regional Destination



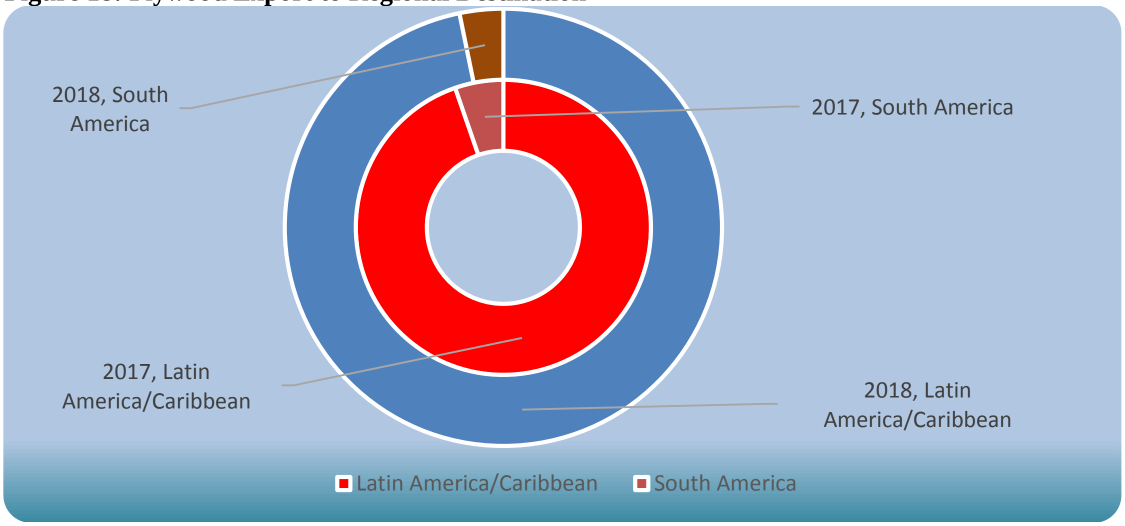
The United States was the only market in North America for Guyana's Shingles totalling 1,145m³ in 2018. Other markets for Guyana's Shingles were found in Africa and Asia/Pacific region, recording 237m³ and 24m³ in volume respectively.

7.2.5 Plywood Exports by Destination

The Latin America/Caribbean region and South America are the two main destinations for Guyana Plywood. Further, the LAC region continues to lead the other regions for the consumption of Guyana's Plywood. The region accounted for 96% of all Plywood exports during 2018.

Overall, Plywood 2018 exports totalled 2,924m³ in volume for US$1.58M revenue, as compared to 2017 figures of 2,613m³ and US$1.36M, representing an 11.92% and 16.24% increase in volume and value respectively.

Figure 18: Plywood Export to Regional Destination



7.3 Forestry Sector Export Earnings by Destination

The Asia/Pacific zone has been the largest market for Guyana's forest produce with a value of US$15.009M and accounts for 40% of total export earnings. However, when compared to 2017 earnings, export decreased by 19%, from US$18.50M to US$15.009M. China was the single largest destination for Guyana's timber products which was followed closely by India.

The second largest market zone for Guyana's forest produce was the Latin America/Caribbean Region with export value totalling US$12.53M and accounting for 33% of total export value. Within this Region, Trinidad and Tobago and Barbados continue to be the major destinations for Guyana's forest produce. Barbados and Trinidad recorded a combined export value of US$4.4M.

The export regions of Africa, Europe, North America and South America was responsible for the remaining 27% of total export of Guyana forest products. The main destinations within these regions were the United States, Netherland, United Kingdom, Mauritius, Italy and Belgium.

Logs were largely exported to the Asia Pacific region, whilst the dominant market for Sawnwood was the Latin American and Caribbean Region - Undressed Sawnwood was the more demanded product. Roundwood's dominant market was found in North America whilst Splitwood and Plywood were exported mainly to Latin America and the Caribbean, as well as South America.

