THE STATE
OF THE WORLD's
FOREST GENETIC RESOURCES

COUNTRY REPORT

THE REPUBLIC OF MAURITIUS

This country report is prepared as a contribution to the FAO publication, The Report on the State of the World's Forest Genetic Resources. The content and the structure are in accordance with the recommendations and guidelines given by FAO in the document Guidelines for Preparation of Country Reports for the State of the World's Forest Genetic Resources (2010). These guidelines set out recommendations for the objective, scope and structure of the country reports. Countries were requested to consider the current state of knowledge of forest genetic diversity, including:

- Between and within species diversity
- List of priority species; their roles and values and importance
- List of threatened/endangered species
- Threats, opportunities and challenges for the conservation, use and development of forest genetic resources

These reports were submitted to FAO as official government documents. The report is presented on www. fao.org/documents as supportive and contextual information to be used in conjunction with other documentation on world forest genetic resources.

COUNTRY REPORT

FOR

THE STATE OF THE WORLD'S

FOREST GENETIC RESOURCES

THE REPUBLIC OF MAURITIUS

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EXECUTIVE SUMMARY

The Republic of Mauritius, is composed of the islands of Mauritius, Rodrigues, Agalega, St. Brandon, the Chagos Archipelago and a number of outlying islets, all located in the South of the Indian Ocean between latitudes 10o S and 20o S and longitude 55o E and 65o E. The total land area is around 2040 km^2. The population of the Republic of Mauritius was estimated at nearly 1.3 million as at the end of 2010, giving thus a density of around 629 person/km^2 which ranks among the highest in the world. The total forest cover is estimated at 50,000 hectares, representing about 25% of the land area. The native forests had suffered so much from deforestation in the past that their extent is now limited and they subsist in an extremely fragmented state. These native remnants are mostly located in the South West of the island and on steep mountain slopes and other inaccessible areas. The total area of reasonable quality native forest is currently estimated at 2,600 hectares, representing less than 2% of the land area. The remaining native forests still harbour a rich biological diversity of fauna and flora with high level of endemism. However, loss of forest biodiversity and genetic erosion continue through habitat destruction and degradation. There is intense pressure on the forest resources/biodiversity due to rapid economic development, increasing population and limited land resources.

The plantation forests of the Republic of Mauritius provide a range of wood and non-wood forest products. Limited wood exploitation is carried out in forest plantations. The National Forest Policy (2006) lays more emphasis on the environmental and protective functions of forests as well as non consumptive use of forests like leisure, recreation and eco-tourism. In fact it recommends that timber production be gradually phased out.

The Government of Mauritius has shown its commitment to the conservation and sustainable use of forest biodiversity/genetic resources by signing the forestry-related international conventions like UNCBD, UNCCD and CITES. Significant achievements have been made in the field of conservation during the last few decades. Most of the state native forests have been declared Nature Reserves and National Parks. The legally protected forest areas have increased significantly over the years and now represent about 7% of the total land area. Conservation Management Areas (CMAs) have nearly doubled during the last decade. A proper legal framework exists for the conservation and management of forestry resources. However, there is a need to review and update legislation to bridge the gaps and make provision for forest genetic resources as well as new emerging issues. The National Forest and Environment policies have been reviewed and updated. Various strategies and action plans have already been formulated and are being implemented. Significant progress has also been achieved in capacity building. A Forest Land Information System (FLIS) has been set up at the Forestry Service with a view to better manage and monitor the forestry resources.

Despite significant progress made during the last few decades, much remain to be done to effectively protect and conserve the remaining forest genetic resources. The challenge to reverse the trend of genetic erosion is really daunting. Mauritius is characterized by extensive habitat degradation and loss of biodiversity. The two main threats are invasive alien species and habitat destruction. The major constraints facing organizations involved in natural resources management are weak security of land tenure, gaps in legislation, inadequate human and financial resources, limited research, lack of qualified personnel, and limited capacity. Nevertheless, significant progress will be made during this decade with the participation of all major stakeholders and the collaboration of regional and international organizations.

INTRODUCTION TO THE COUNTRY AND FOREST SECTOR

The Republic of Mauritius, is composed of the islands of Mauritius, Rodrigues, Agalega, St. Brandon, the Chagos Archipelago and a number of outlying islets, all located in the South of the Indian Ocean between latitudes 10o S and 20o S and longitude 55o E and 65o E. The total land area is around 2040 km^2. The population of the Republic of Mauritius was estimated at nearly 1.3 million as at the end of 2010, giving thus a density of around 629 person/km^2 which ranks among the highest in the world. The average annual rate of increase of the population is around 1%. Mauritius is the principal island with a land area of 1865 km^2. The GDP per capita is around US $ 7,500 and the standards of health, nutrition and education are high compared to other countries in Africa.

Mauritius enjoys a maritime tropical climate with a mean summer temperature of 24.7°C and a mean winter temperature of 20.4°C. The long term mean annual rainfall is 2100 mm with summer rainfall accounting for about 70% of the total. The island is exposed to tropical cyclones and drought spells.

