

# MINISTRY OF FORESTRY

# ANNUAL REPORT 2017-2018

Parliamentary Paper No. 80 of 2021

# MINISTRY OF FORESTRY

## ANNUAL REPORT

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For Period 01<sup>st</sup> Aug 2017 – 31<sup>st</sup> July 2018





## REFERRAL LETTER

Rear-Admiral (Ret'd) Honourable Josaia V. Bainimarama  
Prime Minister and Minister for iTaukei Affairs,  
Sugar Industry, Foreign Affairs and Forestry  
Office of the Prime Minister  
Suva

Dear Sir,

I am pleased to present to you the Annual Report of the Ministry of Forestry for the period 1 August 2017 to 31 July 2018, for presentation to Parliament in accordance with the requirements of the Financial Management Act 2004.

Yours Sincerely,

A handwritten signature in blue ink, appearing to read 'G. P. N. Baleinabuli', with a horizontal line underneath.

G. P. N. Baleinabuli  
Permanent Secretary for Forestry and  
Acting Permanent Secretary for Fisheries

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## ACRONYM

CITES	Convention on International Trade in Endangered Species
CSO	Clonal Seed Orchard
CSOs	Civil Society Organisations
EMA	Environment Management Act
EPS	Endangered and Protected Species
FAO	Food Agriculture Organisation
FCPF	Forest Carbon Partnership Facility
FFHCOP	Fiji Forest Harvesting Code of Practice
GWE	Gross Wage Earner
HTMB	Harvest Tree Manually (Basic)
JEE	Job Evaluation Exercise
MOF	Ministry of Forestry
MOU	Memorandum of Understanding
MRV	Measuring, Reporting, Verification
NBSAP	National Biodiversity Strategy and Action Plan
NFI	National Forest Inventory
PSP	Permanent Sample Plots
RDF	Reforestation of Degraded Forests
REDD	Reducing Emissions from Deforestation and Forest Degradation
RL	Right License
SDGs	Sustainable Development Goals
SDP	Strategic Development Plan
SEG	Standard Expenditure Group
TPAF	Training and Productivity Authority of Fiji
UNFCCC	United Nations Framework Convention on Climate Change
UNFF	United Nations Forum on Forests

# PERMANENT SECRETARY'S FOREWORD



I am honoured to present the annual report for the Ministry of Forestry for the financial year August 2017 to July 2018.

The Ministry received a total budget of \$16.0 million, of which \$13.3 million (83.1%) was utilised for the implementation of the Ministry's programmes and projects. The Ministry was able to deliver its outputs effectively with the resources provided. Some of the major achievements include:

- i. The signing and immediate implementation of the Memorandum of Understanding (MOU) with Indonesia on 24 April 2018 at the 3rd Asia-Pacific Rainforest Summit (APRS);
- ii. The official opening of the Nabalasere Ecotourism Forest Park in the province of Ra;
- iii. The establishment and launch of the first indigenous tree species nursery at the Vunimaqo Forestry Station, Galoa;
- iv. The development of the draft Ministry's Strategic Development Plan;
- v. The endorsement of the REDD+ Mid Term Review report;
- vi. The acceptance by the World Bank of a US\$2million additional funding for the REDD+ programme;
- vii. The signing of the REDD+ Conservation lease agreement for the national REDD+ pilot site with the community of Emalu; and, among other things,
- viii. The initiation of the forest warden allowance and contractual agreement.

I acknowledge the leadership and guidance of the then Minister for Forestry, Honourable Osea Naiqamu and the then Permanent Secretaries for Forestry, Mr. Samuela Lagataki and Ms. Bernadette Welch, respectively. I also commend the efforts of all the staff of the Ministry who continue to persevere and inspire the stakeholders and communities that we work with and serve to collectively strive for the sustainable management of Fiji's forests.

G. P. N. Baleinabuli  
Permanent Secretary for Forestry (since November 2018)

# AGENCY OVERVIEW

## CORE BUSINESS



The leader in forests sustainability and innovation for small island economies



To drive sustainable resource management, economic growth and improve livelihoods through SMART forest policies that is based on applied research and development



### **Responsible**

We will discharge our duties with accountabilities

### **Resolute**

We will discharge our duties with determination and be firm and fair in our decisions

### **Respectful**

We will be sensitive to individual needs and the diversity of views

### **Resourceful**

We will be practical, creative, effective and efficient and maintain uncompromising integrity in our daily work

### **Reliable**

We will do and deliver what we have committed and promised to our customers

The Ministry is a regulatory and service organisation responsible for the national forestry sector through the following functions:

- Formulate and implement forest strategies and policies;
- Provide and administer the regulatory function under the respective Ministry's legislation and regulations;
- Monitor and evaluate current strategies, policies and deliverables;
- Develop and promote effective training, communication and awareness and extension advisory services;
- Strengthen community and industry networks and support frameworks;
- Maintain international bilateral and multilateral commitments; and
- Undertake applied research for sustainable forest resource management practices and product development.

## CORPORATE PROFILE

### LEGISLATIVE FRAMEWORK

The Ministry of Forestry is guided in its daily operations by the following legislations, regulations, policies, plans and manuals.

Table 1: Organisational Management

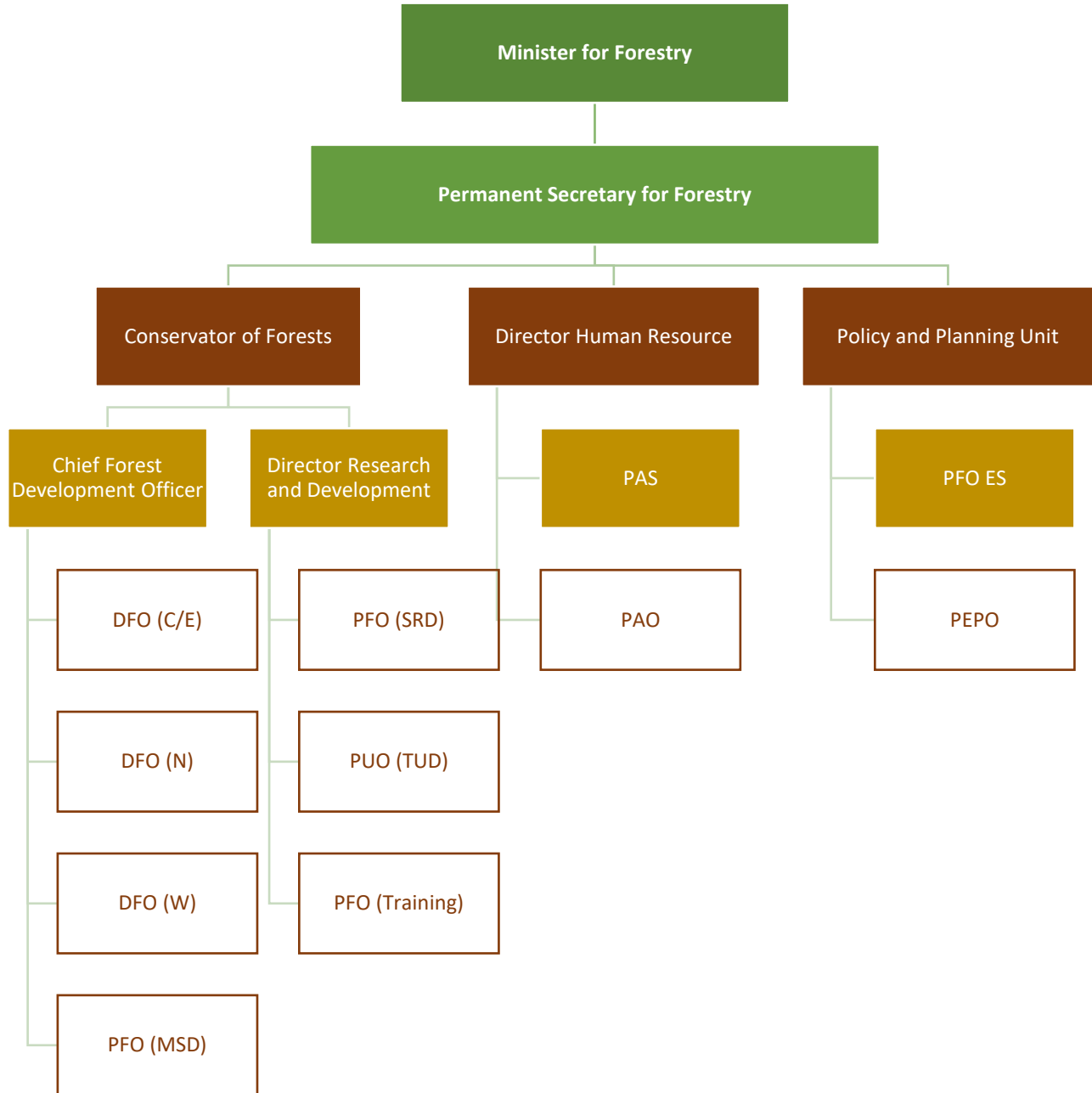
Legislations	Regulations	Policies	Plans	Manuals
<ul style="list-style-type: none"> <li>• Constitution of the Republic of Fiji 2013</li> <li>• Financial Management Act 2004</li> <li>• Tax Administration Decree 2009</li> <li>• Fiji Health &amp; Safety at Work Act 1996</li> <li>• Civil Service Act 2016</li> <li>• Act 2 of 2016 – Amendment to PSC Act</li> <li>• Employment Relations Promulgations 2007 &amp; Employment Relations (Amendment) Act 2016</li> </ul>	<ul style="list-style-type: none"> <li>• Civil Service Regulation 2017</li> <li>• Finance Instructions 2010</li> <li>• Fiji Procurement Regulations &amp; Amendments 2010</li> </ul>	<ul style="list-style-type: none"> <li>• General Order 2011 Terms &amp; Conditions of Employment for GWE's 2010</li> <li>• Ministry's Risk Management Policy</li> </ul>	<ul style="list-style-type: none"> <li>• MOF Training Plan</li> <li>• MOF Asset Management Plan</li> <li>• MOF Operational Plan</li> </ul>	<ul style="list-style-type: none"> <li>• MOF HR Manual</li> <li>• MOF Finance Manual</li> </ul>

Table 2: Forestry Sector Management

Legislations	Regulations	Policies	Plans	Manuals
<ul style="list-style-type: none"> <li>• Forest Act 1992</li> <li>• National Research Bill</li> <li>• Environment Management Act (EMA)</li> <li>• Biosecurity Promulgation</li> <li>• Native Land Trust Act 2012 (amended)</li> </ul>	<ul style="list-style-type: none"> <li>• Forest (Sawmill) Regulation 1968</li> <li>• Forest (Preservative Treatment) Regulation 1992</li> <li>• Forest Guard Regulations 1975</li> <li>• Forest Fire Prevention Regulation 1972</li> <li>• Environment Management (EIA Process) Regulation 2007</li> <li>• Environment Management (Waste Disposal &amp; Recycling) Regulation 2007</li> </ul>	<ul style="list-style-type: none"> <li>• Fiji Forests Policy 2007</li> <li>• REDD+ Policy 2011</li> <li>• Forest Certification</li> <li>• Fiji Climate Change Policy 2012</li> <li>• Draft Energy Policy 2013</li> <li>• Fiji Rural &amp; Land Use Policy 2005</li> </ul>	<ul style="list-style-type: none"> <li>• National Biodiversity Strategy and Action Plan (NBSAP)</li> <li>• Green Growth Framework (GGF)</li> </ul>	<ul style="list-style-type: none"> <li>• Fiji Forest Harvesting Code of Practice (FFHCOP)</li> <li>• Sandalwood Manual</li> <li>• Nursery Manual</li> </ul>



# ORGANISATION STRUCTURE



## FORESTRY PROGRAMMES AND PROJECTS

Table 3: Forestry Programmes and Projects

No.	Programme	Activity	Projects within each Programme & Activity
1	Policy & Admin	<ol style="list-style-type: none"> <li>1. General Admin &amp; Accounts</li> <li>2. Economic Policy, Planning &amp; Statistics.</li> </ol>	<ul style="list-style-type: none"> <li>• Upgrade of Office &amp; Quarters</li> </ul>
2	Forestry	1. General Admin	<ul style="list-style-type: none"> <li>• Forest Subsidy</li> <li>• International Tropical Timber Organisation (ITTO)</li> </ul>
		2. Forestry Conservation & Management Services	<ul style="list-style-type: none"> <li>• Reducing Emissions from Deforestation and Forest Degradation (REDD+)</li> </ul>
		3. Training & Education	<ul style="list-style-type: none"> <li>• Purchase of Harvesting Machines.</li> </ul>
		4. Silviculture Research, Resource Assessment & Development	<ul style="list-style-type: none"> <li>• Sandalwood Development Programme</li> </ul>
		5. Timber Utilisation Research & Product Development	<ul style="list-style-type: none"> <li>• Research &amp; Development of Wood and Non-wood Species.</li> <li>• Utilisation of Wood.</li> </ul>
		6. Extension & Advisory Services (Reforestation & Afforestation)	<ul style="list-style-type: none"> <li>• Reforestation of Degraded Forests &amp; Reforestation of indigenous species</li> </ul>
		7. Monitoring, Control & Surveillance (Harvesting & Logging)	<ul style="list-style-type: none"> <li>• Pine Woodlot Logging Package.</li> <li>• Purchase of equipment - Lakeba Pine Scheme.</li> <li>• Monitoring, Control, Surveillance</li> </ul>
		8. Forest Parks, Recreation & Nature Reserves	<ul style="list-style-type: none"> <li>• Upgrade of Colo-i-Suva Forest Park</li> </ul>

## BUDGET ALLOCATION AND EXPENDITURE

Table 4: MOF Budget Allocation

SEG	SEG PARTICULARS	2017-2018 Allocation [FJD]
1	Established Staff	3,888,522
2	Government Wage Earners	1,370,363
3	Travel and Communications	463,238
4	Maintenance and Operations	1,296,440
5	Purchase of Goods and Services	1,126,784
6	Operating Grants and Transfers	794,524
7	Special Expenditures	2,817,019
	<b>TOTAL OPERATING</b>	<b>11,756,890</b>
8	Capital Construction	2,270,000
9	Capital Purchase	1,364,000
	<b>TOTAL CAPITAL</b>	<b>3,634,000</b>
13	Value Added Tax	630,000
	<b>TOTAL EXPENDITURE</b>	<b>16,020,890</b>

A total of \$16.0 million was allocated to the Ministry, of which \$13.3 million (83.1%) was utilised for the implementation of the Ministry's programmes and projects, leaving a balance of \$2.7 million at the end of July 2018.

# REPORT ON PERFORMANCE

## PORTFOLIO LEADERSHIP, POLICY ADVICE & SECRETARIAT SUPPORT

### Forestry Strategic Development Plan

The decision to separate fisheries and forestry into separate Ministries allowed the Ministry of Forestry to focus its attention on the Forestry Sector in addressing its core roles, responsibilities and plans for the achievement of its desired outcomes on a short-term and long-term basis. This led to the development of the Ministry’s first Strategic Development Plan (SDP) to guide the work of the Ministry till 2030. The draft framework for the SDP was developed in consultation with its stakeholders and was guided by the objectives and targeted Outcomes of the National Development Plan, and commitments under the Sustainable Development Goals (SDGs), the United Nations Forum on Forests (UNFF), the United Nations Framework Convention on Climate Change (UNFCCC), and other international obligations that Fiji is a signatory to.

The SDP was not published in this financial year as it was undergoing reviews.

### Development of Policies

The Ministry continued work on the Planted Forests Policy, with assistance from the Food and Agriculture Organisation (FAO). The aim of this Policy is to increase forest areas under managed plantations to reduce pressures on Fiji’s natural forests. Consultations were conducted with all relevant stakeholders and a draft Policy was developed with FAO consultants.

### Review of and development of Forest Legislations & Regulations

In this financial year, the Ministry continued to pursue the finalisation and endorsement of the Forest Bill [Bill No. 13 of 2016], which is a review of the Forest Act 1992. The Bill is the outcome of a number of stakeholder consultations with a view of revising the 1992 Forest Act to include recent developments within the Forest Sector in addition to supporting the full implementation of the Fiji Forest Policy 2007.

The Ministry continued work on reviewing two forestry regulations, the Forest (Preservative Treatment) Regulation 1992 and the Forest (Sawmills) Regulation 1968, to ensure that it captures recent developments in the sector.

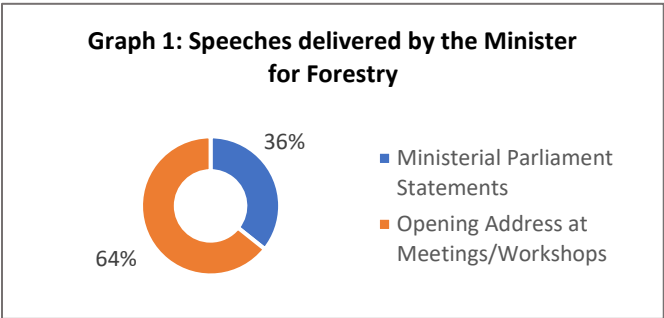
### Cabinet Submission

Three Cabinet submissions were made during this period and are as follows:

- i. The Memorandum of Understanding (MOU) between Indonesia’s Ministry of Environment and Forestry and Fiji’s Ministry of Forestry;
- ii. The Third Asia-Pacific Rainforest Summit; and
- iii. The United Nations Forum on Forests 12th Session Meeting Report.

### Speeches & Parliament Responses

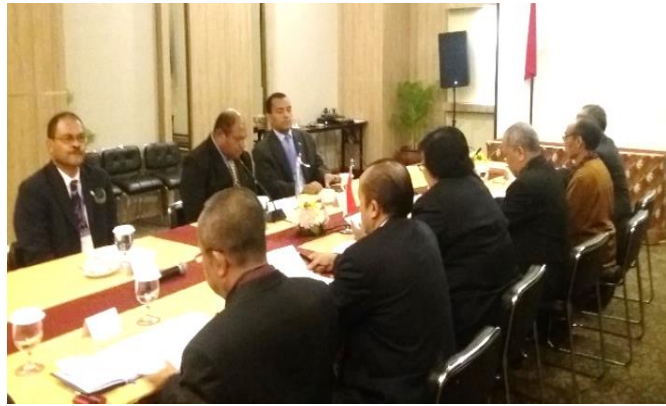
Fourteen Speeches were compiled and delivered by the Honourable Minister for Forestry at various events highlighted in Graph 1.



## Partnership | Memorandum of Understanding

The Ministry developed a Memorandum of Understanding (MOU) with the Ministry of Environment and Forestry of the Republic of Indonesia. This MOU was signed on 24 April 2018 at the 3rd Asia-Pacific Rainforest Summit (APRS) in Yogyakarta, Indonesia by the Fijian Minister for Forestry, Honourable Osea Naiqamu, and Honourable Siti Nurbaya, Indonesia's Minister of Environment and Forestry.

The areas of cooperation include forest and land rehabilitation, wildlife and plant protection, wood and non-wood products utilisation, and promotion of trade in forest products.



*Delegation from Fiji and Fiji's First Secretary to Indonesia with representatives from Indonesia's Ministry of Environment and Forestry.*

## Human Resource

The financial year 2017 – 2018 saw the separation of the Ministry of Forestry and the Ministry of Fisheries corporate staff that were once shared. The HR Division continued with its normal function despite the challenges of performing extra responsibilities for better services. The implementation of the Job Evaluation Exercise (JEE) 2017 was also carried out in this financial year where a total of 226 transition contracts were signed. Following this the Performance Management Guideline, Discipline Guideline and the Learning and Development Guideline were implemented.

The staffing strength at the end of this financial year stood at 85.8%.