Figure 19: Graph showing: Total Export Value (%) by Regional Destination 2018

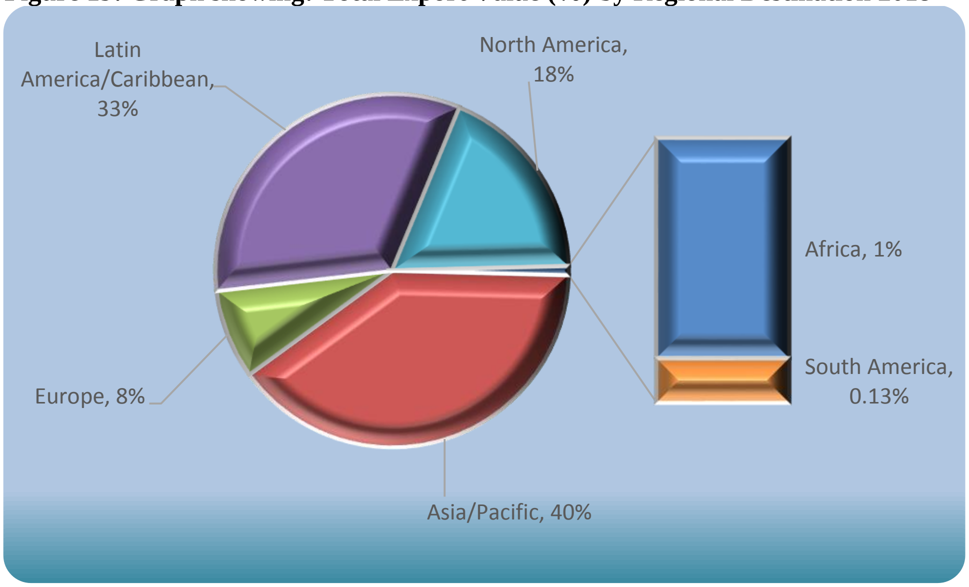


Table 8: Comparative Export Value by Regional Destination (2014 to 2018)

Market Destinations	Export Value (%) 2014	Export Value (%) 2015	Export Value (%) 2016	Export Value (%) 2017	Export Value (%) 2018
Africa	0.04	0.1	0.1	1	1
Asia/Pacific	53	53	49.4	47	40
Europe	9	6	5	7	8
Latin America/Caribbean	21	24.9	27	29	33
North America	16	15	18	16	18
South America	1	1	0.1	0.2	0.1
Grand Total	**100**	**100**	**100**	**100**	**100**

7.4 Export Prices

Export prices increased in several categories of forest products exported in 2018, with the exception of Logs, Dressed Lumber and Fuelwood which decreased by 0.88%, 2.56% and 8.73% respectively.

The product category with the largest price increase was Roundwood which saw a 12.91% increase in export prices over 2017.

The product category of Sawnwood which takes up a relatively large amount of total export volume, saw a 3.21% increase in average price level in 2018. Within this category, an increase was recorded in the average price level of Undressed Sawnwood by 5.86%, whilst the Dressed category decreased by 2.56%

There has been a 7.07% increase in the average price level of Splitwood when compared to 2017. Plywood also showed an increase in the general price level in 2018 by 3.86% when compared to 2017.

Table 9: Average Export Price for Timber and Plywood 2017-2018

Product	2017(US)/M^3	2018(US)/M^3	% Change Over 2017
Logs	165	164	(0.88)
Sawnwood	940	970	3.21
Dressed	1,188	1,157	(2.56)
Undressed	768	813	5.86
Roundwood	509	574	12.91
Splitwood	895	958	7.07
Fuelwood	45	42	(8.73)
Plywood	523	543	3.86