The extent of forest cover in the Republic of Mauritius is around 50,000 hectares representing about 25% of the total land area **(Fig. I)**. There are only two types of forest ownership: public and private. There is no communal forest and no communities living within or dependent on the forests. Owing to rapid economic development, limited land area and increase in population, there is intense pressure on forest lands from the other land-based sectors. Moreover, because of the rising value of land, private forest owners are more inclined to convert their forests lands to more profitable land use such as housing development and deer ranching.

Table 1 – Categories & extent of forest lands in the Republic of Mauritius (2010)

1. MAURITIUS	
Category	**Area (Hectares)**
(I) State Forest Lands	
Plantations	12,123
National Parks(Main land)	7071
Islet National Parks	134
Nature Reserves	
(a) on mainland	200
(b) islets	599
Vallee D'Osterlog Endemic Garden	275
Other forest lands	1,782
TOTAL	***22184***
(II) Privately-Owned Forest Lands	
Mountain Reserves	3,800
River Reserves	2,740
Private Reserves	13
Plantations	2,600
Other forest lands including scrub and grazing lands	15,847
TOTAL	***25,000***
GRAND TOTAL	**47184**
2. RODRIGUES	
Native Forests	50
Plantations	3313

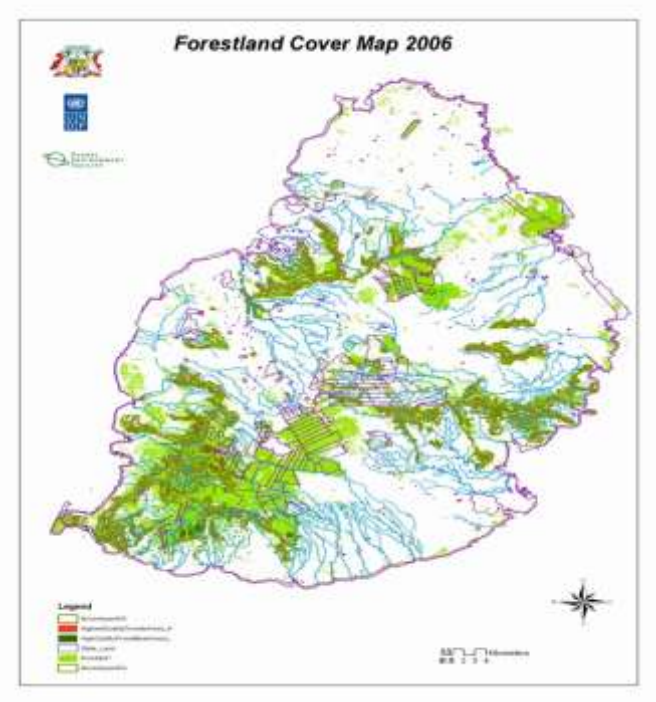
TOTAL	**3,363**

The forests of the Republic of Mauritius provide a range of wood and non-wood forest products. Timber, poles, firewood, honey, deer, grass, fibres, fruits and medicinal plants are common examples. However, wood production has been gradually reduced over the years and now some 4000 m^3 of logs, 1000 m^3 of poles and 5000 m^3 of firewood are annually exploited in the exotic forest plantations. Local timber production meets only about 10% of the demand for utility timber and the rest is imported. There are one large sawmill, three medium sized sawmills and about 30 small scattered sawmills scattered over the island employing a total of about 300 workers.

The forest sector provides direct and indirect employment to some 5000 people in forest resource management activities, biodiversity conservation, tree planting to provide soil cover in environmentally fragile areas, wood production, primary and secondary processing of wood, wildlife capture and export, deer ranching and ecotourism. The contribution of the sector to the Gross National Product is estimated to be about one percent. By virtue of their strategic location, the upland forests play a vital role in soil and water conservation and the protection of agricultural crops cultivated mainly at mid and low elevations. Moreover, the native forests harbour a rich biological diversity of fauna and flora with high level of endemism. These ecosystem services and biological values are not considered in National Accounts but would certainly amount to billion of rupees.

Due to its limited land resources and increasing population, Mauritius is and will always be a net importer of timber. Consequently, timber exploitation will be gradually phased out in line with the National Forest Policy (2006). Emphasis in forest management is now on increasing the size of the forest estate, resource conservation, watershed protection, forest ecosystem and biodiversity conservation and replacement of harmful invasive alien species by native species. Non-consumptive use of forest resources is favoured through leisure, recreational and ecotourism activities.

Fig.1 - Forest Cover in Mauritius



Chapter 1

The Current State of Forest Genetic Resources

Mauritius as an oceanic island far from the large land masses has evolved a unique flora ever since it was formed 7.8 million years ago. It is believed that 70% of the phanerogams are derived from Madagascar and the African continent, 8% from Asia, 12% are of pan-indo pacific origin and 8% are endemic (Cadet, 1977; Gueho, 1988). The island has been identified as a Centre of Plant Diversity by IUCN, and Mascarenes (Mauritius, La Reunion and Rodrigues) have been included in the Madagascar and Indian Ocean islands biodiversity hotspot.

