



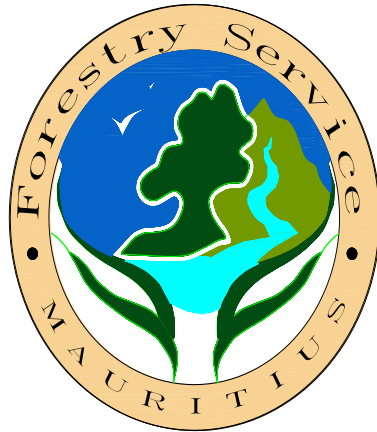
MINISTRY OF AGRO-INDUSTRY & FOOD SECURITY

**ANNUAL REPORT OF THE FORESTRY SERVICE**

**2018**



Forestry Service  
Botanical Garden Street  
Curepipe



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## **VISION**

Our vision is to ensure a healthy forest environment that will satisfy the needs and aspirations of present and future generations for goods and services derived from our forests in a sustainable manner.

## **MISSION**

Our mission is to sustainably manage our forest resources for, with and on behalf of the people of Mauritius.

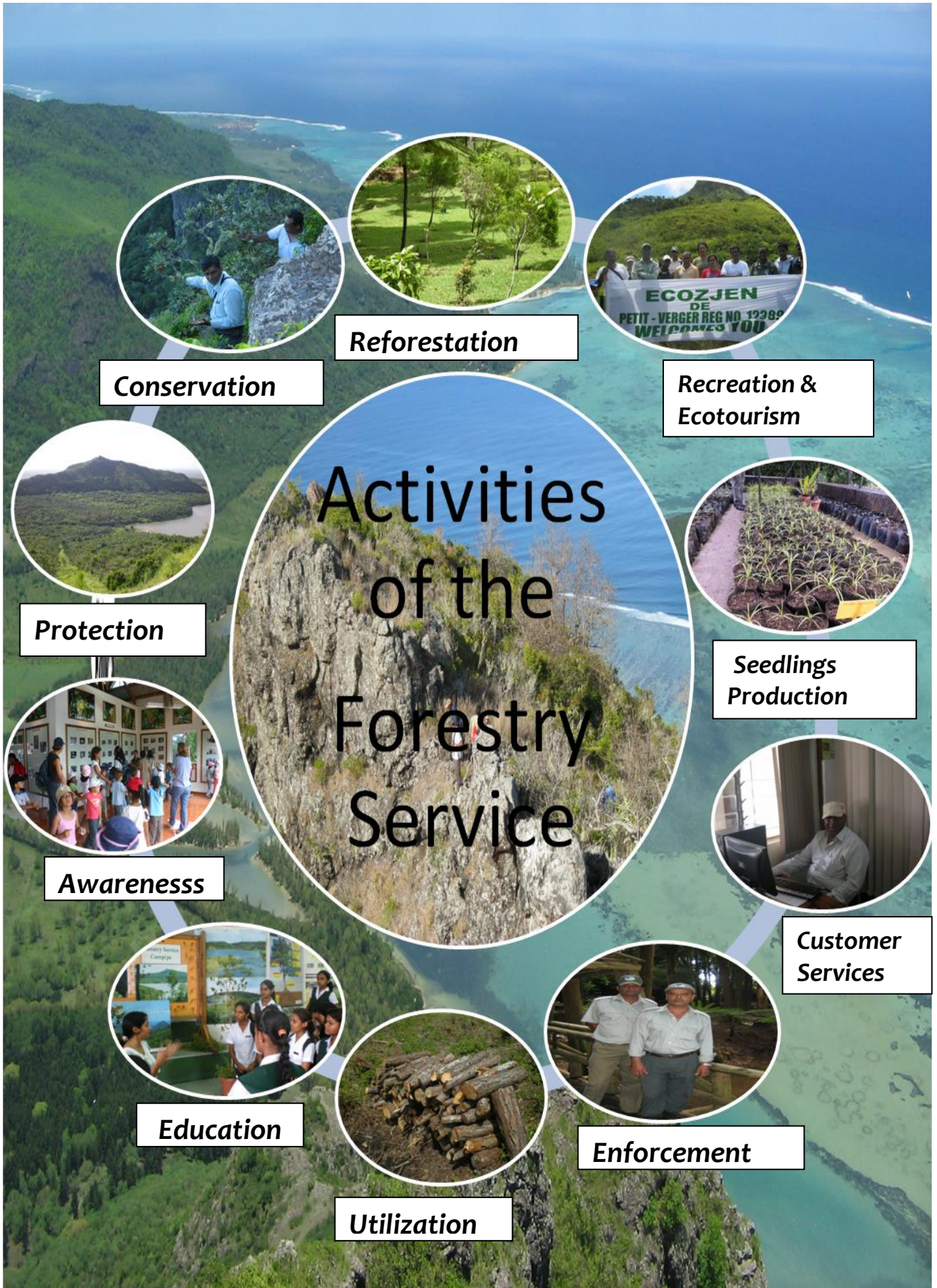
## **GOAL**

Our goal is to manage and monitor the development of the forest sector in a sustainable way, in harmony with our National Development Plan.

We aim to fulfill the commitment by:

- Improving the management, protection, rational use and diversification of our forest resources;
- Protecting the Environmentally Sensitive Areas (ESAs) in forests to ensure a continuous supply of clean and fresh water for domestic and other purposes;
- Preserving our rich heritage of native species of plants, birds and animals; and
- Developing facilities in our forests for leisure and recreation.





## **ACKNOWLEDGEMENT**

We would like to express our wholehearted gratitude to the following institutions for their prompt and unflinching support and collaboration:

- The Mauritius Meat Producers Association (MMPA)
- The Ministry of Labour, Industrial Rights, Employment & Training
- The Finance Division, Ministry of Agro-Industry & Food Security
- The Staff of the Forestry Service.

## TABLE OF CONTENTS

Address & Contact numbers of the Forestry Service .....	2
Vision, Mission and Goal of the Forestry Service.....	3
Activities of the Forestry Service.....	4
Acknowledgement.....	5
Table of Contents.....	6
Main features of the year.....	7-10
Chapter I. Forest Management.....	11-17
Chapter II. Organization of the Forestry service.....	18-20
Chapter III. Forest Protection.....	21-23
Chapter IV. Surveys, Roads and Buildings.....	24-25
Chapter V. Silviculture.....	26-29
Chapter VI. Conservation of Biological Diversity.....	30-31
Chapter VII. Recreational Forestry.....	32-33
Chapter VIII. Wildlife Management.....	34-35
Chapter IX. Exploitation and Utilization.....	36-38
Chapter X. Rodrigues.....	39-42
Chapter XI. Miscellaneous.....	43-44
Annex I. Organizational Chart of the Forestry Service	
Annex II. Territorial organization of the Forestry Service	
Annex III. Summary of offences against forest laws	
Annex IV. Silvicultural operations carried out	
Annex V. Selling rates of timber	
Annex VI. Selling rates of poles	
Annex VII. Summary of Revenue & Expenditure	



## Main features of the year 2018

### (i) **The National Tree Planting Programme 2016-2020**

In order to implement the “Strategic Plan for Enhancing the Tree Cover of Mauritius (2016-2020)”, a National Tree Planting Programme was initiated in 2016 by this Service, in collaboration with relevant stakeholders, with a view to introduce 100,000 plants annually, extending over a period of 5 years, in all corners of the island. Some 102,441 plants were planted throughout the island during the year 2018. The total number of plants introduced since the start of the project in 2016 till the end of 2018 amounts to 308,423.

### (ii) **The International Day of Forests**

In the context of the International Day of Forests 2018, the Forestry Service, under the aegis of the Ministry of Agro-Industry & Food Security, officially inaugurated a mini forest at Bel Air SSS on 21 March 2018. To mark this event, different activities and awareness campaigns were initiated by the Forestry Service, including distribution of pamphlets, posters and plants free-of-charge.



Inauguration plaque unveiling by Hon. M.Seeruthun, Minister of Agro-Industry & Food Security

### (iii) **The World Food Day**

The World Food Day 2018 was celebrated at Domaine Les Pailles from 19 to 21 October 2018. To mark this event, talks on agroforestry issues were delivered and plants were sold at reduced price at various nurseries of the Forestry Service.