** Row indicates combined average for Dressed and Undressed Sawnwood

*** Splitwood Export prices refer to mill-produced Splitwood, mainly Shingles

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APPENDICES

Appendix 1: Production Volumes by Counties 2018 from State Forest Estate

Product	Category	Uom	BER	DEM	ESS	Grand Total
Logs	Special Category Log	m³	9,381.58	26,223.70	18,626.02	54,231.30
	Class 1 Log		31,549.25	59,368.51	12,208.90	103,126.66
	Class 2 Log		10,197.02	25,329.36	12,253.68	47,780.06
	Class 3 Log		7,125.24	9,861.95	3,359.06	20,346.25
Logs Total		**m³**	**58,253.09**	**120,783.52**	**46,447.66**	**225,484.27**
Primary Lumber	Special Category Lumber	m³	255.97	3,350.93	3,331.37	6,938.27
	Class 1 Lumber		1,099.26	8,108.19	2,267.54	11,474.99
	Class 2 Lumber		765.83	2,477.29	1,205.25	4,448.37
	Class 3 Lumber		306.49	1,132.34	792.21	2,231.04
Primary Lumber Total		**m³**	**2,427.55**	**15,068.75**	**7,596.37**	**25,092.67**
Splitwood	Paling Staves	m³	0.19	26.31	-	26.51
	Shingles		-	-	-	-
Splitwood Total		**m³**	**0.19**	**26.31**	**-**	**26.51**
Roundwood	Piles	m³	1,519.31	8,967.76	1,715.87	12,202.94
	Poles		77.14	3,650.11	321.99	4,049.24
	Posts		98.77	504.44	65.91	669.12
	Spars		0.05	8.54	0.68	9.28
Roundwood Total		**m³**	**1,695.27**	**13,130.85**	**2,104.45**	**16,930.58**
Fuelwood	Charcoal	m³	577.57	869.07	643.10	2,089.74
	Firewood		-	6,966.61	503.19	7,469.80
Fuelwood Total		**m³**	**577.57**	**7,835.68**	**1,146.29**	**9,559.54**
Wattles	Wattles	pcs	14,751.00	222,566.00	5,308.00	242,625.00
Wattles Total		**pcs**	**14,751.00**	**222,566.00**	**5,308.00**	**242,625.00**
Manicole Palm Heart	Manicole Palm Heart	pcs	-	12,200.00	2,680,749.00	2,692,949.00
Manicole Palm Heart Total		**pcs**	**-**	**12,200.00**	**2,680,749.00**	**2,692,949.00**

Appendix 2 State Forest Total Production by Station in Demerara 2018

Product	Category	Uom	Georgetown	Ituni	Linden	Mabura	Soesdyke	Grand Total
Logs	Special Category Log	m^3	3,998.49	569.44	2,113.31	8,609.24	10,933.22	26,223.70
	Class 1 Log		8,938.37	4,848.40	15,855.55	10,979.75	18,746.44	59,368.51
	Class 2 Log		1,775.91	1,669.40	6,759.25	646.08	14,478.72	25,329.36
	Class 3 Log		1,292.31	828.24	3,130.34	1,246.66	3,364.40	9,861.95
Logs Total		**m^3**	**16,005.08**	**7,915.48**	**27,858.45**	**21,481.73**	**47,522.78**	**120,783.52**
Primary Lumber	Special Category Lumber	m^3	959.73	247.47	461.46	-	1,682.27	3,350.93
	Class 1 Lumber		1,766.31	3,658.82	376.07	-	2,306.99	8,108.19
	Class 2 Lumber		556.27	279.77	123.22	-	1,518.03	2,477.29
	Class 3 Lumber		429.49	42.49	217.84	-	442.52	1,132.34
Primary Lumber Total		**m^3**	**3,711.80**	**4,228.55**	**1,178.59**	**-**	**5,949.81**	**15,068.75**
Splitwood	Paling Staves	m^3	-	-	-	-	26.31	26.31
	Shingles		-	-	-	-	-	-
Splitwood Total		**m^3**	**-**	**-**	**-**	**-**	**26.31**	**26.31**
Roundwood	Piles	m^3	987.93	211.27	472.19	269.73	7,026.65	8,967.76
	Poles		1,779.08	-	483.44	-	1,387.59	3,650.11
	Posts		-	-	14.36	-	490.07	504.44
	Spars		-	-	-	-	8.54	8.54
Roundwood Total		**m^3**	**2,767.01**	**211.27**	**969.99**	**269.73**	**8,912.86**	**13,130.85**
Fuelwood	Charcoal	m^3	20.39	-	67.98	-	780.69	869.07
	Firewood		108.74	-	-	-	6,857.87	6,966.61
Fuelwood Total		**m^3**	**129.13**	**-**	**67.98**	**-**	**7,638.56**	**7,835.68**
Wattles	Wattles	pcs	6,860.00	-	-	-	215,706.00	222,566.00
Wattles Total		**pcs**	**6,860.00**	**-**	**-**	**-**	**215,706.00**	**222,566.00**
Manicole Palm Heart	Manicole Palm Heart	pcs	12,200.00	-	-	-	-	12,200.00
Manicole Palm Heart		**pcs**	**12,200.00**	**-**	**-**	**-**	**-**	**12,200.00**