1.1 Status of Native Forests

The extent of native forest is very limited due to the large scale forest clearing which occurred during the colonization period of the island. Good quality native forest is estimated at around 2,600 ha, representing less than 2% of the total land area. They are located mostly in the South West of the island and on the upper reaches of mountains. Broadly there are three native vegetation types. There is the dry lowland forest with less than 1000 mm rainfall annually and characterized by a palm savanna, now restricted to the northern offshore islets, Round Island in particular. The second type is the moist forests which were formerly dominated by Ebony and Bois D'Olive species found below 365 m altitude and with an annual rainfall in the range of 1000-2000 mm. Finally there is the upland wet forest over 365 m and with 2000-4000 mm rainfall annually, dominated by the Sapotaceae family.

With the decline in native forest area, the population level of the native timber species has become too low to allow any sustainable utilization. However, the remaining native forests still hold a great diversity of fauna and flora with high level of endemism. Mauritius is known to contain about 671 native flowering plants of which some 306 are endemic. There are about 337 native plants that can be considered endangered, out of which 141 are critically endangered, 55 endangered, 98 vulnerable, 5 extinct in the wild and 38 presumed extinct (IUCN Red list assessment of the threatened plants of Mauritius – Jan 2007).

Table 2 - Preliminary results of the IUCN Red list assessment of the threatened plants of Mauritius (Jan 2007)

Category	Mauritius Endemics	Mascarene Endemics	Native Species	Total
Presumed extinct	27	11	0	38
Extinct in the Wild	5	0	0	5
Critically Endangered	113	28	0	141
Endangered	46	9	0	55
Vulnerable	81	17	0	98
Least Concern	2	3	0	5
Data deficient	8	3	0	11
Not assessed	24	73	221	318
TOTAL	**306**	**144**	**221**	**671**

The National Threatened Plants Technical Committee (set up in 1994 and consisting of all stakeholders involved in plant conservation) is coordinating the assessment of the Threatened plants of Mauritius. The objective is to develop a database of all native plants, their distribution and IUCN status.

Mauritius and Rodrigues have already completed a botanical description of all the known plant species. This is part of a long-term project over the last 30 years to publish a "Flore des Mascareignes".

The native forests of Mauritius hold a rich biodiversity of fauna and flora which represent the remarkable genetic resources of the country of great potential but yet mostly untapped. The challenge to conserve and protect these genetic resources is daunting as it is a mammoth task to reverse the trend of genetic erosion on a small island developing state. Despite various achievements in the field of conservation during the past few decades, much remain to be done to effectively protect and conserve the remaining genetic resources.

Table 3 - Native diversity of selected groups in Mauritius with respective total number of extinctions. Numbers in brackets indicate the number of endemic species.

	Number of native species	% species endemic	Number of extinct species	Number of extant species
Angiosperms [1]	671 (311)	46 %	77 (42)	594 (269)
Mammals [2]	5 (2)	40 %	2 (1)	3 (1)
Birds [2]	30 (24)	80 %	18 (15)	12 (9)
Reptiles [2]	17 (16)	94 %	5 (5)	12 (11)
Butterflies [3]	37 (5)	14 %	4 (1)	33 (4)
Snails [4]	125 (81)	65 %	43 (36)	82 (45)

1. Page & D'Argent, 1997; 2. Cheke, A.S & Hume, J.P. in press; 3. Williams, 1989; 4. Griffiths & Florens in prep.

1.2 Status of Planted Forests

There are about 12,000 hectares of planted forests, consisting mostly of exotic timber species, on state forest lands and some 2,600 hectares on private lands. The main timber species comprising the softwood are *Pinus elliottii*, *Pinus taeda, Cryptomeria japonica, Araucaria spp, Juniperus bermudiana and Agathis spp*. The main hardwood species are *Eucalyptus tereticornis, Eucalyptus robusta, Casuarina equisetifolia, Tubebuia pallida, Cinnamomum camphora, Switenia mahoganii and Tectona grandis.*

Pinus elliottii (about 70% of all planted forests) form the bulk of the upland forest plantations and *Eucalyptus tereticornis* and *Casuarina* form the bulk of the lowland plantations. Pine and Eucalyptus are the two main commercial species and they account for almost 95% of the timber production in Mauritius.

1.3 The main value of forest genetic resources- refer to tables 4, 5 and 6 (p.28)

Many of the wild native plants could be of economic value. They may contain active ingredients for drugs. Traditionally many of the local plant species have been used for their medicinal values, especially by the low-income group. A comprehensive classification of these plants has been done by Gurib-Fakim and Gueho (1997 a,b,c). A list of indigenous medicinal plants is given in **Annex I**.

Several species have great ornamental value. *Trochetia species, Hibiscus species and Dombeya mauritiana* are good examples which are more and more being used in landscaping works and embellishment of the environment.