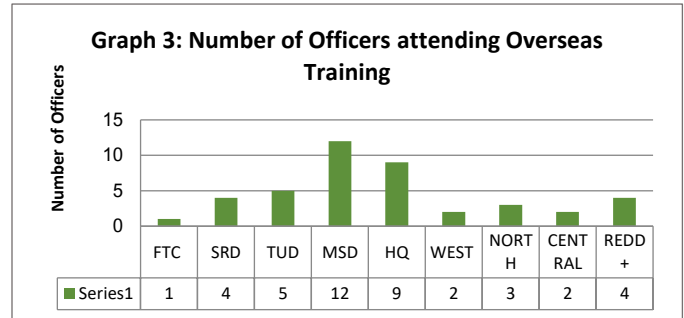
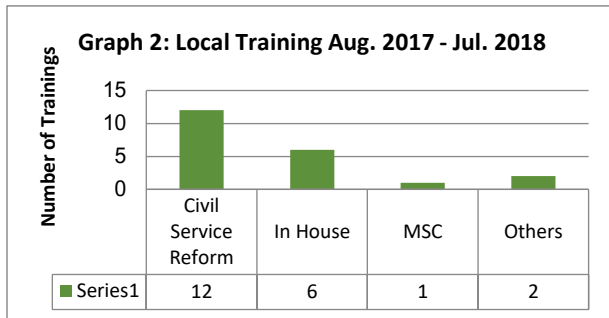
Table 5: Staff establishment

	Established			GWE			Project			Total		
	Approved posts	Strength	Vacant	Approved posts	Strength	Vacant	Approved posts	Strength	Vacant	Approved posts	Strength	Vacant
Number	151	139	12	97	72	25	34	31	3	282	242	40

## Training & Development

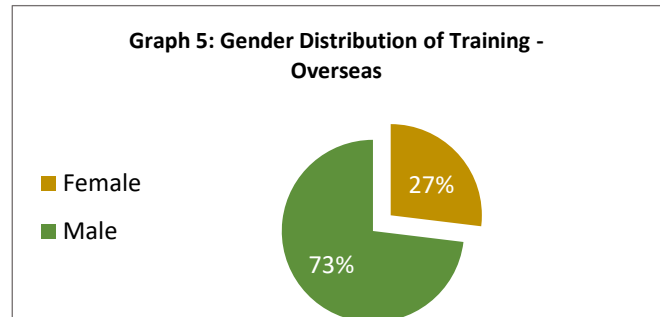
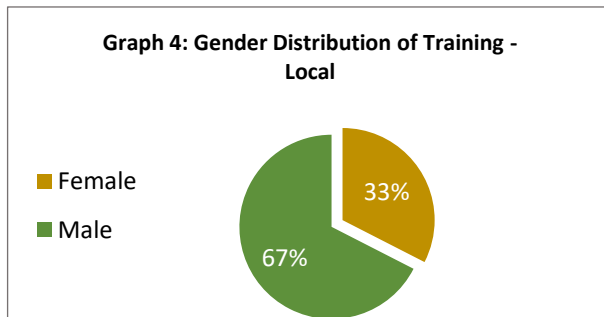
The management of Training and Development in the Ministry saw the conduct of 21 local trainings. These trainings were identified through the Civil Service Reform Unit, Ministry of Civil Service, local institutions and mandatory training under the TPAF Grant and Levy Scheme. Graph 2 shows the distributions of local trainings.

Overseas training recorded a total of 26 programmes and were attended by 42 officers in the Ministry.



Distributions of overseas trainings among Divisions are shown in Graph 3.

Distribution of trainings considering gender equality was recorded as follows in both local and overseas:



A total of 7 officers attended either part-time or full-time studies at the local tertiary or overseas institutions. Two (2) out of the seven (7) officers were granted full time studies while five officers were granted part time. The two (2) full time officers went on overseas studies.

## Upgrade of Quarters

The upgrading project was delayed during the year due to delay in drawings and trade cost summary from Ministry of Infrastructure & Transport. As a result the Tender was readvertised due to variation in costs. However, the team managed to hasten the process and subsequently awarded the tender towards the end of the financial year. Maintenance work of the 8 selected quarters continued in the next financial year.

## FOREST SECTOR DEVELOPMENT

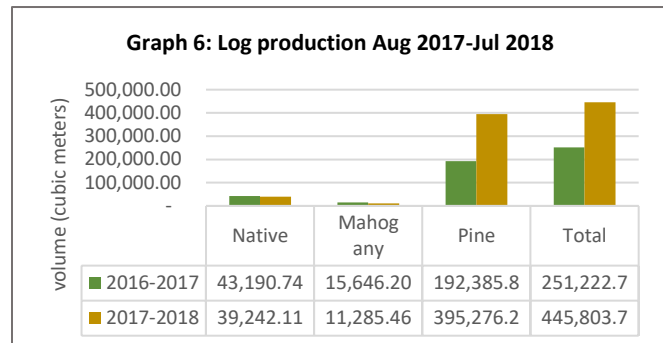
### FOREST RESOURCE BASE

Fiji has a total of 1.1 million hectares of forest areas, of which natural (indigenous) forests comprises 86.56%, Softwood comprises 6.83% and Hardwood comprises 6.6%.

### FOREST PRODUCTION

National log production from Aug 2017 – Jul 2018 stood at 445,803 cubic meters, of which pine was 395,276.20m<sup>3</sup> (88.67%), indigenous species was 39,242.11m<sup>3</sup> (8.80%) and mahogany was 11,285.46m<sup>3</sup> (2.53%).

Natural	Softwood	Hardwood	Total
Hectares			
989,991.28	78,150.95	75,503.07	1,143,645.3



### DOWNSTREAM PROCESSING

#### Sawmills in Fiji

A total of 54 sawmill licenses were issued during Aug 2017 – Jul 2018, of which 23 (42.6%) were for static sawmills, while 31 (57.4%) were for portable sawmills.

Division	Static	Portable	Total
Central/Eastern	8	8	16
Western	5	9	14
Northern	10	14	24
<b>Total</b>	<b>23</b>	<b>31</b>	<b>54</b>

#### Sawmill Production

The total log volume input for Aug 2017 – Jul 2018 was 45,874.67m<sup>3</sup> and the total sawn timber production was 21,698.42m<sup>3</sup>. Thus, the average sawmills recovery rate was 47.0% as detailed in the table.

Division	Input volume (m <sup>3</sup> )	Output volume (m <sup>3</sup> )	Recovery
Central/Eastern	10,940.55	5047.76	46.14%
Western	11,633.46	5,000.32	42.98%
Northern	23,300.66	11,650.33	50.00%
<b>Total</b>	<b>45,874.67</b>	<b>21,698.42</b>	<b>47.0%</b>
			<b>Average Recovery</b>

#### Timber Treatment Plants

Under the Forest (Preservative Treatment) Regulation 1992, 27 treatment plants existed during this period. 19 treatment plants were licensed, 4 were non-operational, and 4 were under process before issuance of licenses. The summary is shown in the table below.

Table 9: Timber Treatment Plants in Fiji

Licensed plants	Non-operational	Under Process	Total
19	4	4	27

## EXPORTS & IMPORTS

### Exports

Total value of export for forest products from Aug 2017-Jul 2018 amounted to \$48.4, an increase of \$15.5 million (46.9%) compared to the \$32.98 million of the previous financial year. The 2 major export commodities were pine chips and sawn timber with a total export revenue of \$45.3 million contributing to 93.6% of total exports.

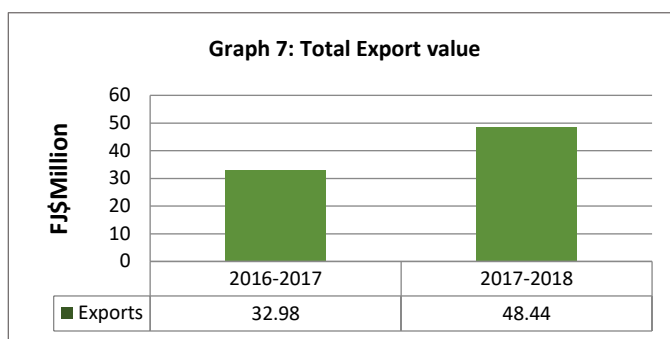


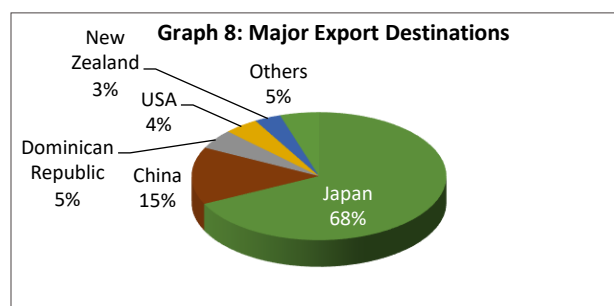
Table 10: Forestry exports by product type

Product Type	Volume				Value (FJD)
	Cubic meters	Mt	Kg	Piece	
Pine chips		231,980			37,216,884.44
Sawn timber	5,015.69				8,131,389.28
Decking	596.73				1,192,221.89
Other	588.46				692,582.41
Slabs	387.14				550,330.03
Plywood	182.49				358,488.41
Veneer	44.82				71,349.75
Flitches	48.45				62,985.00
Roots, Stems & Branches			3,225.0		38,700.00
Mouldings	16.53				34,715.10
Wooden Artifacts				3,172.0	32,410.50
Sticks, Branches, Roots			114.9		29,276.00
Finished Product			2,564.0		14,318.00
Sasa Sticks				920.0	8,280.00
Posts	5.10				8,278.20
Neck	0.39				1,610.00
<b>Total</b>	<b>6,885.8</b>	<b>231,980</b>	<b>5,903.9</b>	<b>4,092.0</b>	<b>48,443,819.01</b>

The major export destinations for forest products for 2017-2018FY were Japan, China, Dominican Republic, USA and New Zealand with total export value of \$46.0 million.

Table 11: Major export country of origin

Export Destination	Value (FJD)
<b>Japan</b>	32,864,378.30
<b>China</b>	7,016,635.67
<b>Dominican Republic</b>	2,407,583.48
<b>USA</b>	2,121,228.02
<b>New Zealand</b>	1,631,815.06
<b>Others</b>	2,402,178.48
<b>Total</b>	<b>48,443,819.01</b>



## Imports

Total value of import of forest products from Aug 2017 - Jul 2018 amounted to \$28.5 million, a decline of \$0.66 million (2.26%) compared to the previous financial year.

The major import commodities were sawn timber, plywood, hardboard and cross arms which accounted for \$22.98 million (80.5%) of imports.

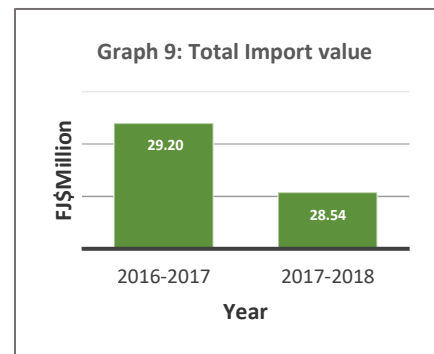


Table 12: Forestry imports by product type

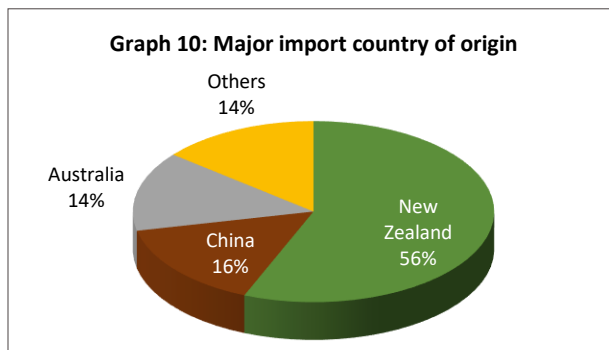
Product	Volume		Value
	Kg	Cubic meters	
Sawn Timber		8765.35	8,133,772.63
Plywood		5,793.03	5,020,677.02
Hard Board		5,906.20	3,683,462.19
Film Face Plywood		4,523.11	3,634,046.73
Cross Arm		517.80	2,505,281.50
Poles		883.62	1,748,222.10
Melamine Particle Board		1,616.80	1,478,310.16
Mouldings		347.26	487,003.16
Wooden Reels		364.246	429,328.94
Laminated Veneer Lumber		139.664	389,503.10
Melteca Board		227.54	238,668.88
Shingles		114	214,000.00
Veener		245.8	206,816.82
Decking		160	116,340.00
Veneer		270.984	88,704.77
Superstand Board		33.796	49,666.36
Gib Board		74.199	39,470.00
Post		22.78	35,806.00
Stick, Roots, Branches	932		19,070.80
Soft Board		48.58	17,384.70
Furniture		20	9,700.00
<b>TOTAL</b>	<b>932</b>	<b>30,074.759</b>	<b>28,545,235.86</b>

The major countries of origin for imports of forest products for 2017-2018FY were New Zealand, China and Australia with a total import value of \$24.5 million.



Table 13: Major import country of origin

Import Origin	Value (FJD)
<b>New Zealand</b>	16,055,457.98
<b>China</b>	4,380,432.87
<b>Australia</b>	4,062,460.71
<b>Others</b>	4,046,884.30
<b>Total</b>	<b>28,545,235.86</b>



## GOVERNMENT SERVICES

### FOREST LAW ENFORCEMENT: LICENSING, COMPLIANCE & MONITORING

#### Forest Harvesting

Total annual logging licenses (right licenses) issued during this period was 314 of which 75 (23.9%) was issued from Central/Eastern Division, 194 (61.8%) from Western Division and 45 (14.3%) from the Northern Division. These licenses included both new and renewed licenses.

A total of 23 licenses were issued for Mahogany, 158 licenses issued for Pine, 36 licenses issued for Indigenous species, 81 licenses issued for Minor Forest Produce (MFP) and 16 licenses issued for clear felling.

Table 14: Right licenses issued by Division

Division	Mahogany	Pine	Indigenous	MFP	Clear-fell	Total
<b>Central/Eastern</b>	15	15	9	21	15	<b>75</b>
<b>Western</b>	3	112	22	57	0	<b>194</b>
<b>Northern</b>	5	31	5	3	1	<b>45</b>
<b>TOTAL</b>	<b>23</b>	<b>158</b>	<b>36</b>	<b>81</b>	<b>16</b>	<b>314</b>

#### Monitoring, Compliance and Surveillance (MCS)

Monitoring, compliance and surveillance were carried out by forestry officers stationed in the three Operation Divisions in the Western, Northern and Central/Eastern Division.

All logging licenses issued and harvesting operations are constantly inspected and supervised to ensure compliance against the Fiji Forest Harvesting Code of Practice 2013, the Forest Act 1992, Harvest Plans and the Health & Safety at Work (OHS) Act 1998. The compliance level was above 80% for field operations and field machines, including chainsaws and safety equipment.

The Monitoring, Compliance and Surveillance Project was allocated a budget of \$100,000.00 which was used to monitor compliance level in all Divisions by the MCS Project Officer and selected team members. Two national monitoring were successfully conducted in this financial year. The MCS budget was also used to carry out refresher trainings and awareness to officers; and this includes training for supervisors in logging companies. The objective is to ensure that operations in the forests are carried out according to relevant laws and approved operating procedures.



The project continued work on the 2 Memorandum of Understandings (MOUs) between the Ministry of Forestry and the Ministry of Employment, Productivity and Industrial Relations (MEPIR); and the Land Transport Authority (LTA). The two MOUs were submitted to the Solicitor General’s Office for vetting and clearance.

**Timber Processing**

A total of 54 sawmill licenses were issued during Aug 2017 – Jul 2018 with the total sawn timber production at 21,698.42m<sup>3</sup>.

A total of nineteen (19) licensed timber treatment plants were operating during the year. These plants treated a total sawn timber volume of 31,606.51m<sup>3</sup>. Monitoring of these sawmills and treatment plants were conducted throughout the year to ensure compliance against the 1968 Forest (sawmill) regulation and the 1992 Forest (preservative treatment) regulation.

**FOREST MANAGEMENT: FOREST RESOURCE INFORMATION**

The Management Division is responsible for the management of Forest Information System (FIS) and data; growth assessment of natural forests through permanent sample plots, administration of mapping and surveys of forest boundaries and forest functions and services; and co-ordination and facilitation of forest international and regional conventions and agreements.

**National Forest Inventory (NFI) 2007**

The NFI Statistics Report was finalised this financial year, however the full report was still work in progress.

**Permanent Sample Plots**

The project has been ongoing since its inception in 2009 and has completed 4 activities based on PSIP. Two more activities are left to be carried out in order to achieve its objective to come up with the annual allowable cut for Fiji’s natural forest. The ongoing activity is the measurement of PSP plots. The fourth round of Permanent Sample Plot measurement started last year and will continue to be measured to determine the growth increment over a period of years.



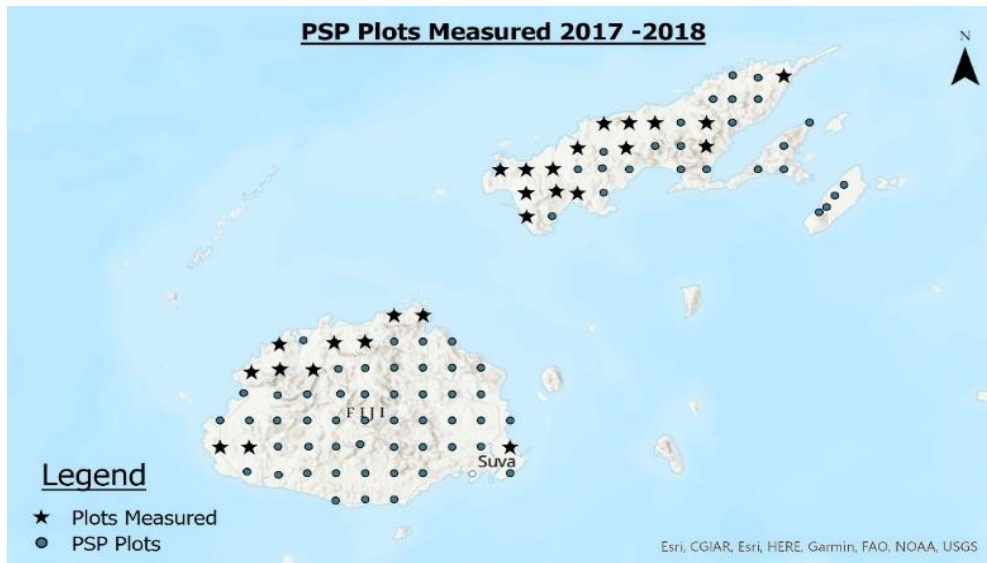
Target for this year was to complete the fourth round of measurements. A total of 26 plots were measured this financial year.

Table 15: PSP Project Activities

No.	Project Activity	Status
1.	PSP Locality identification using NFI results	Completed
2.	Development and training on data collection methodology	Completed
3.	Recon of suitable areas and discussion with landowners	Completed
4.	Establishment of PSP	Completed
5.	Measurement of PSP	Ongoing
6.	Documentation of PSP	Pending
7.	Calculation of first estimate AAC	Pending

Table 16: Plots measured Aug 2017 – Jul 2018

Plot No.	Activity	Location
01	Re-established Plot	Vitawa, Ra
02	Measured Plot	Navolau, Ra
03	Re-established Plot	Raviravi, Ra
05	Re-established Plot	Vatukoula
06	Measured Plot	Naseyani
10	Re-established Plot	Tavakubu, Ba
11	Measured Plot	Nalotawa, Ba
12	Measured Plot	Toge, Ba
39	Re-established Plot	Navutu, Ba
40	Measured Plot	Vagadra
49	Measured Plot	Ovea, Tailevu
61	Measured Plot	Bua
62	Measured Plot	Bua
63	Measured Plot	Bua
64	Measured Plot	Bua
66	Measured Plot	Bua
67	Measured Plot	Bua
68	Measured Plot	Macuata
70	Shifted Plot	Bua
74	Measured Plot	Macuata
75	Measured Plot	Macuata
76	Measured shifted Plot	Macuata
78	Measured Plot	Macuata
84	Measured Plot	Macuata
85	Measured Plot	Cakaudrove
92	Awareness & Measured Plot	Cakaudrove
<b>26 Plots</b>		



### GIS and Mapping

Two Officers were involved in this GIS and Mapping activity at the Pacific Islands Applied Geoscience Commission (SOPAC). They also worked on Forest Change Detection from the year 2006 – 2012 & from 2012-2016 (Period of 10 years) for the following islands:

- i. Vitilevu
- ii. Vanualevu
- iii. Taveuni

The Map depicts forest/ vegetation cover change.



### Timber Volume Estimates & Harvesting Plans

During this period, the Division received 31 applications for timber volume assessment. Eight applications were from the Northern division, 20 applications were from the Central Eastern division and 3 from the Western division.

Table 17: Summary of timber volume assessment application

Division	No. of applications received	Volume	Area (ha)
Northern	8	51,973.81	2,651.22
Central/Eastern	20	112,553.56	4,993.479
Western	3	25,585.53	1,860.68
<b>Total</b>	<b>31</b>	<b>150,507.804</b>	<b>9,505.379</b>

A total of 23 Logging /Harvesting Plans were produced during the period.

### Reducing Emissions from Deforestation and Forest Degradation (REDD Plus)

The REDD+ (Reducing Emissions from Deforestation and forest Degradation (+) forest conservation, sustainable management of forests and forest carbon stock enhancement) readiness process in Fiji has advanced since the endorsement of the REDD+ policy in 2010. The REDD+ Policy contributes to the national forestry sector goal: ‘Sustainable management of Fiji’s forests to maintain their natural potential and to achieve greater social, economic and environmental benefits for current and future generations’. The

REDD+ Policy emphasises safeguards to protect and respect the knowledge and rights of indigenous peoples, to ensure the active participation of resource owners, the consideration of gender issues in all phases of decision-making and the protection of natural forest and their ecosystem services. Fiji recognises REDD+ as an important opportunity to contribute towards global climate change mitigation while strengthening the socio-economic situation of its forest resource owners and protect and restore its forest ecosystems.