Appendix 3: State Forest Total Production by Stations in Berbice 2018

Product	Category	Uom	Bamboo Landing	Canje	Kwakwani	Orealla	Springlands	Unamco Road 110 KM	Grand Total
Logs	Special Category Log	m^3	4,662.64	141.74	1,602.06	-	214.32	2,760.82	9,381.58
	Class 1 Log		692.67	6,000.20	13,447.58	62.51	8,232.70	3,113.59	31,549.25
	Class 2 Log		22.09	1,484.18	3,973.89	-	3,826.14	890.72	10,197.02
	Class 3 Log		54.64	812.26	2,753.61	7.97	2,855.43	641.33	7,125.24
Logs Total		**m^3**	**5,432.04**	**8,438.38**	**21,777.14**		**15,128.59**	**7,406.46**	**58,182.61**
Primary Lumber	Special Category Lumber	m^3	-	52.21	172.99	-	30.77	-	255.97
	Class 1 Lumber		-	560.82	143.03	-	395.41	-	1,099.26
	Class 2 Lumber		-	230.14	45.31	-	490.38	-	765.83
	Class 3 Lumber		-	54.47	81.73	-	170.29	-	306.49
Primary Lumber Total		**m^3**	**-**	**897.64**	**443.06**		**1,086.85**	**-**	**2,427.55**
Splitwood	Paling Staves	m^3	-	-	-	-	0.19	-	0.19
	Shingles		-	-	-	-	-	-	-
Splitwood Total		**m^3**	**-**	**-**	**-**		**0.19**	**-**	**0.19**
Roundwood	Piles	m^3	850.17	8.06	535.05	-	-	126.04	1,519.31
	Poles		-	20.07	57.07	-	-	-	77.14
	Posts		-	-	-	-	98.77	-	98.77
	Spars		-	0.05	-	-	-	-	0.05
Roundwood Total		**m^3**	**850.17**	**28.18**	**592.11**		**98.77**	**126.04**	**1,695.27**
Fuelwood	Charcoal	m^3	-	577.57	-	-	-	-	577.57
	Firewood		-	-	-		-	-	-
Fuelwood Total		**m^3**	**-**	**577.57**	**-**		**-**	**-**	**577.57**
Wattles	Wattles	pcs	-	14,726.00	-	-	25.00	-	14,751.00
Wattles Total		**pcs**	**-**	**14,726.00**	**-**		**25.00**	**-**	**14,751.00**
Manicole Palm Heart	Manicole Palm Heart	pcs	-	-	-	-	-	-	-
Manicole Palm Heart Total		**pcs**	**-**	**-**	**-**		**-**	**-**	**-**