Other plants have more obvious economic importance because they are close relatives of major crops. In Mauritius the only indigenous genus which is a wild relative of an economic crop is *Coffea*. There are three species of native

Coffea growing in the native forest of the island. Two of them namely *Coffea macrocarpa* and *Coffea myrtifolia* are endemic to Mauritius and the other *Coffea mauritiana* is endemic to Mauritius and Reunion. These species are known to be naturally caffeine-free and could thus be of great importance in developing low caffeine cultivars (Dulloo and Owadally, 1991). Wild coffee species might provide new genes for improving this globally important crop. Other native species which are used as a food crop is the native palm *Dictyosperma album var album* is cultivated to provide palm hearts for the making of palm heart salad principally for the hotels and restaurants.

The main forest tree species managed for timber production is *Pinus elliottii* and *Eucalyptus tereticornis*. Both are introduced species. No timber exploitation is carried out in native forests in the Republic of Mauritius. Pine and Eucalyptus provide utility timber which meets about 10% of the local demand. Mauritius, being a small island with limited forest area, is and will always be a net importer of timber. Timber exploitation will be gradually phased out and restricted to salvaging operation in line with the National Forest Policy (2006). At present, some 10,000 m^3 of timber, poles and fuel wood are annually exploited.

By virtue of their strategic location, the upland forests play a vital role in soil and water conservation. They are the main water catchment areas and they help regulate run-off and prevent floods. The environmental and protective functions of forests indirectly support other economic sectors such as agriculture and tourism, and provide direct and indirect employment to people in different subsectors such as plantation forestry, wildlife conservation, deer-ranching and eco-tourism, amongst others.

The environmental functions of forests are now considered most important in the Republic of Mauritius. The National Forest Policy (2006) lays more emphasis on conservation of soil, water and biodiversity and on non-consumptive use of forests like recreation and eco-tourism. Both native and planted forests play a vital role in watershed protection, sequestration of carbon dioxide and other ecosystem services.

1.4 Factors influencing the state of forest genetic diversity

Rapid economic development and increase in population are exerting tremendous pressures on the forestry resources. Mauritius has limited land area and the demand for land is very high leading to intense competition for this precious resource. Forest land is often the first to be sacrificed. Moreover, Mauritius is vulnerable to natural calamities. Cyclones, drought and climate change have adverse impacts on the forest ecosystems.

The key threats to the forest genetic resources are loss of biodiversity and habitat degradation. The main drivers are summarized as follows:

Land conversion and habitat fragmentation

The National Development Strategy (2003) states that over the next 20 years, a further 15,000 ha of land may need to be released from the agricultural and forestry sectors to meet the projected needs for development of housing and social amenities. Habitat destruction and fragmentation continues on account of high demand of land for infrastructural and housing development. Fragmentation results in large contiguous populations of native species breaking into small and often severely isolated populations.

Invasive Alien Species

Invasive alien species is considered the most serious threat to Mauritian native terrestrial biodiversity. There are dozens of aggressive invasive alien weeds threatening Mauritian biodiversity. Among the main invasive woody species are three forest trees (*Ligustrum robustrum* var. *walkeri, Litsea monopetala, Tabebuia pallida)*, four fruit trees and spice plants (*Flacouria indica, Psidium cattleianum, Schinus terebrinthifolius, Syzigium jambos),* six ornamentals

(*Ardisia crenata Hiptage benghalensis, Homolanthus populifolius, Lantana camara, Livistona chinensis, Ravenala madagascariensis),* one fodder plant (*Luecaena leucocephala)* and two accidental introductions (*Clidemia hirta, Rubus alceifolius).* Strawberry guava (*P. Cattleianum,* Myrtaceae*),* a native of Brazil, in Mauritius can reach densities of up to about seven million stems at or above 1.3 m high per km^2 (Ramlugun 2003). The negative effect of competition for light, water and minerals with native plants is massive, leading to major reduction in reproductive output, increased mortality and reduced growth rate as documented for Tambalacoque (*Sideroxylan grandiflorum,* Sapotaceae), (Baider and Florens, 2006), contributing further to the gradual replacement of native communities by alien plants which in turn constitute poor habitats for most native animals.

Many invasive alien animals also present a major threat to both native fauna and flora. At least 21 introduced species of mammals, reptiles and molluscs are naturalized in Mauritius. The Pink Pigeons (*Nesoenas mayeri*) are constantly at risk of predation by feral cats (*Felis catus*); and rats (*Rattus rattus and Rattus norvegicus*) have been documented to destroy up to 60% of the seed crop of Bois Colophane (*Canarium paniculatum, Burseraceae*) (Auchoybur, 2003) doubtless contributing to the poor regeneration of the tree despite in-situ conservation management. Monkeys (*Macaca fascicularis*), rats, pigs (*Sus scrofa*), and Rusa deer are directly detrimental to the native vegetation, and are either indirectly or, together with the lesser Indian mongoose (*Herpestes auropunctatus*). Predation by rats, tenrecs (*Tenrec ecaudatus*), for example, appears to pose a serious threat to the survival of endemic snails.

Because of these factors, the indigenous vegetation is becoming impoverished, both in numbers and genetically. Many species are now threatened with extinction.

Chapter 2.