The REDD+ readiness is being followed in a phased approach to its current national REDD+ programme:

- The first phase aims to put in place policy and institutional frameworks for the implementation of REDD+ and addressing capacity needs for the establishment of a national MRV system.
- The second phase involves the development of a national REDD+ strategy, the establishment of pilot sites and strengthening MRV capacities (towards Tier 2 and 3 level reporting).
- The third phase will be the implementation of the strategy, participation in a REDD+ carbon financing mechanism, and the establishment of an operational MRV and IPCC reporting system.

Fiji is currently in phase 2 of its national REDD+ programme and R-PP development and implementation supports the achievement of the targets set out in this phase while working towards successfully achieving the 3rd phase.

### **Development of REDD+ Readiness and Emission Reduction Programme**

Fiji had secured FCFP funding of \$US3.8m to implement its R-PP (Readiness Preparation Proposal) from 2015 – 2019 with co-funding from the Fiji government and SPC/ GIZ Regional Programme Coping with Climate Change in the Pacific Island Region.

Key achievements for Fiji this 2017 - 2018 financial year were:

- i. The endorsement of the Mid Term Review report;
- ii. Acceptance of the US\$ 2million additional funding request; and
- iii. The signing of the REDD+ Conservation lease agreement for the national REDD+ pilot site with the Emalu community.

Tabulated below are other achievements by the Ministry in terms of the Fiji Readiness implementation from August 2017 to July 2018.

Table 18: Status of achievement for REDD+ Project

<b>Name/ Activity</b>	<b>Date</b>
<b>Stakeholder consultation events</b>	
National REDD+ Steering Committee (NRSC)	18 Aug 2017, 08 Dec 2017, 28 Feb 2018, 01 June 2018
Drivers Inception workshop	31 August 2017
Resource owner pilot site update	13 Feb 2018
CSO platform forum	Mar 5-7 2018
Inception meeting for Divisional working group	16 Jul 2018
<b>Capacity building/training &amp; awareness</b>	
Early Childhood Education (ECE) – forest conservation awareness Tacirua Kindergarten Supported by (RDF & AAD)	02 August 2017
FIVEM - Valuing and Assessing of Carbon	5th, 12th, 19th Aug 2017
REDD+ awareness Sawani District School	29 Sept, 2017
Expert Exchange on REDD+ and Forest Landscape Restoration (FLR) for Asian-Pacific Countries	17-19 Oct 2017
27th Asia Pacific Forestry Commission, Colombo, Sri Lanka	23-27, Oct 2017
REDD+ Awareness Dreketi (TEBTEBBA – SSVM)	25-27 April 2018, 31-34 May 2018
FGRM training	30-31 May

## EDUCATION AND TRAINING

The Training and Education Division 2017 - 2018 Operation Plan continued to be guided by the Fiji Forest Policy 2007 and similar to the previous years, it sets the directions for all our training and awareness activities. Under Section 5.5.7 of the Forest Policy, Forestry Training and Education outline the following: “The Forestry Department will have training courses conducted for forestry personnel and resource owners in all aspects of sustainable forest management, timber utilisation principles and practices, log scaling, and protection of environmental values”.

The Division continued to actively contribute to 4 major outputs of the Ministry in the Operation Plan for 2017-2018. This includes;

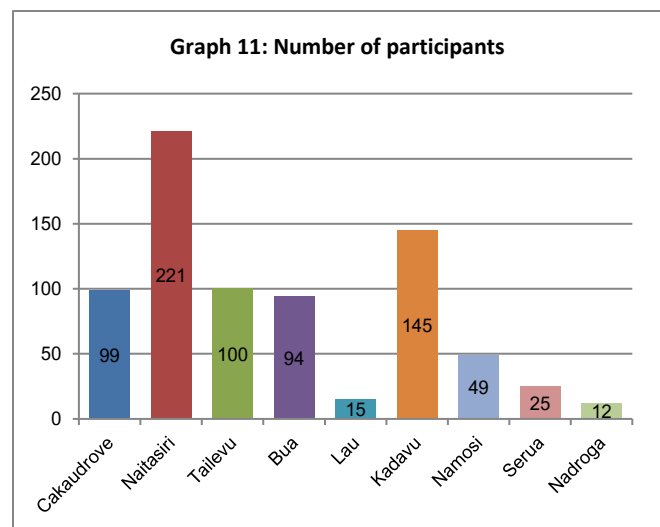
- Output 1: Portfolio Leadership, Policy Advise and Secretariat Support
- Output 3: Education and Training – Forestry Development
- Output 4: Public Awareness and Promotion – SFM
- Output 11: Promote Gender Equality and Women in Development – Forestry

The Training Centre also worked on submitting documents to the Fiji Higher Education Commission to allow schools to be fully registered by the Fiji Higher Education Commission and this is expected to be completed before the end of 2018.

### Technical Skills Training

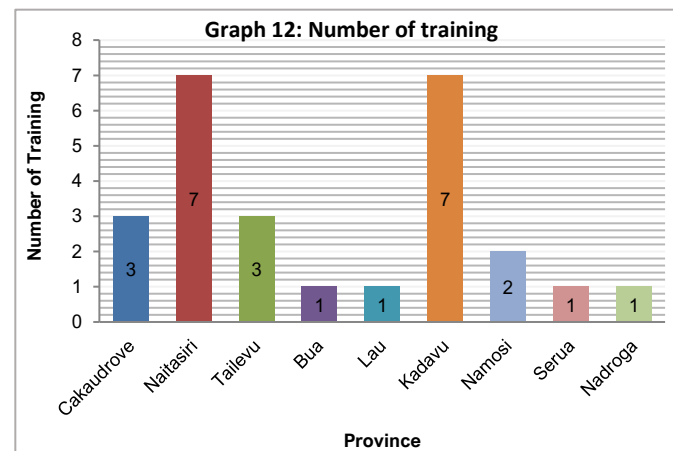
In comparison to the last financial year training, this year’s training has seen an increase in the number of participants attending the technical skills training. A total of 760 participants from 26 different stakeholders participated in this financial year compared to 381 participants from 15 stakeholders in the same period last year. This has mainly contributed to the development that has taken place in the provinces particularly in the reconstruction of homes.

Nine provinces were covered during the year. The province of Naitasiri tops the number of participants that attended the chainsaw training with a total of 221 followed by Kadavu at 145. The numbers for the rest of the provinces were all below 101.



### Number of Trainings

The province of Naitasiri and Kadavu capped the list of training this year followed by Cakaudrove, Tailevu, Namosi and 1 training each for Bua, Lau, Serua and Nadroga. The number reflects the development that has been taking place in the provinces for the reconstruction of homes affected by the recent cyclones and also the financial assistance provided by government for the building of homes initiatives.



### SFM Training and Awareness

Sustainable Forest Management (SFM) and Awareness Training continue to be conducted with the understanding that a well-managed forests with applicable conservation measures can deliver society's needs in a sustainable way.

The Academic Section had planned for 4 trainings to be conducted for this financial year but due to limited staff capacity, only one training was conducted during quarter 1 of the financial year at Kilaka, Kubulau in Bua. However, a three days awareness training was conducted in Waciwaci, Lakeba, and Lau fully funded by the Action Against Desertification (AAD) Project, under the Food and Agriculture Organisation (FAO) of the United Nation.

The SFM awareness team was also invited and completed 3 SFM evening awareness to the Sovi Basin Protected Areas community that consisted of the 3 communities of Delailasakau, Nasevou and Nadakuni of Naitasiri. The awareness focused more on the vibrant roles played by communities or resource owners in the sustainable management of their natural resources.

The communities were very receptive to the training and fully appreciated the knowledge they had gained during the training. There were questions relating to government assistance that encourage the removal of natural forest for other economic benefits but contradict the promotion of natural resource conservation. Communities have been informed on the need to balance natural resource development and natural resource conservation and restoration. They similarly confirm on the need to restore degraded forests using native species, after recognising the depletion of this native species. The communities have agreed to formulate a Natural Resource Management Team or locally called Yaubula Management Support Team, to be responsible for the monitoring, maintenance and replenishment of all natural resources.

Table 19: SFM Training

Date	Community	Province	Female	Male	Total
04/09/17 – 08/09/17	Kilaka, Kubulau	Bua	27	14	41
28/01/18 – 04/02/18	Waciwaci	Lakeba	16	14	30
19/03/18	Delailasakau,	Naitasiri	15	29	44
20/03/18	Nasevou	Naitasiri	20	15	35
21/03/18	Nadakuni	Naitasiri	20	30	50
<b>Total</b>			<b>98</b>	<b>102</b>	<b>200</b>

### Forest Harvesting Training

One of the main outputs of the division under the Ministry Operation Plan aim is to promote quality training programmes for capacity building to communities and industry operators. In trying to achieve this, the Ministry through the Training and Education Division conducted relevant Training Courses to Harvesting contractors throughout the Country.

Activities of the Harvesting Section of the Forestry Training Centre is not limited to the harvesting training activities only but, it has committed its programmes to facilitating trainings on Biodiversity Conservations & Protected Area Management and also in the execution of the National Monitoring exercise.

A total of 15 training activities were completed by the section, an increase of 1 training compared to the same period last year. A total of 389 individuals were trained and tested during the period compared to 471 in the last financial year. Details are in table 20.

Table 20: Forest Harvesting Training

QRT	ACTIVITY	DATE	VENUE	# PARTICIPANTS
1	Bua Harvesting supervision Module II	28/08 – 01/09/17	Bua FPL	17
	ID Card Processing	04/09 – 08/09/17	North	69 operators
	CODE Awareness	18/09 – 22/09/17	West	36
	ID Card Processing	25/09 – 29/09/17		68 operators
	Pruning & Thinning Training and Assessment	09/10 – 13/10/17	Seaqaqa	22
2	Bua Harvesting supervision Module III	07/11 – 09/11/17	Bua FPL	16
	Lakeba Chainsaw training & Skills test	20/11 – 28/11/17	Tubou	21
3	National Monitoring Exercise	11/02 – 04/04/18	N/W/S	34 Contractors
4	West Harvesting Supervisor Module I	14/05 – 18/05/18	Lautoka	21
	Tasmania Study Tour	20/05 – 26/05/18	Tasmania Australia	
	West First Aid Training	29/05 – 31/05/18	Lautoka	16
	Central/Eastern First Aid Training	14/06 – 15/06/18	Nausori	18
	Central/Eastern Harvesting supervision Module 1	18/06 – 22/06/18	Nausori	17
	WCS BC & PAM Tailor-made Training	02/07 – 06/07/18	FTC	25
	Chainsaw Skills Test Seaqaqa	09/07 – 10/07/18	Nanivuda/ Seaqaqa	9
	<b>TOTAL</b>			<b>389</b>

### Forest Warden Training

The Forest Warden programme, which was mandated by the 2007 Forest Policy, enabled Forest Wardens to assist in the policing of Forest Laws.

A total of 28 Forest Wardens graduated with Certificate I in Forest Management & Conservation, and are now actively implementing their roles & responsibilities in their area of operation within their various districts. During the year, a round of consultation was also held within the 3 Field Divisions to establish the responsibilities of the Forest Wardens within their respective divisions. The meeting was attended by representatives from the Provincial Offices as well, as they customarily work closely with Forest Wardens. A recommendation was made by the Provincial Representatives that a time period be established for attachment of Forest Warden within their respective Provincial Office for acquaintance and examining protocols that are essential to be observed when directing consultations, meeting and discussions with communities.

The year also marked the initiation of the allowance pay-out and assigning of contract agreement to the Forest Wardens of the Western Division. The Minister for Forestry, Honourable Osea Naiqamu was the chief guest during the launching ceremony in Lautoka.

### Forest Technician Programme

A total of 22 students graduated with an Advance Certificate in Forest Management from the Forestry Training Centre. This was after the completion of 18 months (4 semesters) of training and undertaking practical work (work attachment). The students did 17 units over the 4 semesters with a total of 1,010 contact hours and 490 hours of Self-Directed Learning.

### Biodiversity Conservation and Protected Area Management Course

A Tailor-made workshop was delivered to National Trust of Fiji Rangers and Resource Owners from the 4th to the 8th of December at Nadave. The workshop was funded by FAO and the Training Centre. There was a total of 25 participants from National Trust of Fiji's Reserve sites and they also comprised of some resource owners from these sites. This tailor-made workshop was widely conducted by Non-Government



Organisations' that value conservation in Fiji. This is the second of its kind conducted by FTC. The 2 consultants for the Biodiversity Conservation and Protected Areas Management (BC & PAM) curriculum development were in the country during the year to provide support in the development of the syllabus into Advance level. Their work was fully funded by FAO who are the sponsors of this project.

The section also coordinated a 5 day tailor-made training programme on Biodiversity Conservation and Protected Areas Management for the Yaubula Management Committee through the Wildlife Conservation Society (WCS) Projects. Logistical support was provided by the FAO, with funding under the GEF FPAM project in Fiji. WCS has been working in Bua since 2004 and had developed a structured network with communities in Bua. WCS has assisted 7 districts in Bua in compiling a district Ecosystem Base Management plan which was launched in 2016. It is a guideline that supports members of the district to better manage their natural resources. The organisation is working closely with the various district resource management committees in a process of developing and strengthening skills, instincts and abilities that they can adhere and adapt to against a changing environment within their district.

### Certificate in Applied Woodcraft Technology TITC

Fourteen (14) students were recruited to undergo a one-year Certificate in Applied Woodcraft Technology. The selection was based on needs of our stakeholders particularly the resource owners. The 14 students included eleven males and three females as shown in Table 21.

### Portable Sawmill Training

A total of 10 portable sawmill training was conducted during the period. The summary of trainings conducted are as follows;

No	Villages	No. of Participants
1	Sanima Pine Scheme, Namara Village, Kadavu	19
2	Muani Pine Scheme, Muani Village, Kadavu	32
3	Yawe Pine Scheme, Naqalotu Village, Kadavu	19
4	Nasegai Pine Scheme, Nasegai Village, Kadavu	25
6	Onoi-lau, Lau	9
7	RFMF Engineers Section, Nabua, Suva	20
8	Nukuvou Village, Kadavu	18
9	Navutulevu Village, Serua	16
10	Advance CAWT Students	16
	<b>Total</b>	<b>174</b>

### Other Trainings

There were other trainings conducted during the period which targeted the timber industry. Tabulated on the right are the summaries of the trainings which were attended by personnel of different timber or sawmill companies.

No.	Name of Training	Location	No. of Participants
1	Timber Grading Training	Labasa	13
2	Timber Grading Training	Lautoka	15
3	Treatment Plant Operations	Nasinu	12

Province	Number/Gender	
	M	F
Namosi	1	
Serua	1	
Tailevu	2	1
Kadavu	1	
Nadroga	1	1
Ba	1	
Ra	1	1
Lau	2	
Lomaiviti	1	
<b>Total</b>	<b>11</b>	<b>3</b>

### Village Rehabilitation

The training team also participated in the village rehabilitation programme which were conducted in;

- Ono, Lau;
- Nukuvou village, Kadavu;
- Navutulevu village, Serua; and
- Vatubalavu village, Nadroga Navosa.



### SILVICULTURE RESEARCH AND DEVELOPMENT

The Silviculture Research Division undertakes applied and silviculture research.

The overall research programme has two (2) key research areas; the plantation forestry and the sustainable management of native forests including mangrove forests/ecosystem. These programmes consisted of five (5) sub-programmes with multiple activities. The 5 sub-programmes are; seed technology, nursery practice, tree improvement, forest health, natural forest management.

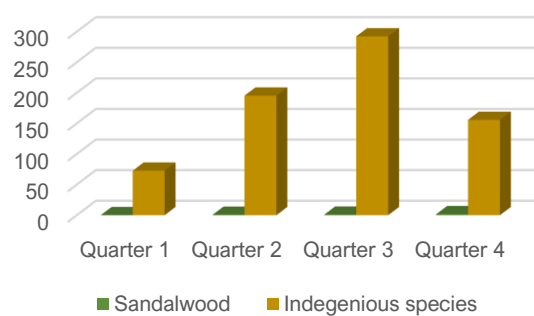
### Seed Technology

The objective of this programme is to develop improved methods for harvesting, processing, testing, storing, retrieving and distributing seeds to ensure improved viability. There was a great decline in the volume of seeds collected compared to previous years and this was due to the trail of destruction that was left by TC Winston in 2016 affecting most of the seed collection areas and seed stands. Furthermore, the continuous rain period experienced in the beginning of 2017 affected the flowering and fruiting of tree species.

### Seed Collection

The seed collection team conducted seed collection on a monthly basis targeting forest areas in the Western and Northern Divisions. Due to the high yield and quality of seeds attributed to its climatic condition i.e., favourable dry and hot conditions which greatly enhances fruiting and maturity resulting in high seed viability. The total volume of seeds collected this year is 934.1kg of seeds comprising 2.8 kg (0.3 %) of Sandalwood seeds and 931.3 kg (99.7 %) of Indigenous species. There was no mahogany seeds collected due to the 200kg dried weight at stock.

Graph 13: Seed collection achieved in each quarter (2017-2018FY)

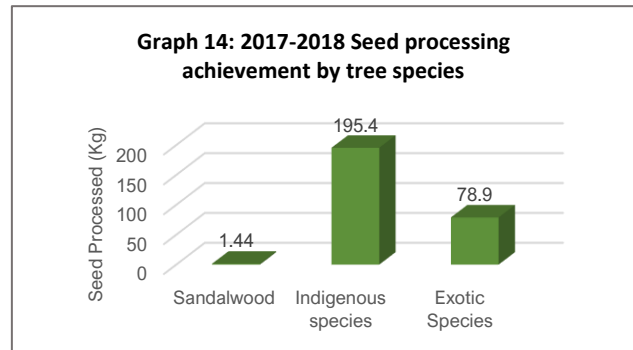


### Seed Processing

Some trees can easily be grown from seed but some may take a much longer time to propagate. Seeds propagation can be a tricky process for several local tree species. It is important to understand the different seed processing techniques. Treating the seed properly is necessary before germination occurs and a seedling can be assured.

### Result

During the year a total of 275.74 kg of seeds was processed. These seeds were processed and sowed. These were Sandalwood species 1.44kg [1%], Indigenous species 195.4kg [71%] and Exotic species 78.9kg [28%].

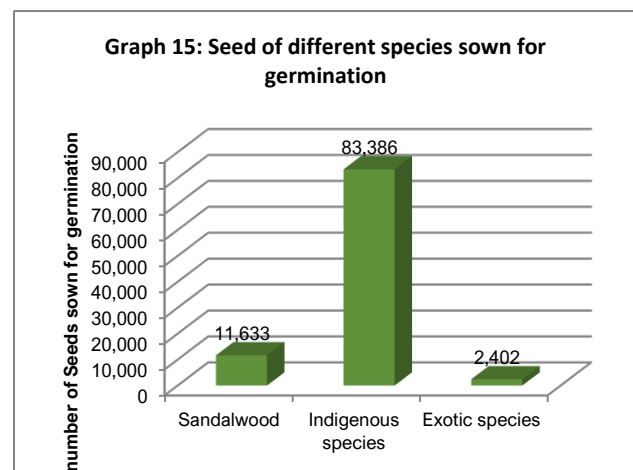


### Seed Sowing

There are number of important reasons a seed cannot germinate under various conditions. Two major causes for unsuccessful tree seed germination are hard seed coats and dormant seed embryos. A small seedling can be very tiny and delicate when first germinated and often require much more care to ensure that it can successfully become a seedling.

### Results

A total of 47,052 seeds were sowed for germinant production during the year. Sandalwood species 11,633 seeds; Indigenous species 83,386 seeds and Exotic species 2,402 seeds.



### Nursery Practice

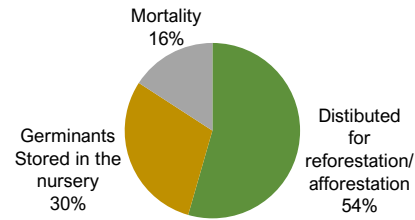
In this financial year, the nursery section was mainly involved in production of seedlings activity which is an extension of the work started by the Seed Technology section in the nurturing of seedlings and connects/ supports the extension for the operations divisions in the afforestation and reforestation programmes. The nursery practice team worked with optimum care and attention on seedlings during their critical juvenile stage, resulting in the production of healthy, vigorous seedlings mainly focusing on research and not on mass production. A portion of germinants recorded under the seed section would only be reported as the other portion was transplanted by the extension nursery team.

### Transplant

A total of 6,751 germinants were transplanted from the germination room which was twice the target of what was achieved in the last financial year. However, despite this achievement, we still encountered mortality at various stage of seedling development and this is attributed to adverse weather conditions that are unfavorable to seedling growth. Out of the total transplanted, 54% were distributed to planting activities, 30% were in stock at the nursery and a 16% mortality.

The mortality is equivalent to 1,071 seedlings and the section strives to reduce this to the range from 5 – 10% through effective management practices.