Appendix 4: State Forest Total Production by Stations in Essequibo 2018

Product	Category	UoM	Annai	Arapiaco	Bartica	Capoey	Charity	Drumhill	Iteballi	Kwebanna	Lethem	Mabaruma	Parika	Port Katuma	Supenaam	Winiperu	Grand Total
Logs	Special Category Log	m^3	10.29	2.16	429.79	24.64	67.67	-	2,992.65	32.42	-	48.32	6,487.41	-	1,157.90	7,372.77	7,372.77
	Class 1 Log		1.53	69.84	1,011.23	3.74	147.27	-	727.38	2.91	-	90.20	6,874.16	-	153.37	3,127.27	3,127.27
	Class 2 Log		-	1,603.18	825.87	14.81	2,877.03	-	1,001.92	-	-	506.48	4,872.22	-	552.17	-	
	Class 3 Log		-	89.72	160.78	3.61	36.20	-	459.19	-	-	126.10	2,105.10	-	84.36	294.00	294.00
Logs Total		**m^3**	**11.82**	**1,764.90**	**2,427.67**	**46.80**	**3,128.17**	**-**	**5,181.14**	**35.33**	**-**	**771.10**	**20,338.89**		**1,947.80**	**10,794.04**	**46,447.66**
Primary Lumber	Special Category Lumber	m^3	159.06	29.46	91.21	20.85	228.48	-	210.79	35.31	136.89	96.40	1,090.16	4.25	1,228.51	-	3,331.37
	Class 1 Lumber		72.84	355.09	85.14	5.36	364.81	-	34.79	70.05	140.07	183.10	249.43	-	706.86	-	2,267.54
	Class 2 Lumber		8.12	11.71	93.94	10.39	34.70	-	10.85	-	12.22	30.36	687.08	-	305.88	-	1,205.25
	Class 3 Lumber		170.48	167.09	33.19	7.79	77.39	-	-	-	78.16	12.22	44.62	-	201.27	-	792.21
Primary Lumber Total		**m^3**	**410.50**	**563.35**	**303.48**	**44.39**	**705.38**	**-**	**256.43**	**105.36**	**367.34**	**322.08**	**2,071.29**		**2,442.52**	**-**	**7,592.12**
Splitwood	Paling Staves	m^3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Shingles		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Splitwood Total		**m^3**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**		**-**	**-**	**-**
Roundwood	Piles	m^3	-	-	428.71	-	-	-	121.66	-	-	-	550.29	-	615.21	-	1,715.87
	Poles		-	12.36	-	-	267.46	-	-	-	-	-	-	-	42.18	-	321.99
	Posts		7.23	-	0.82	-	-	-	-	-	-	-	35.05	-	22.80	-	65.91
	Spars		-	-	0.68	-	-	-	-	-	-	-	-	-	-	-	0.68
Roundwood Total		**m^3**	**7.23**	**12.36**	**430.21**	**-**	**267.46**	**-**	**121.66**	**-**	**-**	**-**	**585.35**		**680.19**	**-**	**2,104.45**
Fuelwood	Charcoal	m^3		-	-	-	-	-	-	-	-	-	643.10	-	-	-	643.10
	Firewood		-	-	-	-	-	-	-	-	-	-	-	-	503.19	-	503.19
Fuelwood Total		**m^3**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**643.10**		**503.19**	**-**	**1,146.29**
Wattles	Wattles	pcs	-	-	1,598.00	-	-	-	-		-	-	1,000.00	-	2,710.00	-	5,308.00
Wattles Total		**pcs**	**-**	**-**	**1,598.00**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1,000.00**		**2,710.00**	**-**	**5,308.00**
Manicole Palm Heart	Manicole Palm Heart	pcs	-	-	-	-	-	2,680,749.00	-	-	-	-	-	-	-	-	2,680,749.00
Manicole Palm Heart Total		**pcs**	**-**	**-**	**-**	**-**	**-**	**2,680,749.00**	**-**	**-**	**-**	**-**	**-**		**-**	**-**	**2,680,749.00**