**(iv) The World Water Day**

This Service participated in the celebration of the World Water Day 2018 on 22 March 2018, organized by the Central Water Authority, under the aegis of the Ministry of Energy and Public Utilities, at Lamarie Treatment Plant, where an exhibition was held depicting the importance of forests as watersheds in catchment areas of reservoirs. Relevant pamphlets and posters were also distributed to the public.

**(v) Raising of Plants**

Some 297,532 plants were raised in the 8 Forest Nurseries and 2 Plant Propagation Units of this Service during the year 2018. A stock of 946,055 plants was carried over from the previous year and the stock remaining at the end of the year 2018 was 754,248. Some 57,179 plants were sold to the public during the year under review.

**(vi) The National Tree Planting Campaign (NTPC)**

The National Tree Planting Campaign was officially launched by this Ministry in 1985. In this scheme, the Ministry approved the distribution of plants free of charge to Government institutions, parastatal bodies, schools and socio-cultural, religious & youth organizations to encourage tree planting throughout the island with a view to embellish the island and enhance the environment. Some 29,745 plants were issued free of charge to various organizations under this scheme during the year under review.



Tree-planting by NGOs under the NTPC



**(vii) Forest Plantations**

Some 32 hectares of state lands were reforested with mainly *Pinus elliottii* seedlings, including 10% of native species.

**(viii) Tending (Maintenance of young forest plantations)**

Some 24 hectares of young plantations were weeded. Recruiting, including filling of gaps, was carried out on around 86 hectares to replace dead and dying plants. Noxious weeds and undergrowth were uprooted on some 85 hectares.

**(ix) Recreational Forestry**

Four Nature Walks, namely: Powder Mills at Pamplémousses (near SSR National Hospital), Monvert at Forest Side, Sophie and Ile d'Ambre, are under the management of the Forestry Service, with a view to provide leisure and recreation to both the local population and tourists. Some 19,128 people visited these sites and 52 guided tours by Forest Officers were effected during the year 2018. It is worthy to note that Ile d'Ambre, although under the jurisdiction of the National Parks and Conservation Service, is managed by the Forestry Service.

Monvert Nature Walk comprises a Visitors Centre and a fernery where a live display of native ferns and orchids can be contemplated. Sophie Visitor's Centre also includes a Forest Museum, where ancient forestry tools and accessories are displayed.



Monvert Nature Walk in Forest Side



Forest Museum at Plaine Sophie, near Mare aux Vacoas

**(x) Forest Legislation**

The Forests and Reserves Act No. 41 of 1983, as amended by Act No.1 of 1986 and Act No.7 of 2003, were still in force for the administration and management of forest resources.

## CHAPTER 1

### Forest Management

- 1.1 The total extent of forest cover in Mauritius, at the end of the year 2018, is estimated at 47,048 hectares representing about 25% of the total land area. There are only two types of forest ownership in Mauritius: public and private. There are more forests on private lands with an estimated extent of around 25,000 hectares as compared to about 22,048 hectares on state lands.

Approximately 14,613 hectares of land are covered with planted forests. The remaining are natural forests, most of which are badly degraded. Only around 2% of the land area of Mauritius is considered to be covered with good quality native forests.

Out of the 22,048 ha of State Forest Lands, 14,540 ha are under the jurisdiction of the Forestry Service, 7,233 ha under that of the National Parks and Conservation Service and 275 ha are managed by the Vallée d'Osterlog Endemic Garden Trust.

Although privately-owned, the extent of mountain and river reserves, amounting to some 6,540 ha, is protected under the Forests and Reserves Act of 1983 and is under constant surveillance by the Forestry Service.



Catchment areas around Mare aux Vacoas reservoir

The forests of Mauritius are small in area but perform vital functions, the most important of them being soil and water conservation. Where water is scarce, activities like agriculture, tourism or manufacturing are seriously affected. The environmental functions of forests in small island developing states (SIDS) far outweigh their direct economic functions. The roles of forests in reducing soil erosion, enhancing carbon sequestration, conservation of biodiversity & genetic resources, recreation & ecotourism are now widely recognized and valued. Consequently, conservation, protection and development of the remaining forests through sustainable management are priority objectives of the overall national forest policy of Mauritius. In fact, the forests of Mauritius are now managed more for these environmental functions rather than for timber production. Consequently, timber exploitation is gradually being phased out and will be restricted to salvage operations following cyclones and other natural disasters such as outbreaks of insect attacks, diseases and droughts. In future, emphasis in forest management will be on increasing the size of the forest estate, resource conservation, protection of

watersheds and forest ecosystems, biodiversity conservation and replacement of harmful invasive exotic species by native species.

- 1.2 The National Forest Policy 2006, under which the Forest Sector is managed, aims at:
- (i) increasing tree planting in the catchment areas of rivers, lakes and reservoirs in the interest of soil and water conservation, for mitigating floods and droughts and for the retardation of siltation of reservoirs;
  - (ii) conserving the natural heritage of the country by preserving the remaining forests with their unique fauna and flora, which represents the remarkable biological diversity and genetic resources of the country;
  - (iii) increasing forest/tree cover to enhance the environment and the carbon sink capacity of the forests through afforestation, reforestation and the National Tree Planting Campaign;
  - (iv) promoting the development of inland recreation and ecotourism activities for tourists and the local population;
  - (v) ensuring the sustainable management of forest lands leased for Shooting & Fishing (Deer Ranching); and
  - (vi) improving the Forestry Service.



## Classification of forest lands in Mauritius (2018)

1.3 The forest lands in Mauritius are classified as follows:

<b>I. State-owned Forest Lands</b>		<b>Area (hectares)</b>
<b>On State Lands</b>		<b>21,442</b>
a	Plantations (mostly <i>Pinus elliottii</i> )	11,799
b	(i) Black River Gorges National Park	6,574
	(ii) Bras d'Eau National Park	497
c	Special Reserves (Open & Closed Reserves)	136
d	(i) Rivulet Terre Rouge Estuary Bird Sanctuary	26
	(ii) Pointe d'Esny Wetland	20
e	(i) Nature Reserves on mainland	200
	(ii) Nature Reserves on islets	599
f	Vallée d'Osterlog Endemic Garden	275
g	Others, including scrublands, native forests, and marginal lands	1,316
<b>On Pas Géométriques</b>		<b>606</b>
a	Plantations (mostly <i>Casuarina equisetifolia</i> )	214
b	Leased for grazing	230
c	Others (mostly rocky)	162
<b>Total State Forest Lands</b>		<b>22,048</b>
<b>II. Privately-owned Forest Lands</b>		
a	(i) Mountain Reserves	3,800
	(ii) River Reserves	2,740
b	Private reserves	13
c	Plantations (mostly <i>Eucalyptus tereticornis</i> )	2,600
d	Other forest lands, including scrublands and grazing areas	15,847
<b>Total Private Forest Lands</b>		<b>25,000</b>
<b>Grand Total</b>		<b>47,048</b>

### State Forest Lands

1.4 The total area of forests on state lands was 21,443 ha and that on Pas Géométriques was 623 ha at the end of the year 2017. During the year under review, around 1 ha of *Pinus elliottii* at SL Mangin in Grand Bassin and 17 ha of *Cassia eburnea* at PG Les Salines in Black River were retrieved from the Service for the creation of a parking lot and for hotel development respectively. Consequently, the total area of forests on state lands dropped to 21,442 ha and that on Pas Géométriques to 606 ha.

It is, nevertheless, worthy to point out that an area of 47 ha of state lands was initially earmarked at Plaine Sophie in July 2013 for the construction of a wind farm by the Consortium Suzlon-Padgreen Co. Ltd. In this context, a survey is needed, after completion of the said project, to determine the exact extent of state lands encroached.

### Pas Géométriques

1.5 The Pas Géométriques form a narrow belt, theoretically 81.21 metres (250 French feet) in width, all around the coast and are State-owned. There are several cases where the width is less than 81.21 metres or does not exist at all.