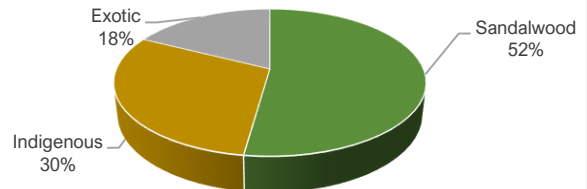
**Graph 16: Germinants distributed for 2017-2018**



### Distribution

A total of 3,680 seedlings were distributed throughout the year. Out of this, 1,922 (52%) were sandalwood seedlings, 1,112 (30%) indigenous seedlings and 646 (18%) exotic seedlings.

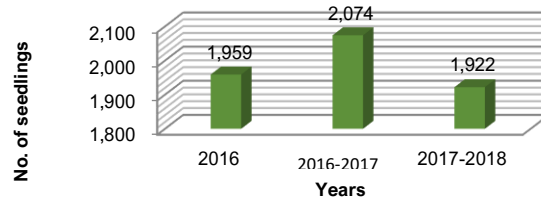
**Graph 17: Seedlings Distribution**



Graph 18 demonstrates the trend in Sandalwood Distribution since 2016. There was an increase in the distribution of sandalwood seedlings in 2016-2017FY as compared to 2017-2018FY. The increase was due to the ongoing rehabilitation post TC Winston.

The low achievement in sandalwood production for the 2017-2018FY was mainly due to the decentralisation of sandalwood projects to the three operation divisions i.e., Northern, Central eastern and the Western Division.

**Graph 18: Sandalwood distribution seedling 2016-2018**





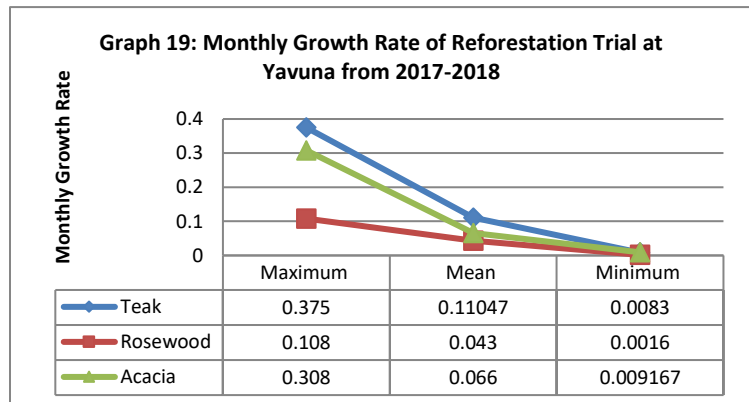
### Tree Improvement

The objective of tree improvement is to identify, thin and develop superior stands for the purpose of supplying quality seeds for reforestation.

### Yavuna Research Trial Plot

Between 2017 and 2018, the Tree Improvement team conducted assessment at the Yavuna Research plot for three species of economic interests i.e., Rosewood, Teak and Acacia. Of the 57 seedlings assessed at the Yavuna research trial plot, 18 Rosewood, 20 teak plants and 19 Acacia plants were assessed.

Graph 19 captures the growth recorded within the 1-year period. The team was also able to determine the average monthly growth rate for each species planted. Teak thrived and responded well to the climatic conditions and altitude of the trial plot with an average growth rate of 0.11047 cm per month, followed by Acacia with an average growth rate of 0.066 cm per month and lastly Rosewood with 0.043 cm average monthly growth rate.

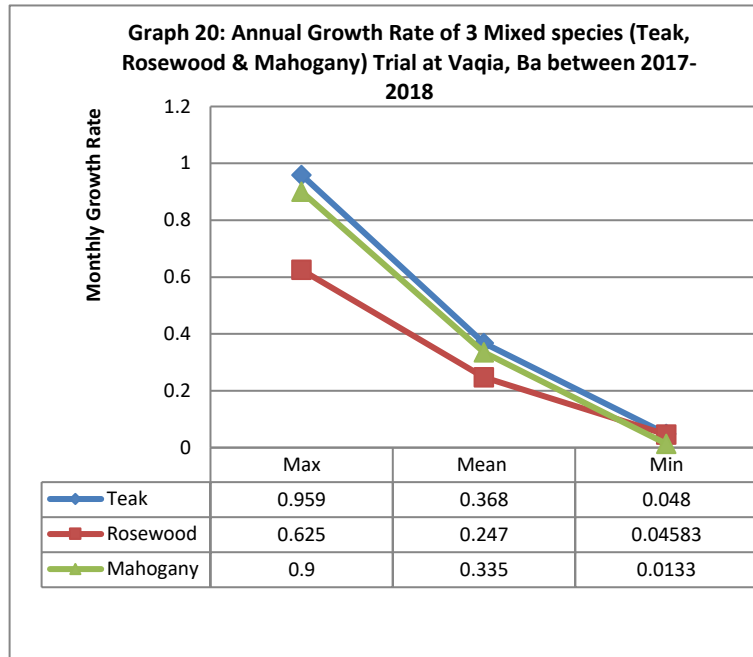


### Vaqia Research Trial plot

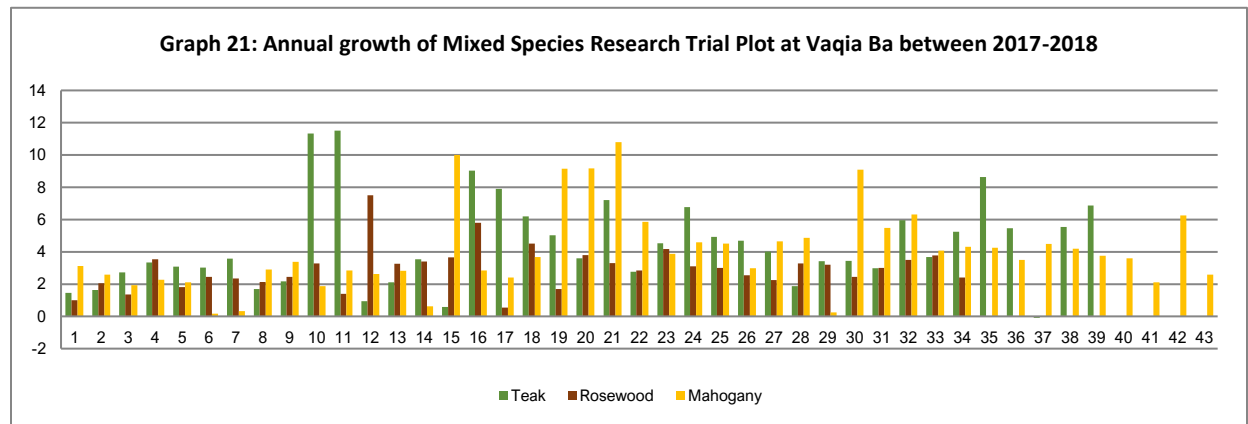
A total of 116 plants were assessed at the research trial plot in Vaqia in Ba. Of the 116 tree species under research, 34 were Rosewood plants, 39 Teak plants and 43 mahogany plants. Graph 20 depicts the growth trend of Teak, Rosewood and Mahogany over the 2017-2018 timeframe.

### Alternative Species Trial at Vaqia, Ba

Graph 21 depicts the growth of plants in 2017-2018 and their average monthly growth rate for each species between for this period. Teak depicted to be the best growing species with the average growth rate of 0.368 cm per month, followed by Mahogany with an average of 0.335cm per month and rosewood with an average monthly growth rate of 0.247cm per month.



Upon comparing the results between the two research trial plots, it can be concluded that teak thrives well however its growth is more pronounced in the trial plot in Vaqia compared to the Yavuna trial plot.



### Forest Health

Forest Health is concerned with insects that affect the forest and forest products and its scope of research is to survey, collect and rear timber infesting insects, to liaise with timber inspectors and quarantine officers for imports of timber products and periodical trapping at ports of entry, plantations and nursery. Some of the important insects affecting wood products are termites, powder post beetles, carpenter ants and the old house borer.

Diseases are also a major contributing factor to the health of the trees, forests and ecosystems. Most common disease are Fungi, bacteria, mistetodes or viruses that can also spread from tree to tree which causing deviation to the normal functioning of a plant. The devastated effect of symptoms ranges from

gradual decline of plant growth to defects in defected plant parts to outright mortality. Yellowish colour foliage is an indicator of affected plants.

### Surveillance and Monitoring

Surveillance and monitoring are an ongoing activity for forest health undertaken for assessing insect interceptions at various sites such as plantation forest, natural forest, trade borders and nurseries. Modes of assessments varies; static traps are monitored every fortnight to note the insect assemblages at various site location, sentinel plants are placed at trade borders to monitor new pest and disease incursion for early detection before its widespread damage to plantation areas, light trapping is undertaken to monitor insect interception at night as not all insects are active during the day. These will give us a clear illustration on insect assemblages and compare its occurrence, its density via night or day and at respective geographical locations.

### Static Trap

A critical component of our activity is meant to capture the occurrence of pests and disease in specific areas. These include port of entries, plantations, natural stands and vegetation, seed production and gene conservation areas.

Three static traps that were used are shown on the right.

The table below shows the sites and number of insects collected.

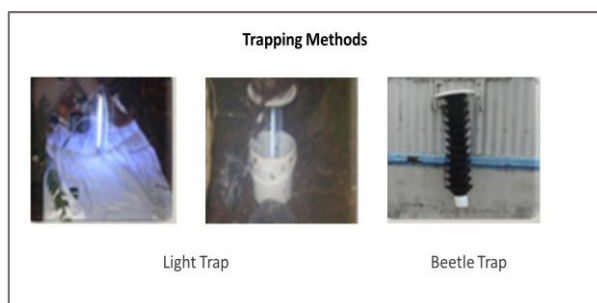


Table 24: Insects collected at various sites

Insects collected from static traps	Kings Suva Wharf (KSW)	Site Locations Export Freights Services (EFS)	Natovi Port (NP)	Nukurua Mahogany (NM)	Lautoka Wharf (LW)
Coleoptera		1	2	53	
Scolytidea				7	
Bostrichidae				1	
Hemiptera Bugs			2		
<b>Total</b>		<b>1</b>	<b>4</b>	<b>61</b>	

Table 25: Taxa Abundance (Pine Plantations)

Order Coleoptera	
Scolytidea	175
Platypodidae	90
Bostrychidae	33
Caridae	10
Formicidae	29
Curculionidae	5
Scarabaeidae	25
Hydrophilidae	155
Rhiphaeridae	1
Order Isoptera	
Termite (Alate)	56
<b>Total</b>	<b>579</b>

Table 26: Taxa Abundance (Nakavu NFMPP Site)

Order Coleoptera	
Scolytidea	56
Platypodidae	6
Elateridae	2
Formicidae	3
Curculionidae	6
<b>Total</b>	<b>73</b>

To compare insect population amongst the different traps used for the past five years, beetle traps are effective at plantations of pine and mahogany to lessen the population of ambrosia beetles as these are often abundant.

For light trapping, two ways to monitor insect interception are:

- i. to set bucket traps at 5pm and collect it the next day at 5am,
- ii. to set up the light trap two way to monitor by using a white sheet and to collect insects for 3 hours. Through past experiences, more insects are collected when we collect for 3 hours. The table above shows that most insects collected were from nocturnal surveys. Nocturnal survey at Pine Plantations recorded the most insect population and majority of the insects collected were from family Scolytidae. This proves that ambrosia beetles are common pests of Pine and Mahogany. These are native pests and one of the best ways to monitor its population is to set up traps and to continue using light traps to lessen its impact on plantations of Pine and Mahogany.

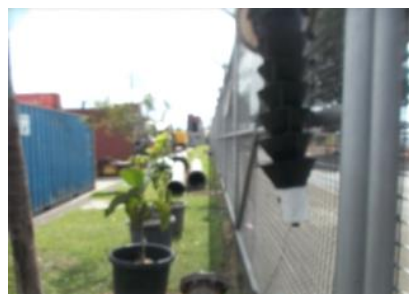
### Sentinel Plants

Sentinel plants placed at the Kings Suva Wharf serves as a control remedy for early detection of introduced pests and diseases to the country and to avoid its widespread damage to plantation areas. Assessment undertaken together with the static traps assessment is done twice a month. Plants with symptoms of tree disorders are replaced with newly potted and healthy plants.

Sentinel Plant species are Guava, Pine, Mahogany, Eucalyptus and Teak. These plants are placed at ports of entry to determine early detection of pests and diseases outbreak and to avoid widespread damage to plantation areas.

For example;

- |                         |                        |
|-------------------------|------------------------|
| - Guava plant           | - guava rusts          |
| - Pinus carriabea       | - Sirex noctilio       |
| - Swietenia macrophylla | - mahogany shoot borer |



### Pest and Disease

Forest Health assessments are carried out to monitor pest and disease infestation to a 0–5-year-old plantations of both native and exotic. For this period, 2 different sites were assessed; Sandalwood Gene Conservation Trial Plot at RKS and Wainiyabia Sandalwood Spacing.



The main objective of the activity is to survey and monitor insect pests and diseases occurrence on plantation areas and draw up a pest list analysis for insect pest and disease infestation on specific plantation areas.

The mode of assessment was a 100% assessment as all individual plants were assessed for pest and disease. Infestation rate to all species is different taking into account the geographical location of the area including the weather patterns and the soil composition.

It is always ideal to undertake forest health on a young plantation (0-5 years old) as plants are more vulnerable to pest and diseases compared to an old plantation. All insect pest or diseases samples were collected and stored at the Entomology Laboratory for proper identification and further authentication.



### **Sandalwood GCA (RKS)**

The objective of establishing the gene conservation site at RKS is to conserve the native yasi which is threatened by high compatibility for hybridisation with the *Santalum album* and their hybrid. Genetic diversity is essential for sustainable forest management as it permits tree species to adapt to new stresses such as disease and climate change, and allow tree breeders to continue achieving genetic improvement objectives.



The plot was established in 2015 with 100 seedlings planted. Majority of the *Santalum* species cultivated have died and based on the assessment done mortality rate is very high. Only about 10 *Santalum* species thrived plus some host plants (citrus). Survival rate was very low at 10%. The plants that died were not because of pest and disease infestation but because the area was too wet and the soil not well drained causing the high mortality rate.

### **Wainiyabia Spacing Trial**

The spacing trial was established in 2013 to determine the best possible spacing for *Santalum* species growth dynamic. For the past 3 years forest health assessments shows that there was no severe threat to this trial as almost all plants are thriving. Only in the case of plants growing under a thick canopy cover having increase humidity the plants were not vigorously growing.



*Santalum Spacing Trial at Wainiyabia*

Almost all the plants survived at this trial plot and the mortality rate is very low at 5%. There are no major symptoms of tree disorders but a few plants died of dieback.

Forest health assessment helps determine the number of insect pest infesting in every plantation surveyed and the spread of disease like symptoms and fungal decay. Follow up assessment is undertaken on a quarterly basis to determine pest and disease infestation and if there is an increase in mortality rate.

### **Research**

The nursery nurtures both native and exotic timber tree species seedlings. Most of the seedlings raised in the nursery are thriving well with overall mortality about 5% which is very low indicating high survival rate. Majority of the seedlings are healthy with minor chewing, blight and decay or stains on their foliage. A

common disease on Santalum species are leaf spots and common pests are mealy bugs, white flies and scale insects.



*Diseases of leaf blight and leaf spots at SRD Nursery*

Good nursery practice and management will minimise pest and disease in a nursery set up and will avoid the widespread damage to plantation areas. Before seedlings are to be transferred for field cultivation it must be of the required standard in size and in health (free of pest and diseases) in order to withstand the outside temperatures.

Some symptoms of tree disorders are seen on some species such as *Intsia bijuga*, *Agathis macrophylla*, *Santalum album*, *Santalum hybrid* and citrus. Recommended insecticides and bio pesticides to be used are Prevathon, Malathion and Hortiguard.

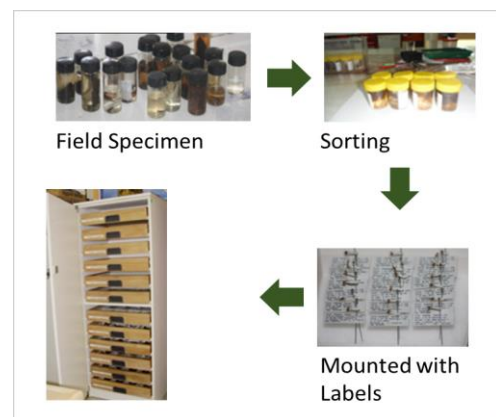
### **Seedling Transfer**

All potted plant species are being inspected for pest and disease before transferring to outer islands. This is a collaboration work with the Biosecurity Authority of Fiji (BAF) in trying to minimise pest and disease infestation from the main island being transferred to outer islands and vice versa.

### **Laboratory Work**

Laboratory work is an ongoing activity including species identification and recording of insect pest collected from static traps, nursery and plantation assessments. This is undertaken the next day after field assessment. All insects' specimen collections are stored at the entomology laboratory for future referencing and further authentication. The specimens are stored either in wet or dry collections for preservation purposes.

Specimen curation to preserve field collected specimens to catalogue what species exist in a certain area and to have reference specimens to compare to others in the future. All specimens must have a data label providing the location, date and collector. All wet specimens re-filled with ethanol and pinned dry specimens are brushed with ethanol for long-term preservation. Data gathered are stored for future referencing and use.



### **Natural Forest Management**

In Fiji, various management tools are in place such as diameter limit tables based on species growth, selective removal practices under the Fiji Forest Harvesting Code of Practice, retention of mother trees, rehabilitation of coupes after logging, replanting of 10% of coupe area after sustainable harvesting or enhancement plantings on skid tracks and landings, robust methodology and non-detriment findings enhancing the setting of sustainable harvest and trade quotas.

The Natural Forest management programme and research in Nakavu research trial plot seeks to conduct non-detriment findings, establish Diameter limit tables and sustainable logging practices for tree species in Appendix II of the CITES Listing. The Diameter Limit Table (DLT) implementation guideline aims to train the Ministry of Forestry staff and other stakeholders (contractors and land owners) on the standard logging practice under the Ministry's regulation for native tree species according to the species Diameter Limit. The Non-Detrimental Findings of these species give detailed information on the biological characteristics, national status, stock status, controlled harvest or monitored harvest practices and protection from harvests at a national level.

The first step involved is species identification and ascertaining its stock abundances from NFI reports, TUD export reports, CITES list, IUCN list and Ministry of Environment Fiji Endangered and Protected Species (EPS) regulation. Species below 20 cubic meters to 0.1 cubic meters per hectare include *masiratu, kuasi, makoloa, kautoa, bo, bosawa, sarosaro, yaro, vutukana, eucalyptus, salato, vugalevu, tivi, waciwaci, sole, aimasi, vacea, vutudina, dulewa, yaka, kauceuti, gadoa, manawi, marasa, duvula, vaivai ni veikau, malamala, rosawa, kaudamu male, vauceva, kambi, lauci, diriniu, vure, yawe, cibicibi, bulu m, nokonoko, yasidina, vutu, tarawau, doi, amunu, masa, nunu, cevua, drausasa, dokonisau, qumu, kaudamu lailai, buabua, tavola, totowivi, baka, yasivula, bausa, wiriwiri, kaunisiga, tiri vanua, bauloa, nuqa, molau, damanu lailai, yasi nunu, lidi, moivi lailai, damanu dilodilo, vasarewa, vesiwai, buluwai, doidamu, kaudamu levu, yasiwai, drala, tomanu, kadaba, midra, sisisi, mavida, vasa, drautolu, lolo, damanu ni yaqaqa, moivi levu, vuga, bausawa, kautoa, vesida, anita, rogi, dabi, vaivai ni vavalagi, sasaqilu, yasiyasi lailai, kauceuti levu, mako vatu*. At this level of stocking, the species above can be considered threatened for extinction however, the outcomes of this research can lead to amendments of the species listing in the EPS Act whereby these tree species can be shifted from schedule 1 species to schedule 2 and the approval permit be granted for species listed in schedule 2.

The main activities that were carefully executed and completed under the Natural Forest programme include the; Research data compilation and analysis performed on individual species including Tree Spotting and measuring and marking of the tree species in compartments 8, 11, and 12.

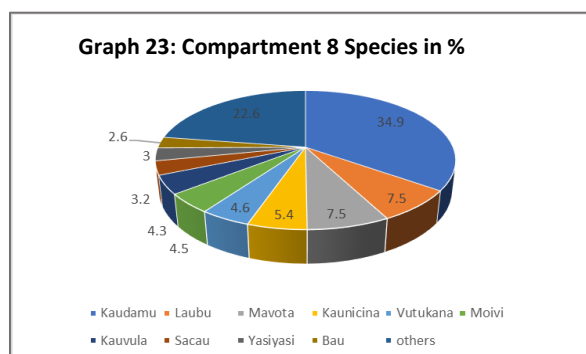
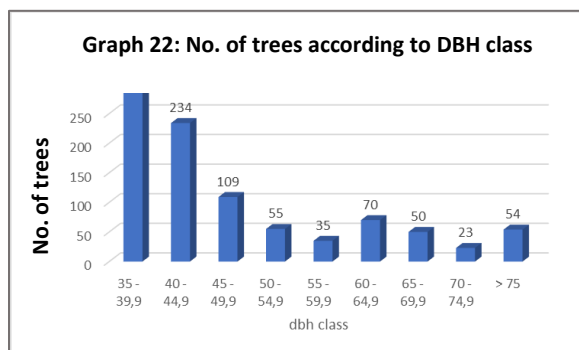
The other works that were also executed and completed in this financial year were:

- Skid track planning and marking: Compartment 8 and 11;
- Harvesting Plans incl. Tax Report for Compartment 8 and 11;
- Carbon Inventory: Compartment 4 and 7;
- PSP recording and maintenance for Compartment 4, 7, 8, 11 and 12.