Appendix 5 Analysis of Volume by Destinations 2017-2018

Appendix V: Analysis of Volume by Destination					
Product		**Region**	**2017**	**2018**	**% Change**
Logs	Logs	Asia/Pacific	88,471.70	81,169.82	- 8.25
		Europe	-	33.86	-
		North America	152.54	55.37	- 63.70
Logs Total			**88,624.25**	**81,259.05**	**- 8.31**
Sawnwood	Dressed Lumber	Asia/Pacific	534.74	553.99	3.60
		Europe	151.78	144.84	- 4.58
		Latin America/Caribbean	5,282.58	5,029.72	- 4.79
		North America	1,234.86	1,446.81	17.16
	Undressed Lumber	Africa	39.60	14.52	- 63.33
		Asia/Pacific	2,699.93	1,546.62	- 42.72
		Europe	2,801.25	3,109.08	10.99
		Latin America/Caribbean	3,187.53	1,683.01	- 47.20
		North America	1,613.61	2,152.73	33.41
		South America	-	1.80	-
Sawnwood Total			**17,545.88**	**15,683.11**	**- 10.62**
Roundwood	Piles	Asia/Pacific	-	511.95	-
		Europe	438.31	770.93	75.89
		Latin America/Caribbean	65.37	134.06	105.08
		North America	3,292.69	2,717.19	- 17.48
	Poles	Asia/Pacific	2.41	-	- 100.00
		Latin America/Caribbean	828.33	1,299.36	56.86
		North America	6.35	6.02	- 5.13
	Posts	Europe	-	0.94	-
		Latin America/Caribbean	106.78	98.75	- 7.52
		North America	13.04	-	- 100.00
Roundwood Total			**4,753.28**	**5,539.20**	**16.53**
Shingles	Shingles	Africa	207.28	236.50	14.09
		Asia/Pacific	1,034.00	23.76	- 97.70
		Europe	22.00	-	- 100.00
		Latin America/Caribbean	1,889.39	2,644.11	39.94
		North America	874.91	1,145.39	30.92
Shingles Total			**4,027.59**	**4,049.76**	**0.55**
Plywood	Plywood	Latin America/Caribbean	2,474.87	2,830.56	14.37
		South America	138.55	94.28	- 31.95
Plywood Total			**2,613.42**	**2,924.83**	**11.92**
Grand Total			**117,564.41**	**109,455.96**	**- 6.90**

Appendix 5: Analysis of Value (US$) by Region for 2017 & 2018

Appendix V: Analysis of Value by Destination					
Product		**Region**	**2017**	**2018**	**% Change**
Logs	Logs	Asia/Pacific	14,607,614.76	13,283,629.30	- 9.06
		Europe	-	5,296.60	-
		North America	29,391.28	13,195.73	- 55.10
Logs Total			**14,637,006.04**	**13,302,121.63**	**- 9.12**
Sawnwood	Dressed Lumber	Asia/Pacific	699,444.26	211,894.86	- 69.71
		Europe	92,942.30	135,688.14	45.99
		Latin America/Caribbean	5,256,069.79	5,195,938.41	- 1.14
		North America	2,508,257.90	2,760,716.73	10.07
	Undressed Lumber	Africa	39,600.00	23,500.00	- 40.66
		Asia/Pacific	2,282,062.13	1,231,492.17	- 46.04
		Europe	2,199,607.84	2,547,589.53	15.82
		Latin America/Caribbean	2,094,336.52	1,365,177.17	- 34.82
		North America	1,325,328.66	1,747,019.38	31.82
		South America	-	764.00	-
Sawnwood Total			**16,497,649.40**	**15,219,780.39**	**- 7.75**
Roundwood	Piles	Asia/Pacific	-	251,667.59	-
		Europe	285,400.75	408,373.13	43.09
		Latin America/Caribbean	28,296.00	65,375.00	131.04
		North America	1,477,426.55	1,216,417.16	- 17.67
	Poles	Asia/Pacific	3,060.00	-	- 100.00
		Latin America/Caribbean	551,385.01	1,161,652.73	110.68
		North America	5,002.50	11,500.00	129.89
	Posts	Europe	-	540.50	-
		Latin America/Caribbean	64,247.00	64,704.23	0.71
		North America	6,687.50	-	- 100.00
Roundwood Total			**2,421,505.31**	**3,180,230.34**	**31.33**
Shingles	Shingles	Africa	210,140.00	225,373.68	7.25
		Asia/Pacific	913,760.00	22,088.00	- 97.58
		Europe	19,500.00	-	- 100.00
		Latin America/Caribbean	1,637,823.79	2,439,130.60	48.93
		North America	823,102.00	1,193,678.75	45.02
Shingles Total			**3,604,325.79**	**3,880,271.03**	**7.66**
Plywood	Plywood	Latin America/Caribbean	1,298,459.59	1,540,090.53	18.61
		South America	68,130.25	48,372.72	- 29.00
Plywood Total			**1,366,589.84**	**1,588,463.25**	**16.24**
Grand Total			**38,527,076.38**	**37,170,866.64**	**- 3.52**