- 1.6 The total area of Pas Géométriques is about 2,110 hectares. Most have undergone a change in land use and are now leased for bungalow and hotel sites. Proclaimed and unproclaimed public beaches occupy a fairly large area around the island. The area of Pas Géométriques under the control of the Forestry Service was only 606 hectares at the end of the year under review.



*Casuarina equisetifolia* plantation on Pas Géométriques

- 1.7 Filao (*Casuarina equisetifolia*), a nitrogen-fixing species, is mostly planted along the coast. It is well adapted to coralline sand, grows fast and yields valuable timber, poles and firewood. On the windward side of the island, the Filao plantation acts as a useful windbreak.

#### Privately-owned forest lands

- 1.8 Mountain Reserves occupy the upper slopes of mountains; parts are rocky and bare but many areas are densely covered with native vegetation and also Invasive Alien Species (IAS) like Traveller's palm (*Ravenala madagascariensis*), Privet (*Ligustrum robustum* var. *walkeri*), Guava (*Psidium cattleianum*) and Aloès (*Furcraea foetida*). Most of these areas are extensively used for deer ranching.
- 1.9 River Reserves are strips of land bordering a natural watercourse on both banks, whose widths are of 3 metres, 8 metres or 16 metres on each side according to the status of the watercourse, whether it is a feeder, a rivulet or a river respectively, as per the Forests and Reserves Act No. 41 of 1983. Most of these are privately-owned and are maintained by the riparian owners. Nevertheless, the Forestry Service exercises a strict control on any developments effected thereon and these are under constant surveillance.



River reserves

- 1.10 It is worthy to note that Mountain and River Reserves which occupy a total extent of 6,540 ha, although privately-owned, are protected under the Forests and Reserves Act of 1983.

#### Other Privately- Owned Lands

- 1.11 It is estimated that about 15,847 hectares of privately-owned land is under scrub forest and is mostly managed for deer ranching and ecotourism.

1.12 Hereunder is a list of **Terrestrial Protected Areas** within the *Republic of Mauritius* (2018)

<b>Name</b>	<b>Conservation status</b>	<b>Extent (ha)</b>	<b>Total Extent(ha)</b>
<b>State Protected Areas - Mainland</b>			
<i>Black River Gorges</i>	<i>National Park<sup>1</sup></i>	6,574.00	<b>7,071.20</b>
<i>Bras D'Eau</i>		497.20	
<i>Pouce</i>	<i>Nature Reserve<sup>2</sup></i>	68.80	<b>224.26</b>
<i>Perrier</i>		1.44	
<i>Bois Sec</i>		5.91	
<i>Gouly Père</i>		10.95	
<i>Corps de Garde</i>		90.33	
<i>Cabinet</i>		17.73	
<i>Les Mares</i>		5.10	
<i>Grande Montagne (Rodrigues)</i>		14.00	
<i>Anse Quitar (Rodrigues)</i>		10.00	
<i>Vallée d'Osterlog Endemic Garden</i>		<i>National Protected Area<sup>3</sup></i>	
<i>Rivulet Terre Rouge Estuary Bird Sanctuary</i>	<i>Wetland (Ramsar Site)<sup>4</sup></i>	26.00	<b>46.00</b>
<i>Pointe d'Esny Wetland</i>		20.00	
<b>State Protected Areas - Offshore Islets</b>			
<i>Pigeon Rock</i>	<i>Special Reserve<sup>1</sup></i>	0.63	<b>136.42</b>
<i>Ile d'Ambre</i>		128.00	
<i>Rocher des Oiseaux</i>		0.10	
<i>Ile aux Fous</i>		0.30	
<i>Ile aux Vacoas</i>		1.36	
<i>Ile aux Fouquets</i>		2.34	
<i>Ilot Flamants</i>		0.80	
<i>Ile de la Passe</i>		2.19	
<i>Ile aux Oiseaux</i>		0.70	
<i>Coin de Mire</i>		<i>Nature Reserve<sup>2</sup></i>	
<i>Ile aux Aigrettes</i>	24.96		
<i>Ile aux Serpents</i>	31.66		
<i>Ile Plate</i>	253.00		
<i>Ile Ronde</i>	168.84		
<i>Ilot Gabriel</i>	42.20		
<i>Ilot Marianne</i>	1.98		
<i>Ile aux Cocos (Rodrigues)</i>	15.00		
<i>Ile aux Sables (Rodrigues)</i>	8.00		
<b>Privately-owned Protected Areas</b>			
<i>Mountain Reserves</i>	<i>Mountain Reserve<sup>2</sup></i>	3,800.00	<b>3,800.00</b>
<i>River Reserves</i>	<i>River Reserve<sup>2</sup></i>	2,740.00	<b>2,740.00</b>
<b>TOTAL</b>		<b>14,914.50</b>	<b>14,914.50</b>

<sup>1</sup> Protected as per the Native Terrestrial Biodiversity & National Parks Act of 2015

<sup>2</sup> Protected as per the Forests and Reserves Act of 1983 (as amended in 1986 and 2003)

<sup>3</sup> Protected as per the Vallée d'Osterlog Endemic Garden Foundation Act of 2007

<sup>4</sup> Designated as Wetlands of International Importance under the RAMSAR Convention

**Note:** "Special Reserve" includes Open and Closed Reserves as per Section 11 of the Native Terrestrial Biodiversity & National Parks Act of 2015



### Forest Legislation

- 1.13 The Forests and Reserves Act No. 41 of 1983, together with its amendments, was still in force during the year 2018 for the administration and management of forests and forest resources.
- 1.14 The Wood Exploitation Licence Regulations 1992 proclaimed under Section 17 of the Forests and Reserves Act 1983 which states that “No person shall exploit timber, poles and firewood for commercial purposes from State-owned lands unless he holds a Wood Exploitation Licence issued under the authority of the Minister”, were still applicable.
- 1.15 The Native Terrestrial Biodiversity and National Parks Act 2015 was still in force during the year 2018. It makes further and better provision for the protection, conservation and management of native terrestrial biodiversity in Mauritius.
- 1.16 The Conservator of Forests was still a member of the newly-constituted Native Terrestrial Biodiversity and National Parks Advisory Council. He was also still a member of the Invasive Alien Species Committee, the Special Technical Committee on Wildlife, the National Parks & Conservation Fund and the Scientific Authority for the purpose of CITES.
- 1.17 The State Land (Amendment) Act No. 6 of 1986 and the Pas Géométriques (Amendment) Act. No. 7 of 1986 were still in force. These acts give powers to the Minister of Housing & Lands to evict squatters on State Lands and Pas Géométriques.

## CHAPTER II

### A. Organization of the Forestry Service

- 2.1 The Forestry Service is responsible mainly for the management of the State forest lands under its jurisdiction and its main activities are, namely: reforestation, afforestation, conservation, utilization and promoting leisure and recreation.
- 2.2 At the end of the year 2018, the establishment of the Forestry Service was made up as follows:

S.No.	Grade	Number in post
1.	Professional Staff (DFO, CFCEO, PFCEO, SFCEO & FCEO)	115
2.	Enforcement Officers (DFO, CFCEO, PFCEO, SFCEO & FCEO)	115
3.	Surveyor	1
4.	Technical Design Officer	2
5.	Senior Survey Technician	1
6.	Procurement & Supply Officer	1
7.	General Service Staff (incl. Confidential Secretary, Word Processing Operator, Receptionist, Office Auxiliary Cadre)	33
8.	Survey Field staff, Woodcutter & Security Guard	49
	Artisan, Senior Field Supervisor, Field Supervisor, Driver, Motor Mechanic, Lorry Loader, Tobacco Grader, Warehouse Operative, Sanitary Attendant, Leading Hand	55
9.	General Worker, , Head Gardener/ Nursery Attendant, Senior Gardener/ Nursery Attendant, Gardener/ Nursery Attendant, Insecticide Sprayer/ Operator, Stores Attendant	301
	<b>Total</b>	<b>562</b>

- 2.3 Annex I & II show the management chart and the territorial organization of the Service respectively. The Forestry Service is headed by a Conservator of Forests, who is assisted by a Deputy Conservator of Forests and two Assistant Conservator of Forests. The smallest unit of management is the Forest Section, under the control of a SFCEO, assisted by one or more FCEOs. Twenty-four Forest Sections are grouped territorially into four Ranges, each administered by a CFCEO, assisted by two PFCEOs. Two or more Ranges constitute a Division which is administered by a DFO. The Northern and Southern Divisions are each comprised of two Ranges while the Central Division is responsible for three, namely: the Head Quarters (Curepipe Timber Store), River Reserves/Records and Biodiversity Ranges, each under the charge of a CFCEO, assisted by one PFCEO. The Flying Squad and Internal Control

Unit, under the charge of a CFCEO, assisted by one PFCEO, is directly answerable to the Conservator of Forests. The Service administers eight forest nurseries and two small Plant Propagation Units, each under the control of a SFCEO.