The State of In-Situ Genetic Conservation (Table 10, p. 32)

In situ conservation has remained one of the priority areas for the conservation of biodiversity and genetic resources in the Republic of Mauritius. Two terrestrial National Parks, eight Islets National Parks, seven mainland Nature Reserves, eight offshore islets Nature Reserves and three Reserves have been proclaimed in the case of Mauritius whilst for Rodrigues four Nature Reserves have been proclaimed. The extent of forest lands protected by law (protected areas) in Mauritius has increased during the last decade with the proclamation of Bras D'Eau and Poste la Fayette Reserves in 2002 (which has been declared National Park in September 2011) and Islets National Parks in 2004. The total extent is now about 14,843 hectares **(Table 4)** including private forests classified as Mountain and River Reserves, representing about 7% of the total land area of the Republic of Mauritius. However, there is little conservation management on Mountain and River Reserves.

One of the strategic objectives of the National Biodiversity Strategy and Action Plan (2006-2015) is to establish a representative and viable Protected Area Network (PAN). This will be achieved under the project "Expanding coverage and Strengthening Management Effectiveness of the Terrestrial Protected Area Network on the island of Mauritius" funded by UNDP/GEF/Government of Mauritius. It has been approved at the level of the GEF at a total project cost of USD 11,747,000. Implementation has just started and will span over 5 years. The project goal is to catalyze working partnerships between private, NGO and Community Stakeholders to more effectively conserve native forest biodiversity in the protected areas of Mauritius. The project objective is to expand and ensure effective management of the protected area network to safeguard threatened biodiversity and to place under protection at least 8% of Mauritian terrestrial area within a PAN by 2015, 10% by 2020 and 25% by 2030.

Intensive *in-situ* conservation activities are being carried out in Conservation Management Areas (CMAs). The total extent of CMAs has nearly doubled during the last decade from some 44 hectares in 2000 to about 82.5 hectares now. CMAs are areas of native forest chosen as distinctive ecosystem types and are relatively well preserved. These areas receive active conservation management in an attempt to reverse the alien-driven degradation process. It comprises initial and maintenance weeding of invasive alien plants and fencing against Java Deer (*Cervus timorensis)* and feral pigs (*Sus scrota*) which are two large alien mammals perceived as very damaging to native vegetation.

Research has shown that recovery from weeding has an immediate positive effect on the plants and the effect is amplified over time (Baider and Florens 2006; Florens 2008). However, restoration according to current methodology used by Government agencies is very expensive (US $10,000 per ha) for initial weeding and fencing cost US $330 per running metre. Consequently CMAs are limited and it is recognized that the present extent is inadequate to conserve biodiversity in the long term. The extent of CMAs is expected to increase during the next ten years but unless low-cost methodologies to combat invasive alien species are found the increase will be limited.

Table4 - Legally protected forest areas in the Republic of Mauritius

Name	Conservation Status	Area (ha)
Formal State Protected areas - mainland		
Black River Gorges	National Parks	6,574
Bras d'Eau		497.20
Perrier	Nature Reserves	1.44
Les Mares		5.1
Gouly Pere		10.95
Cabinet		17.73
Bois Sec		5.91
Pouce		68.8
Corps de Garde		90.33
Grande Montagne (Rodrigues)		14
Anse Quitor (Rodrigues)		10
Valle D'Osterlog Endemic Garden	Endemic Garden	275
TOTAL – MAINLAND		**7570.46**
Formal State Protected Areas – Offshore Islets		
Pigeon Rock	Islet National Park	0.63
Ile D'Ambre		128.
Rocher des Oiseaux		0.1
Ile aux Fous		0.3
Ile aux Vacoas		1.36
Ile aux Fouquets		2.49
Ilot Flamants		0.8
Ile aux Oiseaux		0.7
Round Island	Nature Reserves	168.84
Ile aux Serpents		31.66
Flat Island		253
Gabriel Island		42.2
Gunner's Quoin		75.98
Ilot Mariannes		1.98
Ile aux Aigrettes		24.96
Iles aux Cocos (Rodrigues)		15
Iles aux Sables (Rodrigues)		8
Ile de la Passe	Ancient Monument	2.19
TOTAL - ISLETS		**758**
Privately Owned Forest Land		
Varied	Mountain Reserves	3,800
Varied	River Reserves	2,740
TOTAL – Private Forests		**6,540**
GRAND TOTAL		**14868.46**

In-situ conservation is also being actively carried out on some of the islets surrounding Mauritius, especially Round Island and Ile aux Aigrettes. Round Island, 169 hectares in area, off the north coast of Mauritius supports the last remnants of palm savanna along with a number of endemic reptiles and many sea birds. For its size it is one of the most important islands in the Indian Ocean for biological conservation. Control of invasive alien species is being effected as well as monitoring of the rare fauna and flora of the islet. Another islet, Ile aux Aigrettes, leased to the Mauritian Wildlife Foundation (MWF), is subject to active conservation management. The islet of an extent of about 25 hectares has been successfully restored. There is a small nursery propagating native and endemic species specific to the island. The native forest is enriched both by natural vegetation and planting out of native plant species.