Compt	Royalty Class	No of qualified trees	Volume of qualified trees
<b>8</b>	1	381	578
	2	170	292
	3	123	180
	4	235	292
<b>11</b>	1	4	13
	2	13	33
	3	1	4
	4	15	21
<b>12</b>	1	414	504
	2	428	564
	3	216	233
	4	321	333
		<b>2,321</b>	<b>3,047</b>

Of the assessment carried out, there was a total of 2,321 trees that qualified for logging with the corresponding total volume of 3,047 m<sup>3</sup>. The findings from the 3 compartments are captured in the graphs and tables below:

## Results from Compartment 8



**Table 28: Tree number according to diameter class**

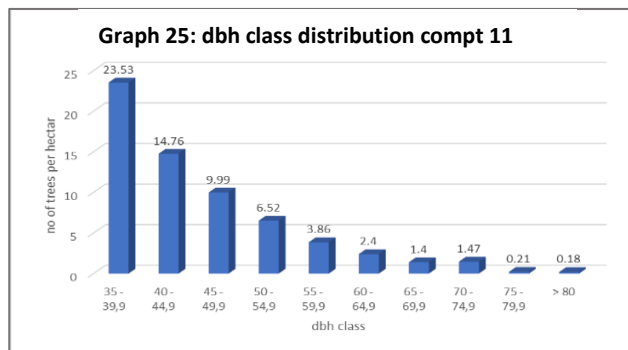
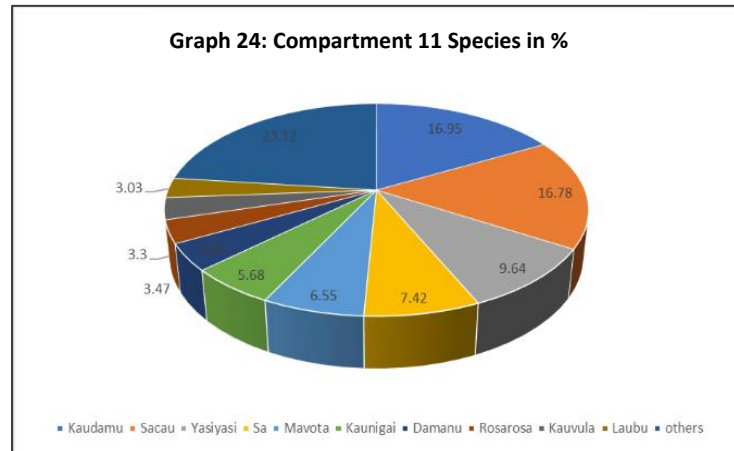
DBH Class	No. of trees
35 - 39,9	285
40 - 44,9	234
45 - 49,9	109
50 - 54,9	55
55 - 59,9	35
60 - 64,9	70
65 - 69,9	50
70 - 74,9	23
> 75	54
<b>Total</b>	<b>915</b>

**Table 29: Species distribution**

Species	Total number	%
Kaudamu	319	34.9
Laubu	69	7.5
Mavota	69	7.5
Kaunicina	49	5.4
Vutukana	42	4.6
Moivi	41	4.5
Kauvula	39	4.3
Sacau	29	3.2
Yasiyasi	27	3.0
Bau	24	2.6
others	207	22.6
<b>Total</b>	<b>915</b>	<b>100</b>

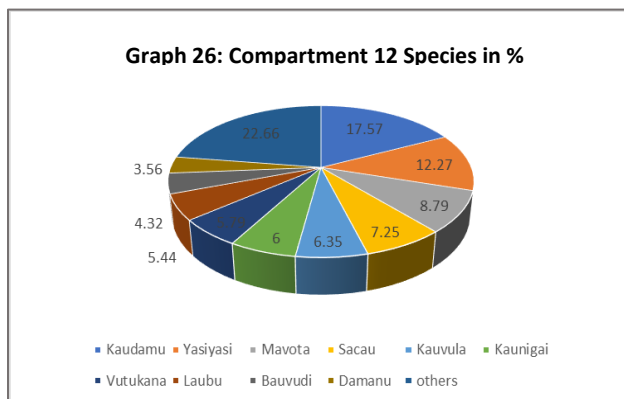
## Results from Compartment 11

Species	%
Kaudamu	16.95
Sacau	16.78
Yasiyasi	9.64
Sa	7.42
Mavota	6.55
Kaunigai	5.68
Damanu	4.06
Rosarosa	3.47
Kauvula	3.30
Laubu	3.03
others	23.12

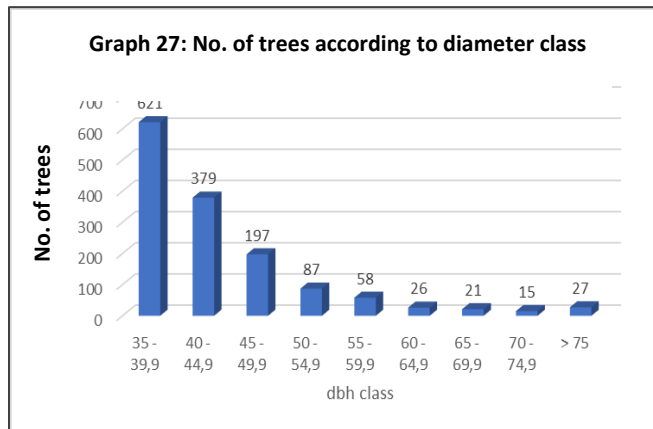


DBH Class	No. of trees per ha
35 - 39,9	23.53
40 - 44,9	14.76
45 - 49,9	9.99
50 - 54,9	6.52
55 - 59,9	3.86
60 - 64,9	2.4
65 - 69,9	1.40
70 - 74,9	1.47
75 - 79,9	0.21
> 80	0.18

## Results from Compartment 12



DBH Class	No. of trees
35 - 39,9	621
40 - 44,9	379
45 - 49,9	197
50 - 54,9	87
55 - 59,9	58
60 - 64,9	26
65 - 69,9	21
70 - 74,9	15
> 75	27
<b>Total</b>	<b>1,434</b>



**Table 33: Tree species distribution**

Species	Total number	%
Kaudamu	252	17.57
Yasiyasi	176	12.27
Mavota	126	8.79
Sacau	104	7.25
Kauvula	91	6.35
Kaunigai	86	6.00
Vutukana	83	5.79
Laubu	78	5.44
Bauvudi	62	4.32
Damanu	51	3.56
others	352	22.66
<b>Total</b>	<b>1,434</b>	<b>100</b>

### Sandalwood Development Project

The 2017 – 2018 fiscal year was very challenging but a productive one for the Sandalwood Development Project. There were a few new activities that were identified to be implemented at community level in order to continue promoting this development activity and most importantly, for the betterment of sandalwood activity in Fiji. These new activities do not change the main objectives of this development programme that is to develop and promote sandalwood resources in Fiji at national level and to enhance the betterment of livelihoods while maintaining and promoting sustainable communities. The total budget allocated for this capital project was \$100,000.00 and was used to execute the different project activities from implementation at the community level, other administrative purposes and the salary for the Project Officer. The activities are;

- i. Sandalwood Field Planting Activity;
- ii. Sandalwood Awareness Activity;
- iii. Sandalwood Inventory Activity;
- iv. Sandalwood Value Adding & Market Consultation Activity;
- v. Project Officer Salary;
- vi. Project Stores, Administration & Payment of Overtime Hours.

The Sandalwood Development Project is a capital project funded and supported by the government for the past 8 years since its commencement in 2011. The main idea of this development activity is to support the development at community level and at the same time, promote long term investments for our future generations.

Despite all the challenges and unplanned activities, the Sandalwood Development Project is rated prominently in the course of service delivery and implementation at community level. Not only that, the engagement and involvement of other private partnerships create more opportunities and strengthen the development and betterment of sandalwood activity in Fiji. These have all been achieved through a rigorous team effort by the Silviculture Research Division staffs together with the Sandalwood Development Project Officer, divisional offices and other government and non – government agencies and the communities as a whole who support and assist during the implementation phase.

### Method of Implementation

All the sites for project implementation and assistance were selected based from the lists of requests received at our office from various interested communities, individuals and stakeholders on sandalwood development activity.

A standard operating procedure was followed in the process of analysing the requested list before submitting to the Screening Committee for final approval of the request. The requests were sorted out by

province and districts to allow easy implementation and avoid complaints from the public for any bias decision.

Sandalwood inventory and market consultation activity are two major new activities that commenced this year for this sandalwood development project. The main objective of these two activities is to maintain and support this development activity at national level and ensure that the end point of the development is well structured by the market force and demand. The sandalwood inventory activity was first conducted on some of the natural distribution sites and targeting other project sites to provide an update on the current sandalwood resources available locally, the age of the trees, the ownership and even measurement were done on some selected trees for the diameter at 30 centimeters from basal and the height of the tree for further analysis. This sandalwood inventory activity will be conducted for the next 3 years. For the very first round of sandalwood market consultation locally, the data was presented, some of our available and existing sandalwood buyers to promote the sandalwood industry in Fiji and find solutions to improve our implementation at community level and most importantly for the benefits of the resource owner during harvesting phase.

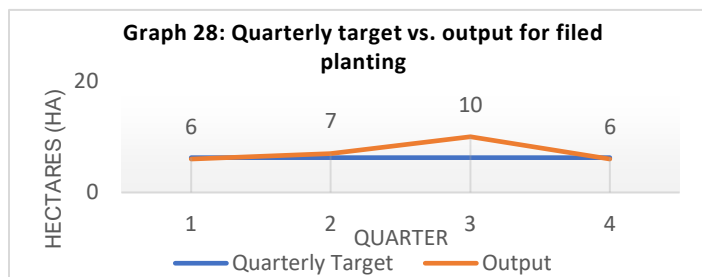


Project management at community level is one of the key important areas that we considered during planning and implementation phases. This is one of the serious factors that is required to be cleared in order to maintain the sustainability of the project and most importantly, for the people to get the maximum benefits of the project at manageable level. The implementation of the project activities is done by the targeted communities, led by the Silviculture Research divisional staffs with the assistance from the three divisional offices (CE, West, North) and the Provincial Offices.

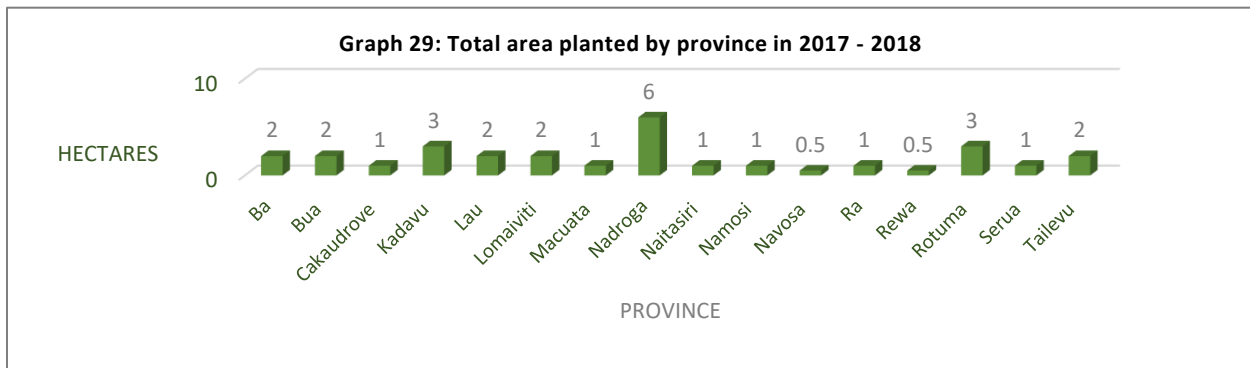
### Field Planting

This activity is mainly focused at community level for sandalwood establishment and planting assistance. The sandalwood seedlings were all raised and nurtured in all our 3 divisional offices; North, Central & Eastern and Western Division before distributed to those targeted sites for planting. Though the project has different seeds sources, it takes into account the fact of preserving our native species of sandalwood and avoid the chances of hybridity of species on the ground to maintain the purity of heartwood extracted in the harvesting phase for maximum benefits.

Quarter	Quarterly Target (Ha)	2017-2018 Output (Ha)	Overall Achievement (%)
1	6.25	6	96%
2	6.25	7	112%
3	6.25	10	160%
4	6.25	6	96%
<b>TOTAL</b>	<b>25 Hectares</b>	<b>29 Hectares</b>	<b>116%</b>



The annual target for 2017 – 2018 is to establish 25 hectares of sandalwood at community level through community assistance and private partnerships with other interested stakeholders. The results are as follows;

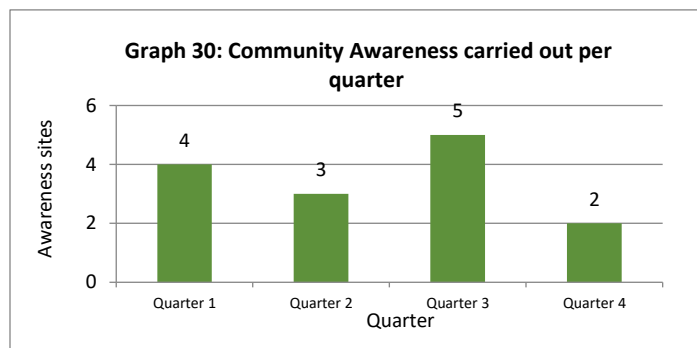


### Awareness

The main objective of this community awareness activity is basically to build up capacity and improve knowledge and skills on sandalwood technology at community level for the betterment of sandalwood development activity. The success of any development at community level is highly dependent on the level of knowledge and skills the people have to execute the activity in the rightful manner. Therefore, the sandalwood project has always considered this activity as one of its core roles over the past few years for the sustainability of the activity, especially on field planting method and management. Not only through community awareness as per planned, but it is also done through live broadcasting programme on various radio stations and television, government road show and other exhibition. The main reason for doing this is to disseminate sandalwood information and technology to the general public and at the same time, promote the sandalwood commodity as part of the ministry's development.

**Table 35: Awareness**

Quarter	Quarterly Target	Output	Overall Achievement (%)
1	2 sites	4 sites	200%
2	2 sites	3 sites	150%
3	2 sites	5 sites	250%
4	2 sites	2 sites	100%
<b>TOTAL</b>	<b>8 sites</b>	<b>14 sites</b>	<b>175%</b>





## Inventory

The sandalwood inventory activity was initiated by the Ministry of Forestry and it is one of the major activities of Sandalwood Development Project in 2017 – 2018 programmes. The sites were randomly selected and visited by the Silviculture Research Division staffs with the assistance of Divisional Forestry Offices (DFOs); Northern, Western Central & Eastern, Provincial Offices, *turaga ni koros* and communities for data collection. This inventory data is essential to fully support the idea of introducing sandalwood policy and regulation to improve sandalwood management and market stability in Fiji. In the course of conducting sandalwood inventory activity, the number of sandalwood trees in all sites were recorded and marked with GPS for mapping purposes. Certain attributes were considered such as the ownership, age of the trees, the species that existed and the locality.



The following table represents the percentage of sandalwood population recorded in the Divisions according to the age of trees.

Division	North	West	Central/Eastern	Total
Total Population	2,190 trees	2,494 trees	10,949 trees	15,633 trees
1 – 5 Years	1,704	2,145	7,518	11,367
6 – 10 Years	352	349	3,084	3,785
11 – 15 Years	134	-	347	481
16 – 20+ Years	-	-	-	-

## Value adding & Market consultation

The main objective of this consultation activity was to engage all existing and known sandalwood buyers locally for the betterment of harvesting and marketing process. Currently, there are no proper rules and regulations established to safeguard the sandalwood resource owners and the buyers. This is one of the main reasons that led to the overexploitation of the sandalwood species in Fiji over the past decades. Consultations were done in all three divisions; Central & Eastern, West and Northern respectively. A few of the guest speakers were invited with other local sandalwood investors. Other sections from divisional offices were also engaged in this consultation such as Timber Inspection unit, Tree Improvement unit and also a speaker from the Ministry of Environment. The summary of the consultation is provided in the table below.

No.	Organisation	Topics
1.	Sustainable Forest and Landscape Management Pillar Land Resources Division Pacific Community (SPC)	Address the areas on Sandalwood Policy & Regulation and how Fiji can work together with other Pacific islands to improve the marketing process of sandalwood commodity in order for the resource owners to get the maximum benefits out of it.
2.	Fiji China Business Council, Suva	Local sandalwood investors
3.	Wee Kong Marine Export Company Limited, Suva	Local sandalwood investors
4.	Ministry of Environment Suva	Address the importance of CITES. Sandalwood species is also under CITES lists and it is regulated in Fiji under Endangered and Protected Species Act (EPS Act) 2017.
5.	Representative from Nawai, Nadi	Represents the sandalwood resource owner.
6.	Representative Nakadrudru, Bua	Local sandalwood investors & farmer

Table 37: Consultation		
No.	Organisation	Topics
7.	Ministry of Forestry Divisional Forestry Office – West Timber Inspection Unit Lautoka Office	Address the issue on sandalwood export. The current process to be followed to get the export permit and any other necessary requirements to be followed by the investors. Also include some of the way forward that we need to consider for the betterment of sandalwood in Fiji locally.
8.	Ministry of Forestry Silviculture Research Division Tree Improvement Section Coloisuva	Highlight some of the key research areas on sandalwood species during planting to adult stage.

### Discussion and Analysis

Since sandalwood field planting and capacity building activity is an ongoing activity from the past 5 years or so, it is found that the rate of implementation is much faster and easier as compared to the rest of the activities. The main reason behind that is to get people and communities be aware of the activity and getting them interested to engage in this development activity for various purposes. While sorting out different request letters received at our office from different applicants throughout the year, there are only 3 major objectives of the request highlighted in almost every letter. These objectives are:

- 1) Long term investment for future generations;
- 2) Community development; and
- 3) Alternative source of livelihood.

This is one of the great impacts of sandalwood awareness activity and other means of media programmes used to broadcast this development activity at national level. Also, the importance of creating public and private partnership with other stakeholders; government and non – government agencies, majority of these sandalwood woodlots and plantation established and assisted through technical advice and establishment of plot this year are privately owned. The highest number of farms are from the Western and Northern Divisions.

Sandalwood inventory activity is one of the new activities commenced in this fiscal year for the purpose of counting and mapping the current sandalwood resource stock available in Fiji. This activity will be running for a period of three (3) consecutive years. The main target for this year is to revisit all the project and natural distribution sites for sandalwood. This is one of the main reasons the highest percentage of sandalwood is from 1 – 5 years old within the three (3) main divisions; Central & Eastern, West and North respectively. For those sites that have some trees more than 11 – 15 years old, its either natural distribution sites or the planting was done long time ago from the existing mother trees that grow in the nearby areas, before the commencement of the sandalwood development project in 2011. Some sandalwood populations in these areas grow wildly as well and this is from the natural regeneration of the seeds or newly grown shoots from the roots.

### Key Findings:

- The highest number of sandalwood populations planted and grown within the 3 divisions range from 1 - 5 years old. This clearly shows that due to lack of knowledge and skills, people were not interested to engage in such development activity over the past decades.
- Most of the old sandalwood trees, 6 – 10 years old, are called mother trees and almost half of them were from existing population.
- Sandalwood species also have a fast regeneration rate. From one mother tree, especially for wildings, an average of 3 young trees can be grown to the size of the mother tree if proper thinning and management are done in timely manner. It is either from the fallen matured seeds or newly grown shoots from the roots.
- *Santalum album* & *Santalum* hybrid are the two dominant species in almost newly established areas. This is due to their growth rates and are well adapted to the climate in Fiji.

- The Santalum yasi highly exists in natural distribution areas. However, requires more management and at early stage.
- Sandalwood species grow very healthy and strong in most areas, but the basal diameter and height varies a lot.
- Low-cost implementation.
- All these population are privately owned, but most are planted and grown in the *Mataqali* land.
- Large scale planting is mainly done by leased owners, especially in the Western division whereas for communities, planting is done in small numbers (scattered).

After the first round of market consultation conducted within the three divisions in this financial year, a Sandalwood Market Concept was drawn up for the second rotation of consultation. This is to open up ideas and opportunities for the betterment of sandalwood trade in Fiji. Currently, there are no existing regulations established to safeguard the resource owners from any illegal operation locally or monitor the local investors in terms of harvesting, marketing and manufacturing. Therefore, this is one of the key activities that the Ministry will continue work on for the next 3 years.