Appendix 6: Major Timber Species and Uses

Classification	Species (Local Names)	Species (Scientific Names)	Major Uses
Special Category	Greenheart	*Chlorocardium rodiei*	Boat building, marine work, piling, general heavy construction, flooring, heavy furniture, turnery and finishing rods.
	Purpleheart	*Peltogyne venosa*	Building construction, flooring, bridging, boat building – keels, transoms, canoes, coach building, furniture, turnery, inlay, tool handles, sticks, bows, and veneer.
	Brown Silverballi	*Licaria cannella*	Boat building, canoes, furniture, interior work, and general carpentry.
	Red Cedar	*Cedrela odorata*	Furniture, cabinet work, panelling, boats, coffins and cigar boxes.
	Letterwood	*Brosimum guianense*	Inlay, turnery, sticks, tool handles and bows for archery.
	Bulletwood	*Manilkara bidentata*	General heavy construction, house framing, sleepers, mill rollers, wheel spokes, fencing, axe and tool handles, turnery.
Class 1	Crabwood	*Carapa guianensis*	General construction, interior work, carpentry, furniture, and turnery, plywood and veneer.
	Yellow Silverballi	*Aniba hypoglauca*	Boat planking, canoes, furniture, cabinet work, and interior construction.
	Itikiboraballi	*Swartzia xanthopetala*	Inlay turnery, cabinet work, walking sticks, bag-pipes and tool handles.
	Locust	*Hymenaea courbaril*	Ship-building, general construction, carriage buildings, tool handles, furniture and croquet mallets.
	Tatabu	*Diplotropis purpurea*	Boat-building, house framing, and flooring, furniture and turnery, interior work, carriage-building, tool handles, and sleepers.
	Determa	*Ocotea rubra*	Boat and carriage building, masts, furniture, carving, interior work, and general carpentry.
	Wamara	*Eperua grandiflora*	Furniture, cabinet work, parquet flooring, turnery, inlay, tool handles, walking sticks, and bows for archery.
	Kabukalli	*Goupia glabra*	Heavy construction, house framing, flooring, decking, punt bottoms, canoes, railway sleepers, paving blocks, furniture and decorative plywood.
	Shibadan	*Aspidosperma album*	Fuel and Plywood.
	Tauroniro	*Humiria balsamifera*	Heavy construction, piling, bridges, house framing, flooring, wheelwright work, furniture, sleepers, counters, work bench tops.
	Manniballi	*Moronobea coccinea*	Heavy construction house sills, machinery frames, flooring, furniture and sheet piling.
	Washiba	*Tabebuia sp.*	Bridges, house framing, sleepers, tool handles, rollers' walking sticks, and fishing rods.