In Rodrigues, the Forestry Service and the Mauritius Wildlife Foundation (MWF) have jointly undertaken significant work in the restoration of Grand Montagne and Anse Quitor Nature Reserves where about 80,000 native and endemic plants have been planted to date.

Chapter 3.

The State of Ex-Situ Genetic Conservation (eg include tables , 8a and 8b, and 11 P.33)

Ex-situ conservation activities have increased considerably during the last decade. The Forestry Service (FS), the National Parks and Conservation Service (NPCS) and the Mauritian Wildlife Foundation (MWF) have all contributed in the successful propagation of large numbers of endangered native plants of at least 100 species. Arboreta have been established at Robinson, Monvert, Pamplemousses and Sophie. Moreover, a native seed bank is already operational. The University of Mauritius, the Mauritian Sugar Industry Research Institute (MSIRI), the Plant Genetic Resources Unit of the Agricultural Services, amongst others, are contributing in ex-situ conservation as well as international organizations.

The Forestry Service is running a Greenhouse and a Tree Seed Centre for the propagation of native/endemic plants mainly for eventual re-introduction in the forests. These propagation facilities have a potential of raising some 100,000 seedlings annually. Some critically endangered species like Syzygium guehoii, Trochetia parviflora, Pandanus iceryi, amongst others, have been successfully raised during the last few years.

The NPCS has a well developed *ex-situ* plant conservation programme. Some 200 species of native plants of which 120 species are flowering plants and 90 species of ferns are being propagated from spores, seeds and cuttings in the Native Plant Propagation Centre. In 2006, the NPCS in collaboration with the Mauritius Herbarium, MSIRI and Royal Botanic Gardens initiated the setting up of native seed bank facility in the country, with collection back up at the Millennium Seed Bank in the United Kingdom. Between 2006 and 2009, this project was funded by the Darwin Initiative/Government of Mauritius/Mauritius Herbarium. The seed bank is operational and up to now seeds of some 200 native plants are kept there. The project aims at seed banking of 60% of all Mascarene endemic species that are considered threatened.

The MWF (NGO) has a native plant propagation nursery on Ile aux Aigrettes for the propagation of mainly plants found on islets. In Rodrigues, the organization collaborates with the Forestry Service in the field of conservation and propagation of native plants. There are two nurseries on the island which raise both native and exotic plants.

One field gene bank was established for the upland native species targeting 20 species with up to 50 individuals in the wild to capture genetic diversity of these species from each known wild individual. But such initiative is costly and not all species are being successfully represented.

There are five botanical gardens and among them are the Sir Seewoosagur Ramgoolam Botanical Gardens at Pamplemousses and Curepipe. The SSRBG of Pamplemousses is of an extent of 60 acres with some 500 plant species. It harbours a collection of native plants that are known to naturalists throughout the world, thus making it among the most visited sites in the Indian Ocean.

The Mauritian Herbarium, located at the MSIRI at Reduit, is an internationally acknowledged centre for research on plant life in the Mascarene and nearby islands. The Herbarium collections are mainly strictly regional, being confined to plant material mainly from the three Mascarene Islands of Reunion, Mauritius and Rodrigues. The collections now comprise more than 25,000 sheet-mounted specimens all carefully preserved in air- conditioned room. In collaboration with the MSIRI, IRD/Museum national de Histoire naturelle, Paris and Royal Botanical Garden Kew, the project “Flore des Mascareignes” was initiated in 1974 and is now completed. With an updated flora and increased number of field surveys, 4-6 new species have been found since 2002 (1 described already), 4 new plant records

were added for Mauritius (2 orchid and 2 ferns), 2 species considered extinct in the wild were relocated and 13 native plant species thought extinct were also relocated.

Chapter 4.

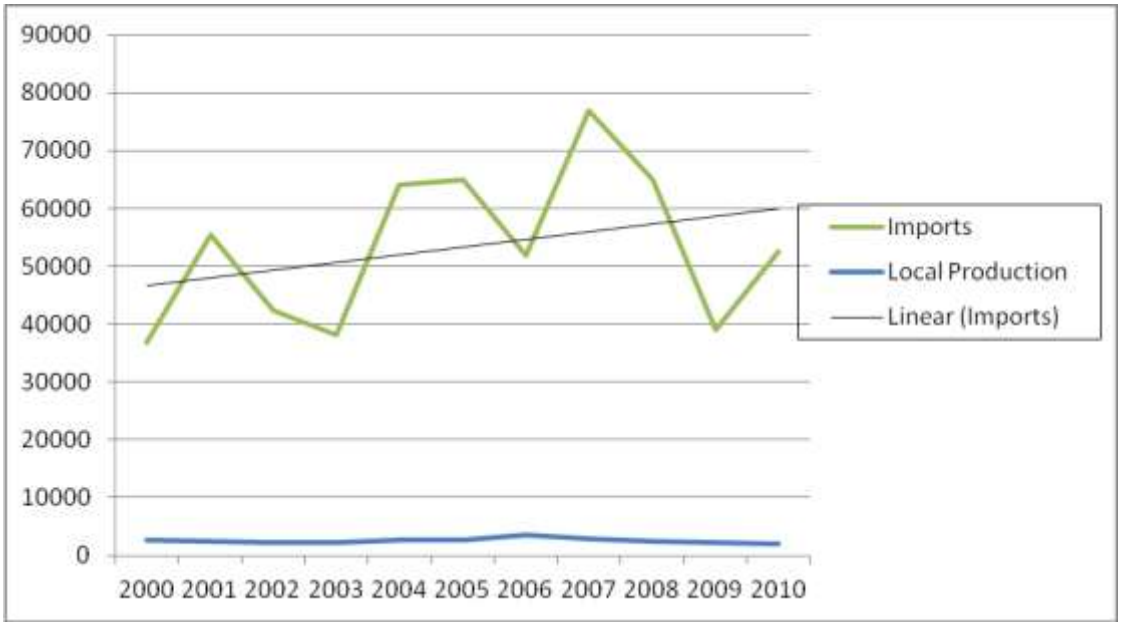
The State of Use and Sustainable Management of Forest Genetic Resources (Tables 13, 14, 15 16 could be included here)