- 2.4 The Survey Unit of the Forestry Service is comprised of 1 Land Surveyor, 1 Senior Survey Technician, 2 Technical Design Officers, 10 Survey Field Workers and 1 Management Support Officer.
- 2.5 The Procurement & Supply Division comprises 1 Principal Procurement & Supply Officer, 1 Assistant Procurement & Supply Officer, 1 Management Support Officer and 1 Stores Attendant.

#### B. Staff Movement

- 2.6 Messrs Namdeo Nawjee and Ishan Chandra Beeharry, Divisional Forest Officers (DFOs), retired from the Service on ground of age.
- 2.7 Mr Panah Balloo, CFCEO, was promoted to the grade of Divisional Forest Officer.
- 2.8 Mr P.Tanakoor, CFCEO, was still on secondment at the SSRBG, Pamplémousses, as from 20 July 2015.
- 2.9 Twelve (12) Forest Conservation & Enforcement Officers (FCEOs) were recruited during the year under review.
- 2.10 Twelve (12) employees in the minor grades retired on ground of age in 2018.
- 2.11 Two (2) employees in the minor grades passed away in the year 2018.

#### C. Overseas Mission

- 2.12 Mr V.Te zoo, Conservator of Forests, attended:
  - (i) The United Nations Forum on Forests (UNFF) Conference in New York, USA;
  - (ii) The Global Forest Resources Assessment (FRA) 2020 Workshop in Tanzania; &
  - (iii) The Southern African Development Community (SADC) Technical Committee Meeting on Wildlife and Forestry in Namibia.
- 2.13 Mr P. Khurun, Deputy Conservator of Forests, attended the 2<sup>nd</sup> Expert Working Group Meeting for Participatory Forest Management (PFM) for the SADC-JICA Project, in Rome, Italy.
- 2.14 Mrs. C.Cyparsade, Assistant Conservator of Forests, attended the 4<sup>th</sup> Joint Coordinating Committee (JCC) Meeting for the SADC-JICA Forestry Project in Johannesburg, South Africa.
- 2.15 Mr Z.Jhumka, Assistant Conservator of Forests, attended:

- (i) The 3<sup>rd</sup> Expert Working Group (EWG) Meeting on Forest Information System (FIS) in Zambia; and
- (ii) The International Training Course on Combatting Desertification in Turkey.

#### D. Local Training

- 2.16 Mr R.Reebye, Office Management Executive, and Mr K.Ramrakha, Management Support Officer, attended a two-day training course on Fire Safety & Fire Risk Management.
- 2.17 Seventeen (17) officers in the minor grades attended a one-day training course on Performance Management System.
- 2.18 Twenty three (23) Lorry Loaders attended a one-day training course on Manual Handling & Safe Lifting Techniques.
- 2.19 Five (5) Office Auxiliaries attended a four-day training course on Achievement in Service and Performance Excellence.
- 2.20 Two (2) Office Auxiliaries attended a one-day training course on Safety & Health at work.



## CHAPTER III

### Forest Protection

#### Climatic Agencies

- 3.1 The climatic conditions prevailing over the island during the year under review have been generally good and favourable for plant growth. Moreover, the country was not visited by cyclones and thus no damage was caused to forest plantations.

#### Weeds

- 3.2 Except in the drier areas of the coastal plains, the undergrowth continued to cause a lot of inconvenience to upland forests. The thorny climber ‘Framboise marron’ (*Rubus alceifolius* syn. *R. roridus*) forms dense thickets in the upland plantations and this increases the cost of silvicultural operations. It is highly prickly and with its scrambling habits, it can reach the top of trees, eight to ten metres high, very rapidly and smother them. It spreads by seeds disseminated by the bird *Otocompsa jocosa* (‘Red-whiskered Bulbul’) and by rooting, whenever a branch touches the ground. *Psidium\_cattleianum* (Guava) is a prolific shrub, forming dense scrub in the upland forests. It is spread by birds, pigs, monkeys and man. The weed *Clidemia hirta* is invading forest plantations in the uplands and is smothering *Rubus* and other species. ‘Liane margoze’ (*Mikania scandens*) is a serious pest in many young plantations. ‘Liane cerf’ (*Hiptage benghalensis*), which is a bad weed at low altitude, is slowly spreading up the slopes. ‘Liane jaune’ (*Cuscuta reflexa*) is another serious pest that is found as a parasite on a variety of hosts. It is spread by birds and man. Consequently, timely weeding is required for the successful establishment of plantations, especially for native species.



*Psidium cattleianum* thicket

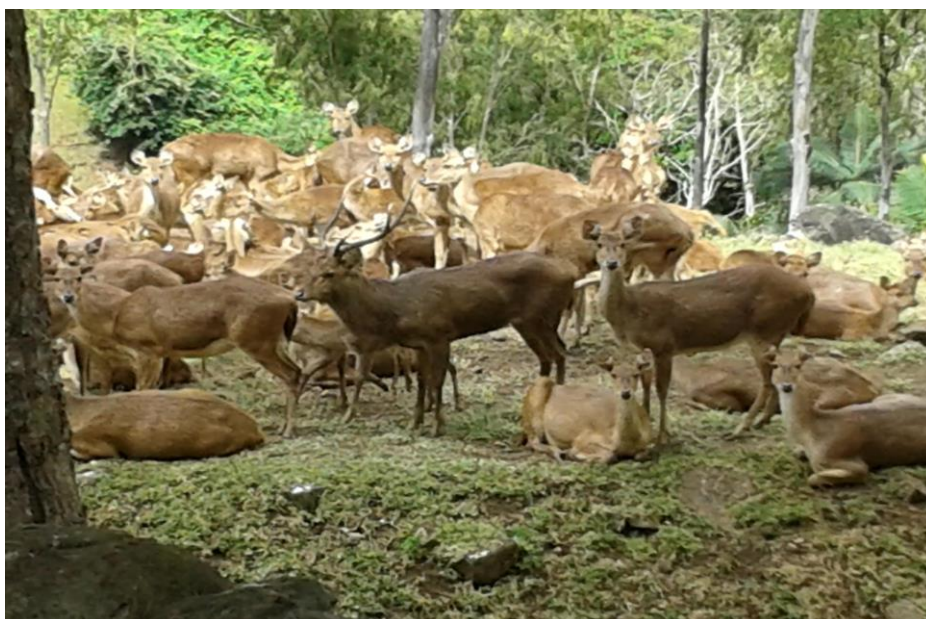
## Animals

- 3.3 Monkeys (*Macaca fascicularis*) are still causing damage to plantations by ring-barking trees. In the absence of cyclones, their population is on the rise. They continue to be a major pest in the native forests by eating the fruits and seeds of forest trees and preying on the eggs and youngsters of native birds.



*Macaca fascicularis* (monkey)

- 3.4 About 9,552 hectares of State-owned forest lands are leased for shooting and fishing purposes and around 780 hectares as gardiennage rights. The current stock of deer (*Cervus timorensis russa*) is on the increase and is causing considerable damage to forest plantations and native forests. The deer population in Mauritius is estimated at 80,000 heads, including those that are reared in intensive deer farms. The average carrying capacity is around 2.6 deer/hectare. The lessees spend considerable sums on fencing, gamekeepers and opening of paths. The additional protection thus afforded to the forests offsets the inconvenience of having to curtail some forest operations during the shooting season - from 1 June to 30 September of each year.