	Hakia	*Tabebuia serratifolia*	Bridges, house framing, sleepers, tool handles, rollers' walking sticks, and fishing rods.
	Dalli	*Virola spp.*	Match boxes, coffins, inside boarding, carpentry, packing cases, plywood, slack cooperage chip board and concrete shuttering.
	Suya	*Pouteria speciosa*	Interior boarding, carpentry, and plywood.
	Ulu	*Trattinickia demerarae*	Inside boarding, cupboard linings, canoes and plywood.
	Simarupa	*Quassia simarouba*	Interior construction, furniture, shelves, drawer linings, shoe heels, plywood, paper pulp, toys.
	Aromata	*Clathrotropis branchypetala*	Furniture, house framing, boat building, flooring and sleepers.
	Mora	*Mora excelsa*	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	*Mora gonggrijpii*	Heavy construction, sleepers, flooring and siding, heavy furniture, boat timbers, truck bodies.
	Hububalli	*Loxopterygium sagotii*	Panelling, furniture and cabinet work.
Class 2	Baromalli	*Catostemma commune*	Dry cooperage, interior work, paper pulp, and plywood.
	Dukalli	*Parahancornia fasciculata*	Carpentry, interior work, furniture, door and window stock, concrete shuttering, match boxes and plywood.
	Kereti Silverballi	*Lauraceae spp*	Shuttering, temporary buildings, box making, and plywood.
	Kurahara	*Calophyllum lucidum*	Boat planking, canoes, punt mast and furniture.
	Wabaima	*Licaria cannella*	Heavy construction, flooring, furniture, boat building (planking), bridge decking, musical instruments.
	Baradan	*Ocotea tomentella*	Canoes, concrete shuttering and plywood.
	Ubudi	*Anarcadium giganteum*	Interior work and plywood.
	Kirikua	*Iryanthera macrophylla*	Oars, interior construction, utility plywood, slack cooperage and concrete shuttering.
	Kurokai	*Protium decandrum*	Masts, spars, house framing and plywood.
	Maporokan	*Inga alba*	Interior work, fuel and cheap plywood.
	Monkey Pot	*Lecythis zabucajo*	General construction, furniture, turnery and wheel spokes.
	Manni	*Symphonia globulifera*	Utility wood, paper, pulp, plywood, cooperage, railway sleepers, sheet piling, packing cases, general carpentry, flooring, furniture and fuel.
	Pakuri	*Platonia insignis*	Piling, boat building, furniture, turnery, house framing, flooring, panelling, tight cooperage and general carpentry.

	Yaruru (Yarula)	*Aspidosperma excelsum*	Paddles, axe and tool handles, walking sticks, fishing rods and fuel.
	Muneridian	*Siparuna spp.*	
	Wallaba	*Eperua falcata* *Eperua grandiflora*	Pillar trees, roundwood framing, fence posts, transmission poles, sleepers, paling and vat staves, shingles, charcoal, particle board and firewood.
Class 3	Burada	*Parinari campestris*	Heavy construction, flooring.
	Duka	*Tapirira marchandi*	Interior construction, furniture, and plywood.
	Dukuria	*Sacoglottis cydonioides*	Heavy construction.
	Fukadi	*Terminalia amazonia*	House framing, framing, constructional work, railway sleepers and plywood.
	Inyak	*Antonia ovata*	Interior work, furniture and boxes.
	Limonaballi	*Chrysophyllum pomiferum*	Heavy construction and fuel.
	Suradan	*Hyeronima alchorneoides*	Boat-framing, railway sleepers, heavy construction, truck building, wheel spokes, furniture, plywood and gun stocks.
	White Cedar	*Tabebuia insignis*	Paddles, shovel handles, and interior work, packing cases and cheap furniture.
	Futui	*Jacaranda copaia*	Coffins, matches, concrete shuttering and interior construction.
	Halchiballi	*Pera schomburgkiana*	Fuel and utility plywood.
	Haiariballi	*Alexa imperatricis*	Interior construction, packing cases and plywood.
	Huruasa	*Abarema jupunba*	Fuel and plywood.
	Iteballi	*Vochysia schomburgkii*	Carpentry and furniture.
	Kakaralli	*Eschweilera alata*	Piling, house framing, mine lagging, posts and sleepers.
	Kauta	*Licania laxiflora*	Light gauge railway sleepers, roof shingles, mine timbering, fuel and charcoal.

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