Certain topics discussed during the consultation were constructive for developing and improving the sandalwood industry in Fiji. One of the major threats to the sandalwood business is the availability of stock. Fortunately, the project team was able to present some of the inventory data during the consultation to reassure them that government is focusing on this commodity species for the next 5 – 10 years. Additionally, the operation of middle agents is also a major threat to both parties; the resource owner and the market as well. For that reason, the Ministry will continue to scale up monitoring to counter all illegal operation, reviewing all the sandalwood buyer's profile and register those selected investors who will bring positive impact to the society and to the nation as a whole.

## **TIMBER UTILISATION RESEARCH & PRODUCT DEVELOPMENT**

The Timber Utilisation Research & Product Development Divisions is responsible for the research and investigation of wood properties of all native and exotic timber, formulation, establishment and implementation of quality management system for timber processing and timber utilisation; and administer timber trade through product development, quality controls. The Timber Utilisation and Research Division consist of four sections namely:

- Wood Properties
- Conversion/Sawmilling
- Timber Preservation
- Timber Inspectorate

The main activities carried out this financial year include:

- Research and studies on properties and potential uses of the indigenous and exotic timber species;
- Trade assistance and technical advice including the provision of various support services to all stakeholders and also contributing to training;
- End user assistance including the provision of various utilisation advisory and consumer protection services;
- Licensing and monitoring of all sawmills and timber treatment plants operating on a commercial basis
- Export and import inspection, and licensing; and
- Operate the sawmilling and woodworking research: and facilities on a semi commercial basis (TMA).

## **WOOD PROPERTY SECTION**

Objectives of this section is to

- To conduct timber identification services within the Department and the trade.
- To study the properties of the lesser-known and lesser used species.
- To assess wood quality of exotic and indigenous species in research trial plots.

- To provide technical assistance and information services to the trade on seasoning operations.
- To compile research documents as and when required

With a budget allocation of \$150,000 to carry out the “Research and Development for Wood and Non-Wood Species” project activities carried out included the research study on the effects of pine resin tapping on wood quality, the completion of service trial bure and the purchase of a mini Pellet Machine.

### Effects of Pine tapping on wood quality

The study on the effects of pine resin tapping on wood quality continued during the financial year (August 2017- July 2018). A main activity was the identification of an insect found on the research site. The process of insect identification was initially carried out at the Silviculture Research Division, identifying the insect as a long horn beetle (*Cacodacnus herbridanus*). However, the Division could not confirm the species the insect belonged to and whether it fed on the plant or used it as a host only.



Through the assistance of SPC Nabua further assistance in the identification of the insects was provided by the Ministry of Primary Industries (MPI), New Zealand through email. MPI NZ identified the insect as *Cacodacnus herbridanus*, a long horn beetle from the sub family *Prioninae*, which is recorded in Viti Levu (Fiji), Norfolk Island (Australia), New Caledonia and Vanuatu. According to MPI NZ, not a lot is known about the biology of the *Cacodacnus herbridanus*, but a species from the same genus *Cacodacnus planicollis* from Australia is said to infest *Pinus radiata* plantations. It is thought to have benefitted planted forest by enhancing the rate at which stumps and logs decay.

### Sawmilling & Grading

Recovery for both Untapped and Tapped pine are as follows:

	Untapped Pine	Tapped Pine
Input	7.286m <sup>3</sup>	6.632m <sup>3</sup>
Output	3.7498 m <sup>3</sup>	3.3201 m <sup>3</sup>
Recovery	51%	50%

Upon observation, it was noted that it was easier to rip the tapped logs compared to the untapped ones. The resin from the untapped logs made it difficult for the blades to work and they had to be cleaned regularly. Whereas compared to the tapped log, the blades worked freely through the logs since there was less resin in them. Observation and the analysis of the grades of both tapped and non-tapped timber, determined whether tapped or untapped, it has minimum effect on the timber.

### Density Analysis Results

Table 39: Untapped Pine Density Results

Moisture Content (MC)	68%
Basic density	555kg/m <sup>3</sup>
Relative Density	580kg/m <sup>3</sup>
Green density	924kg/m <sup>3</sup>
Density @12% MC	622kg/m <sup>3</sup>

Table 40: Tapped Pine Density Results

Moisture Content (MC)	83%
Basic density	525kg/m <sup>3</sup>
Relative Density	541kg/m <sup>3</sup>
Green density	943kg/m <sup>3</sup>
Density @12% MC	589kg/m <sup>3</sup>



Cutting of Density Discs from a Tapped Pine log



Research Officer from Fiji Pine Ltd assisting in the cutting of density samples at TUD, Nasinu

### Conclusion

Tapping has minimal effect on the pine timber itself as observed during the conversion process at the Nasinu Mill. However, these are results of the trees that have only been tapped once. While observing the research results, additional research is recommended to be conducted on trees that have been tapped more than once to obtain better and more firm results on the timber grades.

### Completion of Service Trial Bure

The request for the completion of *Bure* was submitted to the Ministry’s Head Quarters for approval. The requests submitted included the carpenter cost (S. Chand Building Industries - \$4,960.00) and the cost of pine timber (TMA- \$3879.60). All damaged structures had been removed and replaced with H3 treated pine timber.

The Service Trial *Bure* consists of various native species, including *sa* (*Parinari insularum*) which was used as the *bure* posts. The intention was to test the natural durability (untreated and in ground contact) properties of *sa*. In addition, the structural frames consisted of H3 treated *dulewa* species to test the species amenability and mechanical properties. The *sa* posts and *dulewa* frames were assessed during the year, and no decays or insect attack was evident meaning that the posts and frames continued to be sound ever since the *bure* was constructed in May 2014.

### Purchase of Mini Pellet Machine

GEMCO Energy Limited was the sole supplier of the mini-pellet machine. The Mini pellet request was approved on March 12, 2018 and procurement processes followed with Ministry of Economy to obtain the machine. With regards to the pellet research, the species that will be tested are *dulewa*, *kuluva* and *sa*. Discussions with the University of the South Pacific had been initiated to assist the Ministry in obtaining the calorific value of these 3 species.

### TIMBER PRESERVATION SECTION

This Section carried out the inspection, licensing and monitoring of treatment plants.

Table 41: Treatment plants licensing	
Status	Total Numbers
Licensed	19
Non-Operational	4
Application pending	4

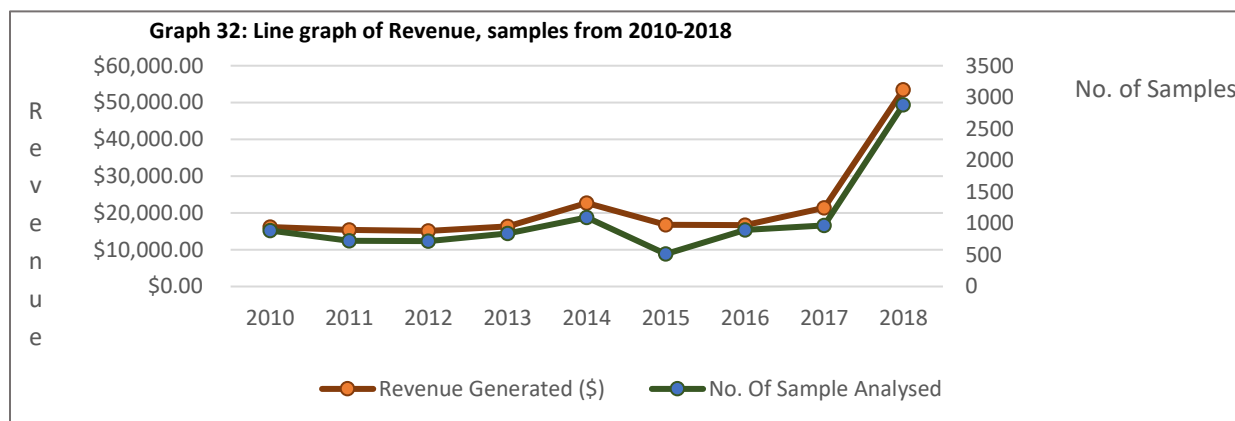
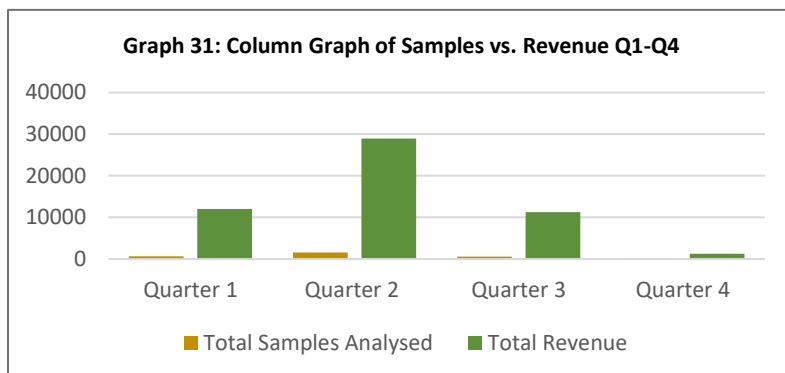
## Quality Control – Laboratory Preservative Loading Tests (August 2017-July 2018)

The laboratory facilities at Nasinu was utilised throughout the year on a “user-pay” basis for treated timber analysis and spot testing under the division’s quality control monitoring scheme. Tabulated is a summary of Treated timber products that was analysed based on the different Hazard Classes of Preservative Treatment with the total Revenue earned and total Samples submitted on a quarterly basis for the period of 2017-2018.

Hazard Level	Total No. of Sample	No. Passed	No. Failed	% Fail	% Pass
H2	81	81	-	0.00%	100%
H3	514	510	4	1.0%	99%
H4	60	36	24	40%	60%
H5	2228	2197	31	1.39%	98.61%
H6	-	-	-	-	-

Quarter	Total Samples Analysed	Total Revenue
Quarter 1- Aug 2017-Oct 2018	640	\$12,036.95
Quarter 2 -Nov 2017 – Jan 2018	1,572	\$ 28,970.85
Quarter 3- Feb-April 2018	605	\$11,239.45
Quarter 4- May-July 2018	66	\$1,229.75
<b>TOTAL</b>	<b>2,883</b>	<b>\$53,477.00</b>

Graph 31 represents the total number of samples sent in for analysis by individual sawmills and total revenue earned from analysing samples on quarterly basis. There was a huge increase of timber samples submitted and revenue earned in quarter 2 as this was the period when most of the saw millers were licensed and also operating.



The above graph signifies the total number of samples and total revenue generated from 2010-2018. There was a huge increase in the revenue figure from 2017 to 2018 due to an increase in the number of samples

sent by saw millers, mostly Tropik Wood Industries for their rural electrification project poles supplied to Energy Fiji Limited (EFL).

<b>Table 44: Summary of Total Volume Sawn and Round Timber treated for 2017-2018</b>			
<b>Quarter</b>	<b>Hazard Level</b>	<b>Timber Product</b>	<b>Volume Treated (m<sup>3</sup>)</b>
1	H2	Sawn Timber (Indoor)	2,614.868
2	H3	Sawn Timber (Outdoor)	27,149.725
3	H4	Round Wood (Fence Post)	666.942
4	H5	Round Wood (FEA Poles)	1,174.975
	<b>TOTAL</b>		<b>31,606.510m<sup>3</sup></b>

### **Monitoring and Inspection Field Activities**

Monitoring of Wood Processing facilities including sawmills and treatment plants was carried out in the three Divisions namely Central eastern, Northern and Western. The inspection was conducted to ensure that saw millers and treatment plant operators are complying with the conditions of their licenses and operating in accordance with the Forest (Preservative Treatment) Regulation, 1992 and Forest (Sawmills) Regulation, 1968.

### **SAWMILLING SECTION**

- Provided advice and technical assistance to the sawmilling industry aimed at improving quality and quantity of sawn-out-turn.
- Provided trade assistance and technical advice to wood industry in support of value-added concepts.
- Operated the Division's sawmilling and wood working facilities on commercial operations.

### **TRADE ASSISTANCE & TECHNICAL ADVICE**

The following companies were rendered trade assistance from July 2017 to August 2018:

- X Pro Electric
- Shan Trading
- Eco Lumber Pacific
- Naduruvatu Sawmillers
- Narayan Wood Products
- Rishi Kumar Timber Supply
- Lumber Tec Enterprises Ltd
- H K Hardware Ltd

The above companies were given technical advice on how to get provisional sawmill licenses. They all applied for portable sawmill licenses and were all given 6 months provisional approval. The Sawmills were strongly reminded about the importance of submitting their monthly sawmill returns on time so that the Ministry can analyse and have a fair idea of the effectiveness of their operations, and also the local timber consumption and the demand rate.

### **MONITORING OF SAWMILLS**

The licensing procedures of sawmills involves the initial submission of an application, issuance of a Provisional License. This allows the applicant six months in which to set up the sawmill. After the six months, an inspection is carried out to evaluate compliance with the requirements of and the Provisional License. Once the inspection is satisfactorily completed, a full Sawmill License is issued, valid for one year. This requires yearly renewal, pursuant to fulfillment of the conditions of the Forest (Sawmill) Regulation 1968.

Monitoring specifications involve:

- Log yard management of Sawmillers;
- Assessment of cutting techniques utilised;
- Timber stacking methods assessment;
- Evaluation of occupational health and safety regulations enforcement; and
- employee up skilling in the various aspects of sawmilling.

The assessment of monitoring scores stood at an average of 75.7. Improvement notice were immediately issued to companies with low compliance.

## **SUPPORT INCOME GENERATING FORESTRY PROJECTS THROUGH SUBSIDY & OTHER FINANCING OPTIONS**

### **Administration of SCARF**

Applicants were assisted with technical advice and also guided in the filling of the forms with other related requirements that were needed by FDB before approving the loan request.

A total of 17 scarf applications were facilitated by the division through HQ to the Fiji Development Bank. The Ministry of Forestry fully supported the initiatives undertaken by the resource owners to venture into logging business to improve their livelihoods.

### **Forest Subsidy Programme**

Under this programme with a budget allocation of \$50,000, the Ministry was able to assist 6 people with the procurement of their specialised value adding tools and machines. This creates opportunity for those with skills and potentials for wood carving in order to boost their production while also enhancing the quality of their products.

### **Duty Exemption**

The division continued to provide administrative support in facilitating the request from the industries through the provision of support letter for duty exemption. This included purchasing of logging machineries from other countries. Companies that were assisted included;

<b>Table 45: Companies assisted for duty exemption</b>	
<b>Name Of Company</b>	<b>Item/ Product</b>
<b>Road Track Maintenance Group Fiji Ltd</b>	Bell Loader
<b>Southern Forest Product Fiji Ltd</b>	Saw Shop Grinders
	Saw Shop Bench
	Saw Shop Bend Sharpener
	Head Rig Band Saw Parts
	Saw Shop
	Saw Shop Bench
	Saw Mill Resaw
<b>Vitican Enterprise Pte Limited</b>	Log Carriage
	Skidder
<b>Pinto Industries Limited</b>	Ford Tractor
	Portable Sawmill
<b>Eco Lumber Pacific Ltd</b>	Edger(Eg100g14)
<b>Valebasoga Tropikboards Ltd</b>	1×Pc 200-3 Excavator



Table 45: Companies assisted for duty exemption	
Name Of Company	Item/ Product
Road Track Maintenance Group Fiji Ltd	Cat Log Skidder
Evergreen Timbers Pte Ltd	Band Saw
Rishi Kumar Timbers	Brand New Loader
Designtech Ltd	Ma.U Wadkin Ga220 Moulder
	Finger Joint Profile& Press
	Old Gear Box Parts
	Head To Suit Moulder

### Pine Woodlot Logging/ Maritime Assistance

The Ministry continued working in various pine schemes in Maritime zones and this included Cicia, Narocake (Gau), and Kadavu. In this financial year, the Ministry focused on housing rehabilitations in the islands greatly affected by tropical cyclones.

Table 46: Assistance in Kadavu Pine Schemes

No.	Village	No. of Houses
1	Namara	16
2	Naikorokoro	2
3	Vunisei	4 teacher's Quarters
4	Nukuvou	20
5	Matasawalevu	5
6	Dagai	15
7	Drue	1 house; 20 partly damaged
8	Nasegai	1
9	Nasalia	2
<b>TOTAL</b>		<b>86</b>

Table 47: Assistance in Narocake Pine Scheme

Location	Tot. No. of houses	Full House	Extension
Yadua village & Nadrodro set.	3	3	-
Vadravadra village	7	3	4
Lovu village	7	3	4
<b>TOTAL</b>	<b>17</b>	<b>9</b>	<b>8</b>

Table 48: Assistance in Cicia Pine Schemes

Village	No. of Houses	Tree Species	Housing materials bought	
Natokalau	5	1 Mahogany, Vaivai, Tavola	Piles, Bolt, Rod	2 incomplete
Naceva	2	Tavola, Vaivai	Piles, straps, nails	
Mabula	8	Tavola, Mahogany, Vaivai	Piles, straps, nails	4 extensions
Tarukua	2	Mahogany, Tavola, Vaivai	Piles, straps, nails	
Lomati	2	Vaivai, Pine	Piles, straps, nails	
<b>TOTAL</b>	<b>19</b>			

Table 49: Capacity Building for Resource Owners

Chainsaw Training Completed	Chainsaw Issued	Portable Sawmill Training Conducted
Naqara	Sanima Pine Scheme	Namalata Pine Scheme
Tiliva	Namalata Pine Scheme	Sanima Pine Scheme
Vunisei, Naceva	Namuana	Yawe Pine Scheme
Baidamudamu	Solodamu	
Nasegai, Ravitaki	Yawe	

Chainsaw Training Completed	Chainsaw Issued	Portable Sawmill Training Conducted
Namuana, Tavuki	Nasegai	
Nalotu, Yawe		
Namara, Sanima		
Nukuvou, Nakasaleka		
Narikoso, Ono		

## EXTENSION AND ADVISORY SERVICES

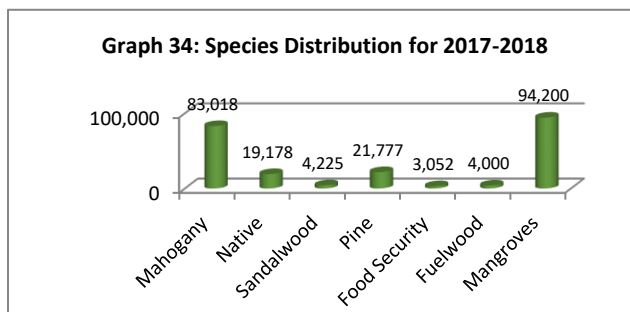
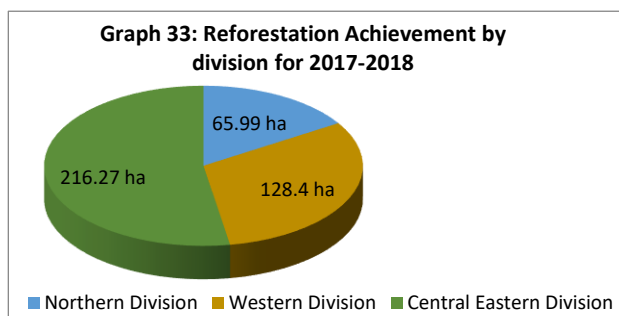
These services have been decentralised to the 3 Operation Divisions in the Northern, Western and Central/Eastern Divisions to ensure wider outreach all over Fiji. The extension officers are responsible for the promotion of sustainable forests management through instituting afforestation and reforestation to stabilise degraded and logged over sites and expansion of forest cover.

### Reforestation of Degraded Forests Project

The project is an ongoing capital project under the Ministry of Forestry targeting the reforestation of degraded areas for the whole of Fiji. With an annual budget of \$500,000 and target of 500ha, 410.66ha were planted in this financial year.



The two major species planted are Mahogany and Mangroves and this is because we involved private land owners and also business houses for the Reforestation project and they are mostly for mangrove planting



### Agro-forestry

A total of 9 agro-forestry models were established during this fiscal year.

- i. Nasogoivau,
- ii. LDS School,
- iii. Navatuyaba Rewa,
- iv. Dawasamu Secondary School,
- v. Vunivaivai Nakelo, and
- vi. 4 villages in Kadavu which is Yale, Ono, Buliya and Galoa.

This planting method was practiced as a source of livelihood for community, contour planting to prevent landslide together with Reforestation.

### Coastal Rehabilitation Work

Apart from planting inland the division also worked on protecting our shoreline by collaborating with NGO's, communities, schools, government bodies, companies and church groups in planting mangroves. A total of 40,000 mangrove seedlings were planted this year.