Although the forests of the Republic of Mauritius are limited in area, they do provide a range of valuable wood and non-wood products. Examples include timber, poles, firewood, fruits, honey, medicinal plants, fodder and fibres. Timber, poles and fuelwood is exploited in exotic forest plantations. Plants like Aloe (*Furcraea foetida*), *Pandanus (Pandanus utilis and P. heterocarpus*), date palms (*Phoenix dactylifera*) and bamboo are extensively used in local handicrafts. The tourism industry has become one of the main pillars of the economy with a targeted 2M tourists by 2015. Thus the local handicraft products, which are already in high demand, have great scope. Medicinal plants are collected from the forests by the local inhabitants, especially the low income group. They are traditionally used to treat various ailments and provide a cheap source of natural remedies.

4.1 Wood Exploitation

Annually some 10,000 m^3 of timber, poles and firewood are exploited in exotic forest plantations comprising mainly of Pine and Eucalyptus. Local timber production meets only about 10% of the demand for utility timber. The rest as well as almost all the requirements for furniture timber are imported. Mauritius is and will always be a net importer of timber.

Fig 2 - Trend in local production and imports of sawn timber (m^3)



The use of fuelwood has declined considerably over the years since import duty was removed on cooking gas in the 1990s. Virtually every household uses cooking gas now. It should be noted that the wood sold as firewood by the

Forestry Service is mostly converted into woodchips and used as litter in the poultry industry, amongst others, where the demand is high.

Wood production has been reduced over the years. The forests of Mauritius are now managed for the environmental functions rather than timber production. The NFP (2006) recommends that timber exploitation be gradually phased out and restricted to salvaging operations following cyclones and other natural disasters. The policy lays more emphasis on the protection role of forest in soil and water conservation, the preservation of biodiversity, recreation and ecotourism.

4.2 Wild-fruits collection

Many introduced fruit tree species have naturalized or become invasive in the forest of Mauritius, e.g. *Psidium cattleianum* (goyave de chine). This fruit is available from February to July and provide part-time employment to the low-income group. Picking guava is also a very popular Mauritian pastime. Other fruits like Jamblon are also collected on a seasonal basis.

4.3 Palm hearts

The endemic palmist blanc (*Dictyosperma album var.album*) is cultivated in plantations on marginal lands for their cabbage. The revenue generated is estimated to be worth 20 million rupees MRU (Govinden 2004). The local demand from hotels and restaurants is greater than supply. Wild palms are rare and are not exploited.

4.4 Medicinal plants

A few families have earned their living for generations from sale of traditional remedies using native species collected from the forest. However, this is a dying trade and much traditional knowledge passed down orally is being lost. In addition, several of the native species used are critically endangered, sometimes due to over harvesting.

A scientific survey funded by the European Union and carried out under the aegis of the Indian Ocean Commission estimated that there are about 100 native plants species with medicinal properties in Mauritius and Rodrigues in addition to 500 introduced species (Gurib-Fakim et al, 1994-2000). Other species have been found to contain active ingredients for herbicides and pesticides (Dulloo, 1995).

4.5 Handicraft products

Vacoas leaves (*Pandanus utilis*) are used for making baskets, mats and hats in the Republic of Mauritius. Bamboo is used by Fishermen to make fishing traps. Raffia stalks are used in the making of blinds and other handicraft products. A wide range of products ranging from ship models, trays, lamp-shade, ash-trays, etc, are made from local wood to meet the demand from tourists for local souvenirs.

Chapter 5.

The State of National Programmes, Research, Training, Education and Legislation (Include table 17, 18 and 19 P 35)

5.1 The National Environment Policy

The National Environment Policy (NEP), approved by Government in 2007, aims at establishing a clear policy framework and set appropriate environmental objectives and strategies. Its goal is two-fold: it has to help in the management of the ecosystems which support the economic growth of the country and it has to contribute to the improvement of the quality of life of the population. This new policy is being implemented mainly through the revised National Environment Strategy and Action Plan.