Java deer (*Cervus timorensis russa*)

- 3.5 Rats continue to cause significant damage to pine seeds as well as to seeds of both exotic and indigenous species. They also destroyed the eggs of native birds.

#### Insects

- 3.6 Mauritius was fortunate in having no serious insect pests affecting forest trees during the year 2018. The Eucalyptus Weevil caused some defoliation of *Eucalyptus robusta* but only rarely caused mortality. Flamboyant (*Delonix regia*) planted as roadside and garden tree was affected by the leaf sucker *Cerneura delonixia* but did not cause serious damage.

#### Fungi

- 3.7 Fungal diseases were not a problem during the year under review. “Damping off” in the nurseries was effectively controlled with fungicide.

#### Fire

- 3.8 Fourteen (14) fire incidents occurred in 2018, as compared to thirteen (13) in the year 2017. Most of them occurred in the North and a few on other dry areas all over the island. The total area burnt was about 86 hectares in unprotected areas. To prevent forest fires from spreading, some 22 km of firebreaks were re-opened and maintained at a total cost of Rs 2,276,905.

#### Forest Offences

- 3.9 Annex III gives the number and classification of forest offences during the current year. 69 cases (93 in 2017) were registered, of which 14 were prosecuted, 7 were treated departmentally, 22 were outstanding and in 26 cases, the offenders could not be traced out. Fines paid amounted to Rs 27,500.

## Diseases

- 3.10 No serious diseases were encountered during the year under review, except for a few cases of *Armillaria* which affected some forest trees in the uplands, especially *Pinus spp.*

## **CHAPTER IV**

### **Surveys, Roads and Buildings**

#### Surveys

- 4.1 For the year 2018, the Survey Section was composed of one Land Surveyor, one Senior Survey Technician, one Technical Design Officer, one Trainee Technical Design Officer, one Management Support Officer and ten Survey Field Workers.
- 4.2 During the year under review, the Survey Section, amongst other works, also performed the following tasks:

<b>S.No.</b>	<b>Task performed</b>	<b>Quantum</b>
i	Area surveyed (ha)	700
ii	Number of "Notice to attend Survey" treated	36
iii	Number of lease agreement drawn	3





The survey team at work

### Roads

- 4.3 About 50 km of existing roads, trails and paths were maintained at an average cost of around Rs 44 per metre. The respective lengths maintained and costs were as follows:-

<b>Range</b>	<b>Length (km)</b>	<b>Cost Rs)</b>
North	35	1,123,236
East	5	857,636
West	4	80,980
South	6	139,085
<b>Total</b>	<b>50</b>	<b>2,200,937</b>

### Buildings

- 4.4 A sum of Rs 51,457 was used to complete the construction of a watchman's post at the Curepipe Timber Store.
- 4.5 An amount of Rs 165,400 was used during the year under review for the construction of a mess room in Eau Bouillie Nursery compound.
- 4.6 A sum of Rs 200,100 was spent on waterproofing works at Les Mares Forest Office.
- 4.7 The construction of a store room and a toilet block at Bras d'Eau amounted to Rs 206,643.

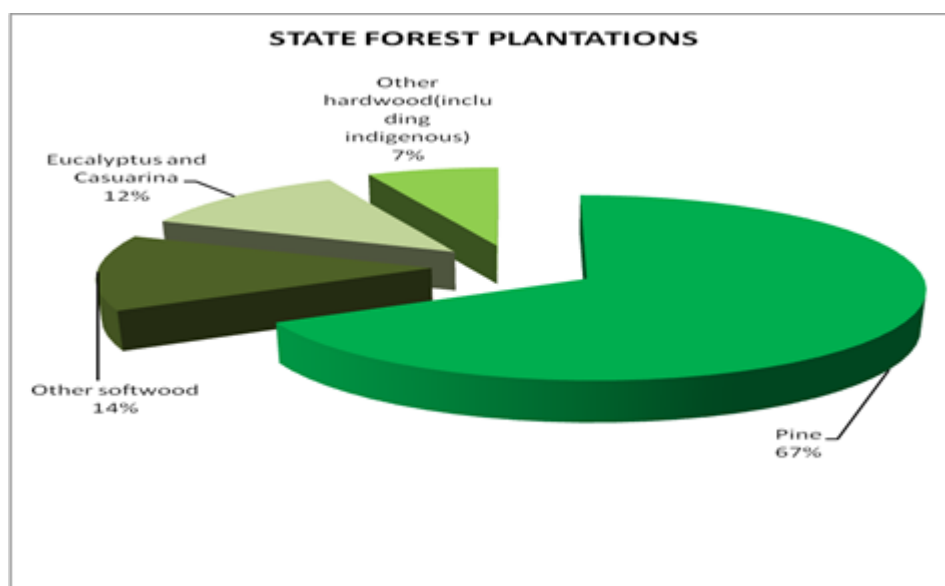
## CHAPTER V

### Silviculture

#### State Forest Plantations

- 5.1 In 2018, the approximate distribution of state forest plantations (including Pas Géométriques) by types was as follows:-

S.No.	Species/Category	Area (ha)
i	Pine	8,088
ii	Other softwoods	1,639
iii	Eucalyptus and Casuarina	1,402
iv	Other hardwoods (incl. native species)	884
<b>Total</b>		<b>12,013</b>



- 5.2 The bulk of the state forest plantations consists mainly of *Pinus elliotii* and *Eucalyptus species*. Other species like *Cryptomeria japonica*, *Araucaria columnaris*, *Casuarina equisetifolia*, *Tabebuia pallida* and native plants are also grown.





Mixed plantation at Plaine Sophie

- 5.3 *Cryptomeria japonica* requires good and well-drained, but very wet and cool sites. The minimum altitude appears to be 540 m and the minimum rainfall 3000 mm. Pine grows well on all other sites provided the soil is not water-logged and not too shallow. It will even regenerate naturally on sites which are free from weeds but these are very rarely found.
- 5.4 *Eucalyptus robusta* grows well on moist lateritic clay soils at elevations of 300 to 600 m. It stands an abundant rainfall, but requires superficial drainage where there is stagnant water. It tolerates limited droughts. It is not wind-resistant as many trees are uprooted by cyclones.
- 5.5 *Eucalyptus tereticornis*, which was introduced in Mauritius since 1879, grows at an altitude of less than 300 m on all kinds of soil, including red clay, black clay, gravelly soils and on lands chiefly covered with Lantana and Aloes. It requires a moderate rainfall and grows well with 125 to 150 mm of rainfall distributed over 100-200 days in the year. It can stand long droughts. It is not too wind-firm in the early stages, but is quite good after about 15 years. It is mostly grown for poles.
- 5.6 *Casuarina equisetifolia* thrives best on sandy beaches, but will grow on well-drained soils with up to 600 m elevation. On black stiff clay, it barely reaches 10 years of age. It is at its best with a rainfall of 150 mm per annum distributed over 100 to 150 days, but tolerates 250 mm rainfall per annum distributed over 250 days on well-drained soils. It was formerly grown mostly for timber, poles and firewood but nowadays, only salvaging and hygienic operations are permitted in these plantations. It also acts as a valuable windbreak and a barrier against salt sprays.

#### Nurseries

- 5.7 Some 345 kg of seeds of various forest species were collected locally in 2018 at a total cost of Rs 37,039, exclusive of transport and storage costs. The amount of seeds and cost of collection by species is given below:

Species	Amount (kg)	Cost (Rs)
<i>Pinus elliottii</i>	2	12,597
<i>Casuarina equisetifolia</i>	1	400
Palm species	126	5,856
Other exotic species	80	5,518
Indigenous species	136	12,668
<b>Total</b>	<b>345</b>	<b>37,039</b>

Around 200 species of plants are raised in the forest nurseries.

5.8 Some 153,987 *cuttings*, comprising of 142,935 exotic species and 11,052 indigenous species, and 88,081 *seedlings*, made up of 69,183 exotic species and 18,898 indigenous species were collected and raised in the nurseries of the Service during the year under review.