**Table 50: Coastal tree planting with stakeholders**

Partnership	No. of seedlings	Venue
M.B.H.S	3,000	Nasese
Fintel	4,000	Vatuwaqa
Naisausau	3,000	Naisausau Namara
R.F.M.F	10,000	Maritime Beah
Vodafone	4,000	Nasese
Asco Motors	4,000	Laucala Beach
Veiuto Primary School	2,000	Veiuto School Compound
U.S.P E.c.e	3,000	Nasese
Ministry of Economy	2,000	Nasese
IDOF	5,000	Nasese

### Awareness & Nursery Establishment

A total of 16 awareness programmes were conducted and 4 community nurseries were established. These nurseries were funded by the University of the South Pacific (USP) under the RESSCUE Project. Activities that were included in this awareness were:

- Awareness to the communities on the project **Reforestation of Degraded Forest**
- Demonstration of planting native trees on rehabilitation sites or grasslands
- Nursery set up demonstration
- Potting of seedlings and
- Coastal rehabilitation through planting mangroves and coastal vegetation



All participants in the 16-awareness carried out were certified with basic nursery management. More than 450 people were certified during the awareness programme of which 15% were women.



Gospel of reforestation and sustainable forest management had been disseminated around communities and the list of communities by divisions is listed below;

**Table 51: Awareness for communities**

Year	Communities	Thematic areas	Responsible officer
2017-2018	1.Naveicovatu	Importance of reserve Reforestation programme	RDF PO
	2.Koro Island 13 Villagers	Forest Cover rehabilitation for Koro Island Native species importance Reserve and parks	RDF PO & AQEP
	3.Rotuma	Forest Cover rehabilitation Native species importance	RDF PO
	4.Navutu, Naitasiri	Reforestation programme and its importance	RDF PO
	5.Bavo	Reforestation programme.	RDF PO
	6.Moala 8 Villagers	Reforestation Sustainable Forest management	RDF PO & CI
	7.Nananu, Ra	Reforestation	RDF & FAO

Table 51: Awareness for communities			
Year	Communities	Thematic areas	Responsible officer
		Sustainable forest management	
	8.Tovu totoya, Lau	Reforestation Water catchment restoration Sustainable forest management	RDF PO & CI
	9.Dawasamu, Tailevu	Reforestation Water catchment restoration Sustainable forest management	RDF PO
	10.Kadavu	Reforestation Water catchment restoration Sustainable Forest management	RDF PO
	11.Vatulele	Reforestation Water catchment restoration Sustainable Forest management	RDF PO and C/E
	12.Levuka	Reforestation Nursery management Sustainable Forest management	RDF PO & DFO C/E
	13.Ravita	Reforestation Nursery management Sustainable Forest management	RDF PO & DFO North
	14.Mamanuca Island	Reforestation Sustainable Forest Management Training Sandalwood training	RDF PO & DFO W
	15.Naiyarabale	Reforestation Water catchment restoration Sustainable Forest Management Training Seed sowing training	RDF & Extension team Northern division
	16.Dogotuki	Reforestation Sustainable Forest management training. Sandalwood seed training	RDF & Extension team Northern division

### Radio Talk Back Shows

The project had also been involved in radio talk back shows to create more awareness on tree planting;

Table 52: Talkback show by RDF team	
Talk back show date	Issues discussed
6 <sup>th</sup> October 2017	Reforestation of Degraded Forests and Forestry Training on Forest Wardens with Forestry Training Centre
29 <sup>th</sup> November 2017	Sustainable Forest Practices with Timber Production and Forest Conservation
19 <sup>th</sup> March, 2018	Preparation of the International Day of Forest Awareness

### Seedling Production

Table 53: Transplanted count

Species	Indigenous	Exotic	Total
Mavota	413		413
Moli		56	56
Nawanawa	109		109
Vesi	561		561
Koka	1,702		1,702
Yasi		183	183
<b>TOTAL</b>	<b>2,785</b>	<b>239</b>	<b>3,024</b>

Table 54: Nursery stock

Species	Indigenous	Exotic	Total
Total	15,407	1,697	17,104

### Reforestation of Indigenous Species

This new project was allocated \$250,000.00 this financial year with the objective to revive and restock forests with indigenous tree species. The target for the year was to establish a nursery on the Queens highway in the Forestry Vunimaqo station and this was done successfully with the new nursery launched before end of the financial year.



*Official opening of the first indigenous tree species nursery by the Honourable Osea Naiqamu at Vunimaqo station*

### ITTO Project – Community based restoration & sustainable management of vulnerable forests of the Rewa Delta, Viti Levu

This project, which started in 2015, is one of the Ministry's internationally funded projects with the aim of sustainably managing coastal and mangrove forest areas. The project is also supported by the University of the South Pacific, the Conservation International and the Secretariat of the Pacific Communities. ITTO Project has 2 components for implementation and they are:

Component 1: Community Awareness and Alternative Livelihood Options; and

Component 2: Restoration and Rehabilitation of Degraded Coastal and Mangrove Wetland.

This year, the Project has completed its first component which was the 'Community Awareness and Alternate Livelihood Options' for all its 6 Project sites around the Rewa Delta and is currently undertaking its second and third component. The tremendous assistance from all the specialised Divisions in the Ministry as well as from the collaborating partners is to be highly acknowledged. Additionally, a Management Action Plan and a Land Use Mapping Plan has also been successfully designed for the respective Project sites. Furthermore, the training focused its activities on four main areas:

- i. Raising awareness and improving the understanding of ecosystem services, mangrove systems and coastal ecosystems amongst the communities;
- ii. Implementing an applied management action plan for the conservation of mangrove land and sustainable agricultural practices on sloping terrain;
- iii. Capacity building through the strengthening for the village based natural resources committee; and
- iv. Promoting alternative sustainable livelihoods through collaboration and technical support from partnering agencies and organisations.



*Photo 1:  
Participants  
being  
engaged in  
group works  
Photo 2:  
Forestry staff  
teaching the  
participants  
on seed  
sowing  
techniques*

A water initiative programme is also in progress for Natila Village. During the 1-week training under component 1 in Natila village, the training team witnessed that a major issue the village was facing was lack of water supply and clean drinking water. For component 2 of the Project, it has achieved at least 70% of its targeted output. These included, in addition to the community trainings on tree seed collection & establishment of nursery,

- The construction of 6 temporary nurseries,
- The raising of coastal seedlings (which includes fruit trees and native trees),
- Setting up of ITTO billboards on all project sites,
- Talkback show on Radio Fiji 2 on Mangrove restoration and Conservation,
- Making publication of ITTO Project on the newspaper,
- Commencement of planting phase on 3 of the villages [Sandalwood, Mahogany, Coconut, Breadfruit, Rose apple, Kumquat, Hybrid mango, Sour sop, Thailand guava],
- Appointment of nursery attendant;
- Signing of Contractual Agreement with the attendant & pays \$54.00/ fortnight,
- Visit by the International National Project Managers,
- 2<sup>nd</sup> Steering Committee meeting.

## **FOREST PARKS, RECREATION AND RESERVES**

The Forest Parks & Forest Reserves section under the Forest Resource Assessment and Conservation division is mandated to look after the Colo-i-Suva Forest Park along with all the forest reserves in Fiji. The section also administers over and manages seventeen (17) forest reserves and seven (7) nature reserves for a total of twenty-four reserves (24) under the Division.

The Nature and Forest reserve areas that were set up to safeguard biodiversity is likely to be affected by man in a number of ways. Increasing human populations is expected to cause deforestation and wildlife species will migrate to areas with more favorable temperatures and therefore the division is also tasked with addressing land use and conservation issues. Forest and biodiversity conservation as well as the management of existing protected area's role needs to be relooked at due to the ever-changing landscape of our world due to climate change.

### Colo-i-Suva Forest Park

The Colo-i-Suva Forest Park is a model for forest ecotourism which enhances the forestry sector through generating revenue for the Government from all the visitors to the park while also showcasing the natural beauty of forests with recreational values as well as its wildlife. The Colo-i-Suva Forest Park is located within the Colo-i-Suva Forest reserve. The Forest Park adjoins three mataqali lands of Kalabu village namely Mataqali Tuirara, Mataqali Matanikorovatu and Mataqali Naulukarowa. Up until the 1940s, the forested area of Colo-i-Suva was subjected to extensive forestry, agricultural and settlement development. Then in 1953, the Colo-i-Suva Forest reserve, 913 acres of native land was leased and gazette. In 1963, ten years after the reserve was established, 92ha was set aside and proclaimed the Colo-i-Suva Forest Park. Well known of its natural beauty with recreational values as well as its proximity to the urban areas, the ministry ventured to promote understanding and awareness of its forest values socially and economically.



Colo-i-Suva Park, as a popular local picnic spot, was visited by 199,972 visitors (locals & tourists) and earned a total of \$90,892 in revenue (entry fees) from Aug 2017-Jul 2018.

The second quarter recorded the highest number of visitors to the park, however these were mostly locals. In the third quarter, the number of visitors dropped drastically, however the revenue remained the same as there were a lot of foreigners/tourists.

Table 55: Visitor numbers and revenue collected		
Period	Revenue (FJ\$)	Visitors
Quarter 1	\$15,733.00	6,248
Quarter 2	\$27,896.50	172,478
Quarter 3	\$27,199.00	12,044
Quarter 4	\$20,063.50	9,202
<b>TOTAL</b>	<b>\$90,892.00</b>	<b>199,972</b>

### Birds in the Park

The bird life in the park is of international importance. Of all the fifty-seven (57) land birds in Fiji there are about 30 bird species found in the Colo-i-Suva Forest Park. Out of the 57 land birds 26 are found to be endemic whereas for Colo-i-Suva Forest Park there 17 endemic bird species found in the park. Some many visitors come for a dip in the many pools inside the park, some visitors come to the park come only to bird watching. Some of the birds found inside the Colo-i-Suva Forest Park are listed below.



Scarlet robin



Barking pigeon



Bush warbler



Spotted fan-tail



Musked parrot



Fiji goshawk

### Pool Cleaning, Track Repairs, Park Renovations

The pool cleaning activities included clearing of humus, scrubbing of pool cement and removal of silt along the pavement for the upper pool area only. This took place once every quarter for the upkeep of the pools. The section also repaired a few tracks and walkways inside the Forest Park. This is a must as the safety of our visitors is paramount and we must ensure that they enjoy their visit to the Colo-i-Suva Forest Park.

There was a total of 8 *bures* repaired inside the park.



### Launching of the Nabalasere Ecotourism Forest Park

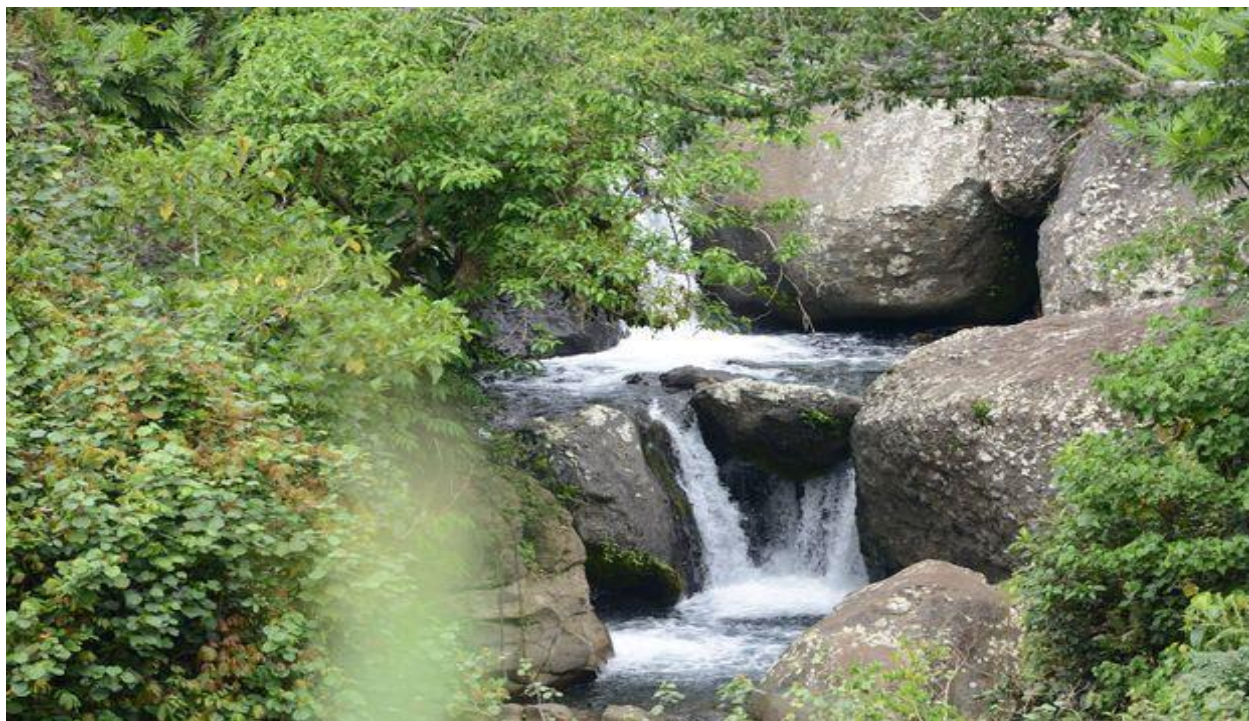
The Nabalasere Ecotourism Forest Park was launched by the Minister for Forestry, Honourable Osea Naiqama on Friday 29th September, 2017. The completion of the park and improvement in forest trail was made possible through partnership between the Nabalasere village community and the Fijian government and was also supported under the Global Environment Fund under the Forest and Protected Area Management (GEF FPAM).

One of the objectives of the establishment of the Ecotourism Park was to support alternative income generating initiatives that would assist in the welfare and livelihood of the community members, while ensuring that the natural pristine forests and ecosystems are preserved. Nabalasere, which is located on the





north-eastern aspect of Viti Levu, is part of the “Greater Tomaniivi” landscape which has been developed as a protected area for its rich biodiversity.



### Forest Reserves and Nature Reserves

The Parks & Reserves section administers over and manages 17 Forest Reserves and 7 Nature Reserves under legal gazette. These reserves have been identified as having a diverse range of wildlife and tree species, has areas susceptible to soil erosion and areas of public interest such as water catchment areas. Boundary maintenance were carried out for the following reserves in this financial year.

Table 56: 2017-2018 Achievements

No.	Reserves visited	Activities
1	Qaranibuluti Nature Reserve	Boundary demarcation
2	Nadarivatu Nature Reserve	Boundary demarcation
3	Qoya Forest Reserve	Field inspection and monitoring
4	Korotari Forest Reserve	Reserve monitoring
5	Taveuni Forest Reserve & Ravilevu Nature Reserve	Village awareness
6	Wabu Nature Reserve	Reserve monitoring
7	Tomaniivi Forest Reserve	Reserve monitoring
8	Coloisuva Forest Reserve	Reserve maintenance and monitoring

Table 57: Forest Reserves

No.	Location/Name	Province	Year Established	Area (HA)
1	Taveuni	Cakaudrove	1914	11,290.7
2	Buretolu	Ba	1926	1,197.9
3	Nadarivatu – Nadala	Ba	1954	7,400.7
4	Maranisaqa & Wainiveitua	Naitasiri	1955	77.3
5	Qoya	Rewa	1955	67.2
6	Tavua	Ba	1958	2 rods
7	Ravilevu	Cakaudrove	1959	4,018.7
8	Vago	Naitasiri	1959	24.7

No.	Location/Name	Province	Year Established	Area (HA)
9	Korotari	Cakaudrove	1961	1,046.9
10	Yarawa	Serua	1962	161.9
11	Savura	Naitasiri	1963	447.6
12	Colo-i-Suva	Naitasiri	1963	369.5
13	Suva & Namuka Harbour, incl. Draunibota, Labiko & Vuo Island	Rewa	1963	19.0
14	Lololo	Lautoka	1968	8.3
15	Naboro	Rewa	1969	19.0
16	Saru Creek	Lautoka	1973	3.2
17	Wabu	Ba	1992	2,907.0
	<b>Total</b>			<b>29,059.6</b>

Table 58: Nature Reserves

No.	Location/Name	Province	Year Established	Area (HA)
1	Nadarivatu	Ba	1956	93.08
2	Tomaniivi	Ba	1958	1,323.33
3	Naqaranibuluti	Ba	1958	279.23
4	Ravilevu	Cakaudrove	1959	4,018.54
5	Draubota & Labiko	Rewa	1959	2.22
6	Vuo Island	Rewa	1960	1.2
7	Vunimoli	Cakaudrove	1968	20.2
	<b>Total</b>			<b>5,737.83</b>

Table 59: Other Parks & Reserves

No.	Location/Name	Province	Year Established	Area (HA)
1	J. H. Garrick Memorial Park	Namosi	1986	427.0
2	Namenalala island Nature Reserves	Bua	1984	43.0
3	Tavakubu	Ba	1970	1.0
4	Saweni beach	Ba	1970	0.5
5	Lomolomo	Ba	1970	0.5
6	Nukulau island	Rewa	1970	8.0
7	Yadua Taba island	Bua	1981	50.0
8	Waisali Forest Amenity Reserve	Cakaudrove	2005	120.0
9	Vaturu Forest Amenity	Ba		
10	Sigatoka Sand Dunes	Nadroga		240.0
11	Wasavulu	Vanua Levu	1981	1.0
12	Batiniwai Protected Forest	Serua	1956	15,749.6
13	Bouma Forest Park	Taveuni	1991	80.9
14	Waikatakata Archaeological Park	Nadroga	1991	70.0
15	Tavuni Hill Fort	Nadroga	1992	3.0
16	Mount Evans Forest Park	Ba	1993	210.0
17	Lavena Coastal Walk & Nature Attractions	Taveuni	1994	
	<b>Total</b>			<b>17,004.5</b>

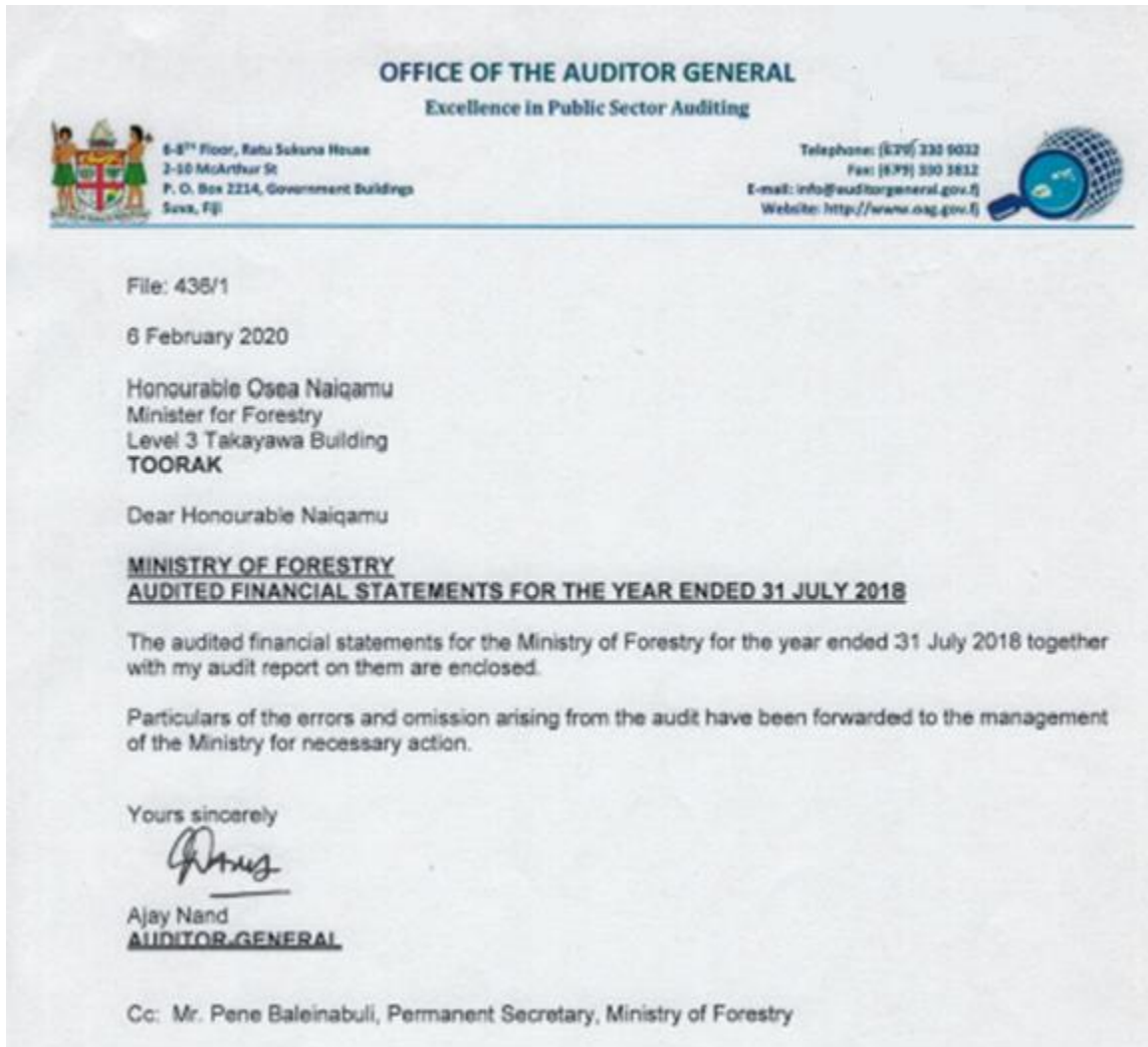
## **ENCROACHMENT**

The Parks unit received some complaints from the public about encroachment into the forest reserves. Some of the complaints received were regarding the Colo-i-Suva Forest Reserve, the Taveuni Forest Reserve and the Ravilevu Nature Reserves. The staff conducted their monitoring and also awareness to the communities and villages living on the periphery of these reserves.



# APPENDICES

## APPENDIX 1: AUDITED FINANCIAL STATEMENT FOR AUG 2017 - JUL 2018



MINISTRY OF FORESTRY

# FINANCIAL STATEMENTS

FOR THE YEAR ENDED 31 JULY 2018

**MINISTRY OF FORESTRY**  
**FINANCIAL STATEMENTS**  
**FOR THE YEAR ENDED 31 JULY 2018**

**MINISTRY OF FORESTRY  
FINANCIAL STATEMENTS  
FOR THE YEAR ENDED 31 JULY 2018**

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# OFFICE OF THE AUDITOR GENERAL

Excellence in Public Sector Auditing

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## INDEPENDENT AUDITOR'S REPORT

### MINISTRY OF FORESTRY

I have audited the financial statements of the Ministry of Forestry which comprise the Statement of Receipts and Expenditure, Appropriation Statement, Statement of Losses, TMA Manufacturing Account, TMA Trading Account, TMA Profit and Loss Statement and TMA Balance Sheet for the year ended 31 July 2018, and notes to and forming part of the financial statements, including a summary of significant accounting policies.

In my opinion, except for the effects on the matters described in the Basis of Qualified Opinion paragraph, the accompanying financial statements are prepared, in all material respects, in accordance with the Financial Management Act 2004 and Finance Instructions 2010 and Finance (Amendment) Instructions 2016.

#### Basis for Qualified Opinion

##### Operating Fund Account

1. Expenditures amounting to \$351,097 were not recorded in the Statement of Receipts and Expenditure for the year ended 31 July 2018. This amount relates to unrecorded expenditures which were paid as accountable advance but were not cleared from the Revolving Fund Account as at 31 July 2018. Consequently, the expenditure balance of \$13,300,906 for the year ended 31 July 2018 is understated by \$351,097.
2. There is an unreconciled variance of \$850,831 between the Financial Management Information System (FMIS) general ledger and the Ministry's payroll report for both Established Staff and Government Wage Earners. Consequently, I was unable to establish the accuracy of the Established Staff Government and Wage Earners balances recorded in the Statement of Receipts and Expenditure for the year ended 31 July 2018.

##### Trading and Manufacturing Account

3. There is an unreconciled variance of \$105,769 between the TMA bank reconciliation and the Cash at Bank general ledger balance. Consequently, I am not able to confirm the accuracy and completeness of the Cash at Bank balance of \$1,567,496 recorded in the TMA Balance Sheet as at 31 July 2018.
4. The Ministry with the approval of the Ministry of Economy transferred a sum of \$2.5 million in 2016 to the Trading and Manufacturing Activity (TMA) account from its operating budget for the purpose of salvaging logs after Tropical Cyclone Winston. Although an amount of \$569,014 was utilised for this purpose in 2018, deferred income account was not adjusted accordingly. Deferred income balance for 2017 of \$2,198,548 remained the same in 2018.

In addition, the cash at bank balance of \$1,567,496 recorded in the TMA Balance Sheet was not sufficient to support the remaining Deferred Income balance of \$2,198,548.



## **Emphasis of Matter**

Without further qualifying the opinion, attention is drawn to the following:

- The TMA account continues to operate at loss since 2010.
- There was an overall excess of liabilities over assets of \$338,272 in the TMA Balance Sheet as at 31 July 2018.
- The Ministry was using one Drawings account with Ministry of Fisheries for the year ended 31 July 2018.

I conducted my audit in accordance with International Standards on Auditing (ISA). My responsibilities under those standards are further described in the *Auditor's Responsibilities* paragraph of my report. I am independent of the Ministry in accordance with the ethical requirements that are relevant to my audit of the financial statements in Fiji and I have fulfilled other responsibilities in accordance with these requirements. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

## **Responsibilities of the Management and Directors for the Financial Statements**

The management of the Ministry is responsible for the preparation of the financial statements in accordance with the Financial Management Act 2004 and Finance Instructions 2010 and Finance (Amendment) Instruction 2016 and for such internal control as the management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

## **Auditor's Responsibilities**

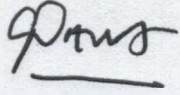
My objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISA will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

As part of an audit in accordance with ISA, I exercise professional judgment and maintain professional scepticism throughout the audit. I also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of Ministry's internal control.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

I communicate with the management and directors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.



Ajay Nand  
AUDITOR-GENERAL



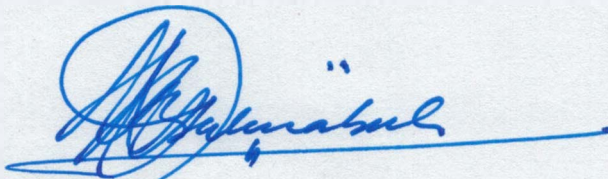
Suva, Fiji  
06 February 2020

**MINISTRY OF FORESTRY  
MANAGEMENT CERTIFICATE  
FOR THE YEAR ENDED 31 JULY 2018**

---

We certify that these financial statements:

- (a) fairly reflect the financial operations and performance of the Ministry for the year ended 31 July 2018; and
- (b) have been prepared in accordance with the requirements of the Financial Management Act 2004, the Finance Instructions 2010 and Finance (Amendment) Instructions 2016.



.....  
Mr. Pene Baleinabuli  
Permanent Secretary  
Ministry of Forestry

Date:

06/02/20

.....



.....  
Maciu Waqa  
Principal Accounts Officer

Date:

06/02/2020

.....

**MINISTRY OF FORESTRY  
STATEMENT OF RECEIPTS AND EXPENDITURE  
FOR THE YEAR ENDED 31 JULY 2018**

	Note	31 July 2018 (\$)	31 July 2017 (\$)
<b>REVENUE</b>			
<b>STATE REVENUE</b>			
Native Timber Measurement		286,381	332,913
Fees and Land Survey		---	1,137
Vessel Registration		---	4,994
License Fees		---	23,922
Sale of Fish & Ice		---	389,814
Miscellaneous Revenue		220,354	312,268
Offshore Fisheries Management Fees		---	701,848
Offshore Fisheries Access Fees		---	465,921
Offshore Fisheries Application Fees		---	37,588
Offshore Fisheries Levies Fees		---	156,881
Offshore Fisheries Related Activity Fees		---	105,184
Offshore Fisheries Miscellaneous Fees		---	19,155
Offshore Fisheries Permitting Fees		---	127,372
Offshore Fisheries Authorisation to Charter Fees		---	3,073
Offshore Fisheries Record Fees		---	36,584
<b>TOTAL REVENUE</b>	<b>3</b>	<b><u>506,735</u></b>	<b><u>2,718,654</u></b>
<b>EXPENDITURE</b>			
<b>OPERATING EXPENDITURE</b>			
Established Staff		3,985,149	7,368,289
Government Wage Earners		1,777,129	2,589,736
Travel & Communication		448,305	652,581
Maintenance and Operations		1,099,416	2,251,312
Purchase of Goods & Services		931,733	1,009,182
Operating Grants & Transfers		716,819	767,116
Special Expenditure		1,021,839	1,639,374
<b>TOTAL OPERATING EXPENDITURE</b>		<b><u>9,980,390</u></b>	<b><u>16,277,590</u></b>
<b>CAPITAL EXPENDITURE</b>			
Capital Construction		2,072,004	5,335,191
Capital Purchases		642,000	420,869
<b>TOTAL CAPITAL EXPENDITURE</b>		<b><u>2,714,004</u></b>	<b><u>5,756,060</u></b>
Value Added Tax		606,512	978,487
<b>TOTAL EXPENDITURE</b>		<b><u>13,300,906</u></b>	<b><u>23,012,137</u></b>

**MINISTRY OF FORESTRY  
APPROPRIATION STATEMENT  
FOR THE YEAR ENDED 31 JULY 2018**

SEG	Item	Budget Estimate (\$)	Appropriation Changes (Note 4) (\$)	Revised Estimate (\$)	Actual Expenditure (\$)	Lapsed Appropriation (\$)
	<b>Operating Expenditure</b>					
1	Established Staff	3,888,522	104,845	3,993,367	3,985,149	8,218
2	Government Wage Earners	1,370,363	412,053	1,782,416	1,777,129	5,287
3	Travel & Communication	463,238	(7,430)	455,808	448,305	7,503
4	Maintenance & Operations	1,296,440	(180,854)	1,115,586	1,099,416	16,170
5	Purchase of Goods & Services	1,126,784	(194,066)	932,718	931,733	985
6	Operating Grants & Transfers	794,524	(77,705)	716,819	716,819	---
7	Special Expenditure	2,817,019	(56,843)	2,760,176	1,021,839	1,738,337
	<b>Total Operating Expenditure</b>	<b>11,756,890</b>	<b>---</b>	<b>11,756,890</b>	<b>9,980,390</b>	<b>1,776,500</b>
	<b>Capital Expenditure</b>					
8	Capital Construction	2,270,000	---	2,270,000	2,072,004	197,996
9	Capital Purchases	1,364,000	---	1,364,000	642,000	722,000
	<b>Total Capital Expenditure</b>	<b>3,634,000</b>	<b>---</b>	<b>3,634,000</b>	<b>2,714,004</b>	<b>919,996</b>
13	Value Added Tax	630,000	---	630,000	606,512	23,488
	<b>TOTAL EXPENDITURE</b>	<b>16,020,890</b>	<b>---</b>	<b>16,020,890</b>	<b>13,300,906</b>	<b>2,719,984</b>

**REASONS FOR SIGNIFICANT SAVINGS**

The savings of \$1,738,337 under the Special Expenditure (SEG 7) allocation resulted from Red Plus World Bank Component as Consultancy Funds Payments were on put hold due to non-delivery of output in 2017 – 2018 and delays in recruitment of the Red Plus National Coordinator in 2017 – 2018.

The savings of \$722,000 under the Special Expenditure (SEG 9) was due to the Ministry not purchasing a bulldozer as it which was not supplied by the supplier.

**MINISTRY OF FORESTRY**  
**TMA – MANUFACTURING ACCOUNT - TIMBER UTILIZATION DIVISION**  
**FOR THE YEAR ENDED 31 JULY 2018**

---

	<b>31 July 2018 (\$)</b>	<b>31 July 2017 (\$)</b>
Opening Raw Materials	178,541	16,791
<i>Add:</i> Purchases	190	---
	<u>178,731</u>	<u>16,791</u>
<i>Less:</i> Closing Raw Materials	211,881	178,541
Raw Materials Used	<b>(33,150)</b>	<b>(161,750)</b>
<i>Add:</i> Direct Labour	126,060	202,131
<b>Cost of Goods Manufactured transferred to Trading Account</b>	<u><b>92,910</b></u>	<u><b>40,381</b></u>

**MINISTRY OF FORESTRY  
TMA – TRADING ACCOUNT - TIMBER UTILIZATION DIVISION  
FOR THE YEAR ENDED 31 JULY 2018**

---

	<b>31 July 2018 (\$)</b>	<b>31 July 2017 (\$)</b>
Sales	445,554	1,161,623
	<u><b>445,554</b></u>	<u><b>1,161,623</b></u>
Opening Finished Goods	21,770	1,229
<i>Add:</i> Cost of Manufactured Goods	92,910	40,381
	<u><b>114,680</b></u>	<u><b>41,610</b></u>
<i>Less:</i> Closing Finished Goods	20,786	21,770
<b>Cost of Goods Sold</b>	<u><b>93,894</b></u>	<u><b>19,840</b></u>
<b>Gross Profit transferred to Profit &amp; Loss Statement</b>	<u><b>351,660</b></u>	<u><b>1,141,783</b></u>

**MINISTRY OF FORESTRY**  
**TMA – PROFIT AND LOSS STATEMENT - TIMBER UTILIZATION DIVISION**  
**FOR THE YEAR ENDED 31 JULY 2018**

---

	<b>31 July 2018 (\$)</b>	<b>31 July 2017 (\$)</b>
<b>Income</b>		
Gross profit transferred from Trading Account	351,660	1,141,783
<b>Total Income</b>	<u><b>351,660</b></u>	<u><b>1,141,783</b></u>
<b>Expenses</b>		
Maintenance & Operations	569,014	1,288,462
Other Expenses	9,574	---
Special Expenses	---	112
<b>Total Expenses</b>	<u><b>578,588</b></u>	<u><b>1,288,574</b></u>
<b>Net Loss</b>	<u><b>(226,928)</b></u>	<u><b>(146,791)</b></u>



**MINISTRY OF FORESTRY**  
**TMA – BALANCE SHEET - TIMBER UTILIZATION DIVISION**  
**AS AT 31 JULY 2018**

	<b>31 July 2018 (\$)</b>	<b>31 July 2017 (\$)</b>
<b>Assets</b>		
Cash at Bank	1,567,496	1,896,419
Raw Materials	211,881	178,541
Accounts Receivable	56,839	---
Finished Goods	20,786	21,770
<b>Total Assets</b>	<u><b>1,857,002</b></u>	<u><b>2,096,730</b></u>
<b>Liabilities</b>		
Deferred Income	2,198,548	2,198,548
Deposits & Deductions	(3,274)	9,526
<b>Total Liabilities</b>	<u><b>2,195,274</b></u>	<u><b>2,208,074</b></u>
<b>Net Assets</b>	<u><b>(338,272)</b></u>	<u><b>(111,344)</b></u>
<b>Equity</b>		
TMA Accumulated Loss	(341,190)	(194,399)
Net Loss for the period	(226,928)	(146,791)
	<u><b>(568,118)</b></u>	<u><b>(341,190)</b></u>
Transfers to Consolidated Fund	229,846	229,846
<b>Total Equity</b>	<u><b>(338,272)</b></u>	<u><b>(111,344)</b></u>

**MINISTRY OF FORESTRY  
STATEMENT OF LOSSES  
FOR THE YEAR ENDED 31 JULY 2018**

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**Loss of Money**

There was no loss of money recorded for the financial year ended 2018.

**Loss of Revenue**

There was no loss of revenue recorded for the financial year ended 2018.

**Loss (other than money)**

In accordance with the Procurement Regulations 2010 (Clause 52), the Permanent Secretary for Economy approved the disposal and write-off of the following items upon submission of the recommendations of the Board of Survey Report.

<b>Assets</b>	<b>Amount (\$)</b>
Motor Vehicles	411,690
Computer Equipment	78,230
Field Equipment	7,991
<b>Total</b>	<b>497,911</b>

**MINISTRY OF FORESTRY**  
**NOTES TO AND FORMING PART OF THE FINANCIAL STATEMENTS**  
**FOR THE YEAR ENDED 31 JULY 2018**

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**NOTE 1      REPORTING ENTITY**

The Ministry of Forestry is responsible for the formulation of policies to ensure the long term sustainability of Fiji's forest resources, stimulate economic growth within Forestry sector and improve livelihoods for communities that rely on these resources.

The Ministry achieves this by ensuring a balance between resource utilization and resource conservation, and the development and alignment of its policies, strategies and structures in order to better address emerging issues, capture emerging opportunities, ensure effective and efficient service delivery to all our stakeholders.

The organization structure of the Ministry is being realigned to drive economic growth in the forestry sectors for the short and mid-term, and strategies for the mid to longer term to capture emerging opportunities such as wood energy and carbon trading in the forestry sector.

The Ministry of Forestry operates a trading and manufacturing account that provides assistance in the processing and selling of pine products.

**NOTE 2      STATEMENT OF ACCOUNTING POLICIES**

**a)      Basis of Accounting**

In accordance with Government accounting policies, the financial statements of the Ministry of Forestry is prepared under the cash basis of accounting. All payments related to purchases of fixed assets have been expensed.

The financial statements are presented in accordance with the requirements of Section 71(1) of the Finance Instructions 2010 and Financial Management Act 2004. The preparation and presentation of a Statement of Assets and Liabilities is not required under the current government policies, except for that of the Trading and Manufacturing Accounts.

**b)      Accounting for Value Added Tax (VAT)**

All income and expenses are VAT exclusive. The Ministry on a monthly basis takes out VAT output on total money received for expenditure from Ministry of Economy. VAT input on the other hand is claimed on payments made to the suppliers and sub-contractors for expenses incurred.

The VAT payment as per the Statement of Receipts and Expenditures relates to the VAT input claimed on payments made to the suppliers and sub-contractors for expenses incurred and VAT payments to Fiji Revenue and Customs Service (FRCS). Actual amount paid to FRCS during the year represents the difference between VAT Output and VAT Input.

**c)      Comparative Figures**

The financial year end for Government was changed from 31 December to 31 July in accordance with the Financial Management (Amendment) Act 2016.

In the 2016-2017 financial year, the financial statements were consolidated with the financial statement of Ministry of Fisheries and Forests as stated in the 2016-2017 Appropriation Act. The 2017-2018 financial statements is only for the Ministry of Forests and does not consolidate with the Ministry of Fisheries. For comparative purposes, the 2017 figures reflected are for Ministry of Fisheries and Forests.

**MINISTRY OF FORESTRY**  
**NOTES TO AND FORMING PART OF THE FINANCIAL STATEMENTS (continued)**  
**FOR THE YEAR ENDED 31 JULY 2018**

**NOTE 2 STATEMENT OF ACCOUNTING POLICIES (continued)**

**d) Revenue Recognition**

Revenue is recognised when the actual cash is received by the Ministry.

**NOTE 3 SIGNIFICANT VARIATIONS**

The Native Timber Measurement revenue decreased by \$46,532 or 14% in 2018 compared to 2017. The decrease was due to closure of logging companies for non-compliance with Forestry Harvesting Code of practices, OHS issues and less indigenous and pine forests to be logged compared to previous years. Miscellaneous fees majority comprise of fees charged at the Forest Park of \$90,666, fees and deposits for SAGA/Train Tree/Pine of \$40,749 and Management fees from Fiji Pine Limited of \$31,512.

**NOTE 4: APPROPRIATION MOVEMENTS**

Appropriation movements were made through virements as follows:

<b>Virement No.</b>	<b>From</b>	<b>Amount (\$)</b>	<b>To</b>	<b>Amount (\$)</b>	<b>Approved by</b>
V32001	SEG 04	45,582	SEG 02	45,582	Minister for Economy
	SEG 04	60,955	SEG 01	60,955	
	SEG 06	50,000	SEG 01	19,933	
	SEG 04	1,530	SEG 02	31,597	
	SEG 07	17,500	SEG 01	8,242	
	SEG 04	11,100	SEG 02	21,441	
	SEG 04	1,083			
	SEG 04	31,079	SEG 02	29,863	
			SEG 07	819	
			SEG 01	396	
V32002	SEG 08	18,350	SEG 08	18,350	Permanent Secretary for Economy
V32003	SEG 01	168,585	SEG 02	170,792	
	SEG 02	111,322	SEG 01	76,706	
	SEG 03	1,998	SEG 01	34,408	Minister for Economy
V32004	SEG 03	7,910	SEG 01	67,537	
	SEG 04	34,653	SEG 02	229,339	
	SEG 05	213,421			
	SEG 07	40,891			Permanent Secretary for Economy
V32005	SEG 02	9,213	SEG 01	16,515	
	SEG 01	7,302			Permanent Secretary for Forestry
DV3201	SEG 04	3,228	SEG 03	2,502	
	SEG 05	19,134	SEG 04	1,130	
			SEG 05	18,730	
DV3202	SEG 05	4,318	SEG 05	31,295	
	SEG 06	27,705	SEG 07	728	

**MINISTRY OF FORESTRY**

**NOTES TO AND FORMING PART OF THE FINANCIAL STATEMENTS (continued)  
FOR THE YEAR ENDED 31 JULY 2018**

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**NOTE 5: TRADING AND MANUFACTURING ACTIVITY**

The Trading and Manufacturing Activity consists of commercial undertaking of processed timber and furniture's as reported above.

The Ministry of Forestry TMA Unit is currently under investigation by Fiji Independent Commission Against Corruption (FICAC). Payment Vouchers and other correspondences relating to the TMA have been uplifted by FICAC Officers for investigation.



Comments and enquiries should be directed to:  
The Permanent Secretary for Forestry  
Ministry of Forestry  
Level 3 Takayawa Building  
Suva, Fiji

Telephone: (+679) 3301 611  
Facsimile: (+679) 3318 692  
Website: [www.forestry.gov.fj](http://www.forestry.gov.fj)