5.9 Some 297,532 plants were raised during the year 2018 in the various nurseries, the Greenhouse and the Tree Seed Centre of the Service. Details by species are given below: -

Species	Stock left at end of 2017	Stock raised in 2018	Stock remaining at end of 2018
<i>Pine</i>	61,062	26,780	43,995
<i>Eucalyptus</i>	20,233	10,232	22,312
<i>Cryptomeria</i>	9,251	2924	10,735
<i>Casuarina</i>	11,321	0	8,764
<i>Araucaria</i>	48,986	3402	30,406
<i>Juniper</i>	1210	0	410
<i>Other exotic spp*</i>	667,729	215,743	538,307
<i>Indigenous spp*</i>	126,263	38451	99,319
<b>Total</b>	<b>946,055</b>	<b>297,532</b>	<b>754,248</b>

*\*including ornamentals*



Potting of plants

- 5.10 A sum of Rs 19,898,034 was spent on the raising and maintenance of plants in the various nurseries, the Greenhouse and the Tree Seed Centre of the Service.
- 5.11 During the year under review, some 29,745 plants were issued, free of charge, to various organizations, youth clubs and other Ministries under the National Tree Planting Campaign. Some 115,572 plants were used by the Forestry Service for its reforestation/afforestation programmes. Around 57,179 plants were sold to the public and the revenue collected was Rs 2,830,500.



Sales depot at Curepipe Forest Nursery

### Tending

- 5.12 Some 24 hectares of young plantations were weeded. Recruiting (including filling of gaps) was carried out on 86 hectares. Some 85 hectares were cleaned of rampant creepers and exotic undergrowth. Annex IV gives the various silvicultural operations that were carried out during the year 2018.



## CHAPTER VI

### Conservation of Biological Diversity

#### Rehabilitation of Nature Reserves and Native Forests

- 6.1 Initial weeding was effected on Ilot Gabriel Nature Reserves where Invasive Alien Species were removed on an extent of 8.6 ha at a cost of Rs 1,411,856. In addition, a mini forest was set up at Bel Air SSS, on an area of around one hectare, wherein native species were introduced.

#### Exploration and Survey of Native Vegetation

- 6.2 Survey of native vegetation were conducted at Le Morne Brabant, SL Cabinet and Nature Reserves Cabinet, Perrier, Le Pouce and Ilot Gabriel on a total extent of some 49 ha.

#### Awareness Raising

- 6.3 This Service continued its sensitization campaign with a view to enlist the support of youths and the population in general in the daunting challenge to conserve, protect and propagate the rare endemic/indigenous fauna and flora. Officers of this Service gave talks on forest conservation, biodiversity conservation, and causes/effects of climate change, supported by power-point presentations, in various schools around the island. Monitoring of endemic gardens was carried out in (9) nine academic institutions. Moreover, awareness-raising programmes continued to be effected at the various Nature Walks.



Raising awareness of the public through talks on the important roles of forests



Sensitizing the younger generation on forest conservation

Production of native plants including endangered and medicinal plants

- 6.4 The Greenhouse and the Tree Seed Centre raised some 26,029 native plants during the year under review, including 1,417 medicinal plants and 3,905 Critically Endangered plants, such as *Zanthoxylum heterophyllum*, *Senecio lamarckianus*, *Hibiscus fragilis*, *Tetrataxis salicifolia*, *Elaeocarpus bojeri*, *Albizia vauhanii*, *Dombeya acutangula* and *Pandanus pyramidalis*.

Seeds of indigenous and endemic plants, wherever available, were collected and sown in the nurseries, the Tree Seed Centre & the Greenhouse. Native plants were raised mainly for eventual outplanting in forests. Native plants, raised from seeds and cuttings, were also offered for sale to the public in forest nurseries and sale depots.

- 6.5 *Trochetia boutoniana*, (Boucle d'Oreille) a rare endemic species, is the National Flower of the Republic of Mauritius. This flower also appears on the various insignia that are conferred by the Republic of Mauritius. This species is being propagated with a view to encourage every Mauritian to grow a plant in his yard.



Our National Flower, *Trochetia boutoniana*



## CHAPTER VII

### Recreational Forestry

- 7.1 The Forestry Service is presently managing (4) four Nature Walks namely: Powder Mills at Pamplémousses (near SSR National Hospital), Monvert at Forest Side, Sophie, near Mare-aux-Vacoas reservoir and Ile d'Ambre with a view to provide leisure and recreation to both the local population and tourists. Moreover, Nature Walks provide a great opportunity for people to learn and appreciate the rare indigenous and endemic fauna and flora, their value to society and the need to conserve them.

It is worthy to note that Ile d'Ambre Nature Walk, although managed by the Forestry Service, is under the jurisdiction of the National Parks and Conservation Service and that Bras d'Eau Nature Walk, also created by this Service, passed under the management of the National Parks and Conservation Service in August 2013.

During the year 2018, some 19,128 tourists and locals visited these Nature Walks and some 52 guided tours by Forest Officers were proposed to visitors.



Sophie Nature Walk, near Mare aux Vacoas



Powder Mills Visitors' Centre, at Pamplemousses

- 7.2 The Vallée D'Osterlog Endemic Garden of an extent of 275 hectares extends from the bottom of Vallée D'Osterlog to the Créole Mountain Range, including Mountain Laselle, Montagne Lagrave, and is astride the districts of Moka and Grand Port. The Garden contains several critically endangered species and some of the rarest indigenous/endemic species. It is managed by The Vallée D'Osterlog Endemic Garden Foundation. Its main objective is to inform and sensitize visitors on the rich endemic flora and fauna of Mauritius.

## CHAPTER VIII

### Wildlife Management

8.1 The population of monkeys (*Macaca fascicularis*) is increasing rapidly due to the absence of cyclones over the island since many years. Monkeys are a major threat to native fauna and flora and contribute greatly in the decline of biodiversity. They are caught in the wild by means of traps and are also bred in captivity by a few companies which export them for medical research. The levies payable by these export companies are credited into the National Parks and Conservation Fund to be used for conservation projects.

8.2 Around 9,552 ha of State forest lands are leased for shooting and fishing purposes and around 780 hectares as gardiennage rights under the Shooting & Fishing Leases Act of 1966. It is worthy to note that the gardiennage lease does not provide any rights to the lessee for shooting or fishing over State lands.

Over the years, deer ranching has become an important economic activity in Mauritius. Venison is one of the red meat accepted by all sections of the Mauritian population. As per the Mauritius Meat Producers' Association, the production of venison in 2018 was around 560 tonnes (475 tonnes from private forest lands & 85 tonnes from state forest lands).

It is worthy to note that considerable damage is caused to both planted and native forests by this activity, through ring-barking of adult trees and uprooting or trampling of seedlings. Frequent meetings are held with all concerned parties to ensure that deer ranching activities are carried out in a sustainable way with least impacts on the environment.



*Cervus timorensis russa* (Java deer)

The new rentals regarding shooting & fishing and gardiennage rights, as per the Government Valuer, effective as from September 2014, will be phased over a period of ten years, and are as follows: -

YEAR OF LEASE	SHOOTING AND FISHING LEASE (Rs / ha)		GARDIENNAGE LEASE (Rs / ha)
	Upland Plateau	Low to Mid-Altitude	
08 Sept 2014 to 07 Sept 2015	1050	565	310
08 Sept 2015 to 07 Sept 2016	1090	600	330
08 Sept 2016 to 07 Sept 2017	1125	640	350
08 Sept 2017 to 07 Sept 2018	1160	675	370
08 Sept 2018 to 07 Sept 2019	1200	710	390
08 Sept 2019 to 07 Sept 2020	1240	750	410
08 Sept 2020 to 07 Sept 2021	1275	790	430
08 Sept 2021 to 07 Sept 2022	1365	845	465
08 Sept 2022 to 07 Sept 2023	1460	900	500
08 Sept 2023 to 07 Sept 2024	1550	960	530

## CHAPTER IX

### Exploitation and Utilization

#### Marketing of Forest Produce

- 9.1 Logs, poles and firewood from State Lands were sold to wood merchants registered with the Forestry Service.
- 9.2 Poles, firewood and tool handles were also cut by employees of the Service and supplied against payment to other government departments and to the public.
- 9.3 Annexes V and VI give the selling rates of logs and poles respectively in 2018.

#### Local Wood Production

- 9.4 The following quantities of wood were sold during the year 2018:

Category	Class	Volume in m <sup>3</sup> (Roundwood)
Log	Hardwood	73
	Softwood	764
Pole	Hardwood	6
	Softwood	3
Fuelwood	Firewood	3,821
	Charcoal	0

- 9.5 Charcoal production is not carried out in State-owned forests but is effected, on a very small scale, by a few private companies, mainly in the regions of Black River and Roches Noires, used mostly for *barbecues* in hotels and restaurants. Unfortunately, no data is available for this forest produce.
- 9.6 Some 837 m<sup>3</sup> of logs were sold to registered wood merchants during the year 2018 (860 m<sup>3</sup> in 2017).
- 9.7 In addition, waste wood, in the form of Privet (*Ligustrum robustum var walkeri*) and Guava (*Psidium cattleianum*) sticks and firewood, was removed, free of charge, by forest workers and members of the public from State lands all over the island. Its volume cannot be estimated.



### Minor Forest Produce

- 9.8 The revenue collected in 2018 from the sale of Christmas trees, tool handles, bamboos, nursery plants and other minor forest produce amounted to Rs 13,926,238 (compared to Rs 17,138,400 in 2017).
- 9.9 No data on forest produce from private lands were available. Estimates of same, mentioned in this report, are based on local expert knowledge.

### Wood Processing

- 9.10 The Concessionnaire Grewals (Mauritius) Ltd. runs a modern sawmill and timber preservation plant at Pailles, employing around 79 workers. This Company imports most of its timber since it has ceased all exploitation on state forest lands since 2012. There are, in addition, one medium-sized sawmill in Port Louis and 16 small ones scattered all over the island, employing some 64 workers. This Service has no control over the licensing of these sawmills; many of them operate on a part-time basis.
- 9.11 Other small wood-based industries include a match factory at Roche Bois and about 500 small and medium furniture factories scattered all over the island.

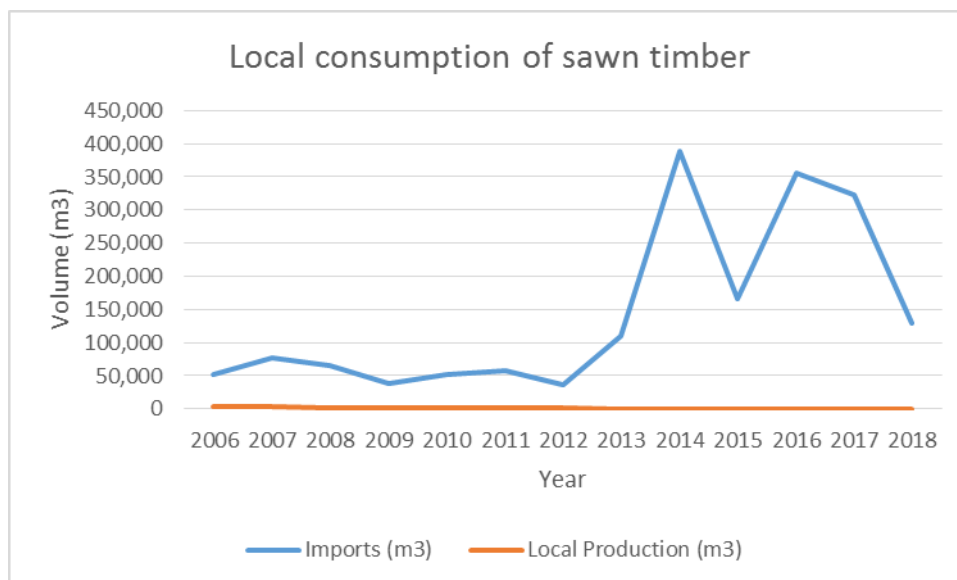
### Timber Imports

- 9.12 The amount of sawn timber imported during the year 2018 was 129,515 m<sup>3</sup>, equivalent to 222,766 m<sup>3</sup> of roundwood. The timber was imported mainly from Madagascar, Malaysia and South Africa. The CIF value was around Rs 697 million compared to Rs 628 million in 2017.

### Local Consumption of Timber

- 9.13 The local consumption of sawn timber (both imports and local production) over the last thirteen years is shown in the table and chart below:

Year	Imports (m3)	Local Production (m3)
2006	51,794	3,521
2007	77,037	2,821
2008	64,958	2,477
2009	38,966	2,187
2010	51,818	1,878
2011	58,394	1,789
2012	37,121	1,258
2013	109,119	494
2014	389,054	457
2015	165,715	312
2016	356,131	564
2017	322,760	501
2018	129,515	487



9.14 The local consumption of wood, excluding plywood, paper, etc. during the year 2018 was as follows:

**Volume of roundwood (m<sup>3</sup>)**

Category	Timber	Pole	Fuelwood	Total
<b>I .From State Lands</b>	<b>837</b>	<b>9</b>	<b>3,821</b>	<b>4,667</b>
(a) Sold	837	7	3,228	3,855
(b) Cut departmentally	0	2	353	542
(c) Free of charge (estimated)	0	0	240	240
<b>II. From Private Lands(estimated)</b>	<b>161</b>	<b>174</b>	<b>291</b>	<b>626</b>
<b>III. Imports</b>	<b>407,976</b>	<b>1,397</b>	<b>2,446</b>	<b>411,819</b>
<b>Total</b>	<b>408,974</b>	<b>1,580</b>	<b>6,558</b>	<b>417,112</b>

9.15 Annex VII gives the statements of revenue and expenditure of the Forestry Service for the year 2018 for Mauritius and Rodrigues.

9.16 The total expenditure for Mauritius for the year 2018 amounted to Rs 186,933,571 compared to Rs 188,693,663 for the previous year.

9.17 The total revenue for Mauritius for the year 2018 amounted to Rs 29,091,335 (Rs 32,488,209 in 2017).

## CHAPTER X

### Rodrigues

#### Staff

- 10.1 The Forestry Staff in Rodrigues, although subject to technical directions from the Conservator of Forests, is answerable in all day-to-day matters, to the Departmental Head, Commission for Environment, Forestry and Others. The island has its own staff establishment and is funded by the Rodrigues Regional Assembly.

The Island is divided into three (3) Forest Sections, namely Mont Lubin, Lataniers and La Ferme. Each section is under the charge of a SFCEO, assisted by several FCEOs. The Conservation Unit is under the charge of a SFCEO assisted by three FCEOs. The Prosecution and Enforcement Unit, the Nursery Unit as well as Ile aux Cocos and Ile aux Sables are under the charge of a CFCEO assisted by two FCEOs. A Technical Officer, attached to the Forestry Services, works on project implementation and monitoring of forest operations and also advises the Head of the Division on technical aspects of the Service.

- 10.2 At the end of the year 2018, the permanent and pensionable establishment of the Forestry Services in Rodrigues was made up as follows:

<b>Rank</b>	<b>In post</b>	<b>Remarks</b>
Head Forestry	1	
CFCEO	1	
PFCEO	1	One (1) post vacant
SFCEO	4	One (1) acting as PFCEO
FCEO	20	One (1) acting as SFCEO
Technical Officer	1	
General Services Officer	2	One (1) post vacant
Field Supervisor	8	Four (4) posts vacant
Head Gardener / Nursery Attendant	1	One (1) post vacant
Gardener / Nursery Attendant	5	Two (2) posts vacant
Security Guard	29	Eight (8) posts vacant
Woodcutter	16	Two (2) posts vacant
Office Caretaker	0	
Store Keeper	0	
General Worker	55	
Launch Driver	2	One (1) post vacant
Boatman	1	
Driver	0	
Driver on roster	0	
Handy Worker	2	One (1) post vacant
<b>Total</b>	<b>149</b>	

- 10.3 During the year 2018, ten (10) employees in the minor grades retired from the Service on ground of age and two (2) were appointed as Woodcutters. Moreover, forty-four (44) General Workers joined the Service during the same year.

## Forest Cover

10.4 The forest lands of Rodrigues can be classified as follows:

<b>I. State-owned Forest Lands</b>			
		<b>Area (hectares)</b>	<b>Total area (hectares)</b>
a	Plantations	3,180	3,180
b	(i) Nature Reserves on mainland		24
	<i>Grande Montagne</i>	14	
	<i>Anse Quitar</i>	10	
	(ii) Nature Reserves on islets		23
	<i>Ile aux Cocos</i>	15	
	<i>Ile aux Sables</i>	8	
<b>Sub-total</b>		<b>3,227</b>	<b>3,227</b>
<b>II. Privately-owned Forest Lands</b>			
a	Other forest lands	200	200
<b>Sub-total</b>		<b>200</b>	<b>200</b>
<b>Grand Total</b>		<b>3,427</b>	<b>3,427</b>

## Protection

- 10.5 Giant snails were controlled with Meta pellets in forest nurseries.
- 10.6 During the year 2018, one (1) case of “Encroachment on State Land” and forty-four (44) cases of “Allowing animals to graze on State Land” were reported.
- 10.7 There were no wildfire outbreaks in forests during the year under review.

## Silviculture

10.8 The following table shows the type of silvicultural operations carried out and extent treated during the year under review:

<b>Operation</b>	<b>Extent treated (ha)</b>
Manual land clearing	12.2
Thinning	2.2
Grass trimming	4.6
Pruning	0.1

10.9 Some 58,333 seedlings were raised at Solitude, La Ferme and Oyster Bay nurseries during the year 2018. A stock of 85,313 seedlings was carried over from the year

2017 and the stock remaining at the end of 2018 was 93,368. Some 2,434 plants were sold to the public and around 48,441 were used departmentally for reforestation/afforestation purposes.

#### Local Wood Production in Rodrigues

10.10 The volume of wood sold during the year 2018 was as follows:

S.No.	Species	Volume (m <sup>3</sup> )		
		Log	Pole	Firewood
1.	<i>Eucalyptus tereticornis</i>	0	122.7	5.2
2.	<i>Casuarina equisetifolia</i>	0	0.7	0.7
3.	<i>Tabebuia pallida</i>	5.7	1.5	0
5.	<i>Swietenia mahagoni</i>	1.0	0	0
6.	<i>Vitex glabrata</i>	0.6	0	0
	<i>Albizia lebbek</i>	13.5	0	0
	<i>Tectona grandis</i>	0.8	0	0
	<i>Calophyllum inophyllum</i>	0.5	0	0
7.	Mixed	0	0	16.3
<b>Total</b>		<b>22.1</b>	<b>124.9</b>	<b>22.2</b>

10.11 The consumption of wood, excluding plywood, paper, etc, in Rodrigues during the year 2018 was as follows:

S.No.		Volume (m <sup>3</sup> )			
		Log	Pole	Fuelwood	Total
<b>1.</b>	<b><i>From State Lands:</i></b>				
(a)	Sold to public	22.1	124.9	22.2	169.2
(b)	Cut departmentally	0	0	0	0
(c)	Removed free of charge (estimated)	0	0	0	0
<b><i>Sub total</i></b>		<b>22.1</b>	<b>124.9</b>	<b>22.2</b>	<b>169.2</b>
<b>2.</b>	<b><i>From Private Lands (estimated)</i></b>	<b>8.5</b>	<b>3.5</b>	<b>3.2</b>	<b>15.2</b>
<b>Total</b>		<b>30.6</b>	<b>128.4</b>	<b>25.4</b>	<b>184.4</b>

#### Nature Reserves

10.12 The Forestry Services, in collaboration with the Mauritian Wildlife Foundation, carried out conservation works in Nature Reserves at Grande Montagne and Anse Quitor, and at Ile aux Cocos & Ile aux Sables.



Removal of invasive alien species was carried out to promote the regeneration of native plants. Invasive Alien Species removed include *Litsea glutinosa*, *Syzygium jambos*, and *Lantana camara*.

#### Restoration at Mourouk Botanical Garden

- 10.13 Around 4.9 ha were manually cleared of *Litsea glutinosa*, *Deris indica* and *Leucaena leucocephala* and 0.02 ha were planted with endemic and indigenous species, such as *Ramosmania rodriguesii*, *Hyophorbe vershaffeltii*, *Hibiscus liliflorus*, *Sideroxylon galeatum*, *Mathurina penduliflora* and *Dictyosperma album*.

#### Setting up of a Nature Reserve at Cascade Pigeon

- 10.14 Extending over some 50 hectares, this project is co-funded by the Rodrigues Regional Assembly and the Indian Ocean Commission. Manual land clearing, thinning, pruning and erection of fencing have already started during the year under review.

#### Revenue and Expenditure

- 10.15 Expenditure amounted to Rs 48,775,000 compared to Rs 45,093,000 in the previous year. The revenue collected amounted to Rs 149,286 (Rs 111,046 in 2017).

## Chapter XI

### Miscellaneous

- 11.1 The staff of the Service gave several talks on forest conservation and wildlife, both in schools and in public social gatherings. They took various parties of secondary school children on ecological tours throughout the forests.
- 11.2 The Service gave advice to several organizations and to the public in general on landscaping and on matters pertaining to Forestry and Nature Conservation.

### Publications

- 11.3 The following is a list of articles, reports and books that have a bearing on Forestry, Wildlife and the Environment in Mauritius:-
- (i) Ministry of Agro Industry and Fisheries, Government of Mauritius (2006) National Forest Policy for the Republic of Mauritius.
  - (ii) Atkinson, R. & Sevathian, J.C. (2005). A guide to the plants in Mauritius. MWF
  - (iii) Paupiah, S.A (2004). Concept Note, Update on the Status of the National Forest Programme and Request for a Partnership Agreement with the National Forest Programme Facility
  - (iv) Paupiah, S.A (2001). Forestry Outlook Study for Africa (FOSA)
  - (v) Paupiah, S.A (2001). Forest Revenue System and financial support for Sustainable Forest Management in Mauritius
  - (vi) Paupiah, S.A (2001). Forest Biodiversity in Mauritius - Paper presented during the National Biodiversity Strategic Action Plan (NBSAP) Thematic Workshop held in January 2001
  - (vii) Guého, J.& Owadally, A.W. (in press) Bibliographie des travaux d'histoire naturelle et science connexes concernant Maurice (504pp)
  - (viii) Lind, R (1994). Management of the EEP (European Endangered Species Programme) Pink Pigeons *Columba (Nesoenas) mayeri* Population. Dodo, J.W.P.T. 30:106-113.
  - (ix) North, S.G. et al (1994). Changes in the vegetation and reptile populations on Round Island, Mauritius, following eradication of rabbits. Biol. Conserv. **67**:21-18
  - (x) Owadally A.W, Pong Kim Kam, Jootun, L & Tezoo, V. (1995). *Report on River Reserves*. This Report was submitted to the Ministry of Agriculture and Natural Resources, 26pp + 8 appendices + 2 maps
  - (xi) Bosser,J.(1997). Flore des Mascareignes: La Reunion, Maurice, Rodrigues. MSIRI.
  - (xii) Rouillard,G. & Gueho,J. (1999). Les plantes et leurs histoires à Maurice

- (xiii) Gurib-Fakim,A. & Gueho,J. (1999). Natural Toxins and poisonous plants in Mauritius.
- (xiv) Claude Michel (1992). Birds of Mauritius (3<sup>rd</sup> Edition)
- (xv) Th.Cadet (1998). Fleurs et plantes de la Reunion et de l'île Maurice (12<sup>th</sup> Edition)
- (xvi) Staub, F. (1993). Fauna of Mauritius and associated flora
- (xvii) Gurib,A. & Gueho,J. (1995-1996). Plante Médicinales de Maurice-Tome 1,2 et 3
- (xviii) Ministry of Agro Industry and Food Security, Government of Mauritius (2015). Rays of Hope – Protected Endemic Sanctuaries.
- (xix) Ministry of Agro Industry and Food Security, Government of Mauritius (2017). National Biodiversity Strategy and Action Plan 2017-2025.