The conservation of environmental resources forms part of its main objectives : "To protect and conserve critical ecological systems and resources, and invaluable natural and man-made heritage which are essential for life-support, livelihoods, economic growth and a broad conception of human well being."

The national targets for conservation and sustainable use of biodiversity are:

(i) A representative selection of habitats and ecosystems of the Republic of Mauritius shall be protected and managed for future generations.
(ii) Major disturbances such as infrastructure development shall be avoided in threatened habitats and ecosystems e.g. in Environmentally Sensitive Areas (ESAs) and in vulnerable ecosystems important ecological functions shall be maintained.
(iii) Harvesting and other use of living resources including biota shall not cause species to become extinct or endangered.
(iv) The introduction of alien species through human activity shall not damage or impair ecosystem functions.
(v) Populations of threatened species shall be maintained or restored to viable levels.
(vi) Enhance community access to nature areas and nature parks.
(vii) Implement the National Biodiversity Strategy and Action Plan and the approved National Forestry Policy.

5.2 The National Forest Policy

The overall objective of the NFP (2006) is to protect and enhance the country's natural environment, biodiversity and national heritage, while at the same time promoting recreation and tourism. It lays more emphasis on the environmental and protective functions of forests rather than timber production. In fact it recommends that timber exploitation be gradually phased out and restricted to salvaging operations following natural disasters such as cyclones.

The forests of the Republic of Mauritius are small in area but perform vital functions, the most important of them being soil and water conservation. The environmental functions of forests in small islands far outweigh their direct economic function. The roles of forests in reducing soil erosion, carbon sequestration, conservation of biodiversity and genetic resources, recreation and ecotourism are now widely recognized and valued. Consequently, conservation, protection and development of native species through sustainable management of forests and the environment are priority objectives of the overall national policy of Mauritius.

5.3 National Forestry Action Programme (NFAP)

A draft NFAP was prepared to implement the NFP (2006) but has not yet been finalized. Owing to the time lag, there is an urgent need to review and finalize the NFAP with the assistance of international organizations that have the required expertise.

5.4 National Biodiversity Strategy and Action Plan (NBSAP)

The NBSAP (2006-2015) for the Republic of Mauritius was approved by the Government in December 2006. Its vision is that people in the Republic of Mauritius enjoy a healthy environment and an enhanced quality of life, through effective conservation and sustainable use of biodiversity in line with national and international commitments, while respecting local values. The Mission Statement states that "Mauritius will continue to work towards achieving a significant reduction in the rate of biodiversity loss by 2015".

There are five strategic objectives set in the NBSAP, namely:-

(i) to establish a representative and viable Protected Area Network (PAN)
(ii) to manage key components of the biodiversity
(iii) to enable sustainable use of biodiversity
(iv) to maintain ecosystem services and
(v) to manage biotechnology and its products

The strategy has 10-year duration 2006-2015 with an independent mid-term review. This will provide the basis for a consultative revision of the NBSAP so as to enable an adaptive management approach and the optimal attainment of goals and objectives.

5.5 The National Invasive Alien Species Strategy and Action Plan (NIASSAP)

The NIASSAP (2009-2018) aims at a comprehensive and coordinated approach to the management of the Invasive Alien Species (IAS) threat in the country. It presents a vision of a nation in which the negative impacts of IAS on the economy, environment and society are avoided, eliminated or minimized. The strategy serves as a guide to the nation so that all Mauritian are together responsible for avoiding, eliminating or minimizing the negative impacts of IAS.

The strategy comprises five management elements: Prevention, Early Detection and Rapid Response, Eradication, Control and Management and Restoration. It also consists of five cross-cutting elements (enabling actions) that are: Legal, Policy and Institutional Frameworks, Capacity Building and Education, Information Management and Research, Public Awareness and Engagement and International Cooperation.

5.6 Institutions actively engaged in conservation and sustainable use of forest genetic resources

There are a number of institutions dealing with conservation and sustainable use of forest biodiversity/genetic resources. Some are directly involved with the conservation, protection, management and sustainable use while others are involved indirectly through formulation of policies, enforcement, awareness-raising and taking onboard biodiversity/genetic resources consideration.

Table 5 - Institutions involved with the conservation of forest biodiversity/ genetic resources

Name of Institution	Type of institution	Activities or Programs	Contact Information
Forestry Service	Government	In-situ and Ex-situ conservation Conservation education and awareness raising	Forestry Service Les Casernes, Curepipe Tel (230) 6707254 Fax (230) 6743449
National Parks and Conservation Service	Government	In-situ and Ex-situ conservation Conservation education and awareness raising	NPCS, Reduit Tel (230) 4642993 Fax (230) 4660453
Mauritian Wildlife Foundation	NGO	In-situ and Ex-situ Conservation Conservation education and awareness raising	MWF, Vacoas Tel (230) 6976097 Fax (230)6976512
Mauritius Sugar Industry Research Institute	Research Institute	Research Herbarium	MSIRI, Reduit Tel (230) 4541061 Fax (230) 4541971
Ministry of Tourism and Leisure	Government	Tourism and ecotourism policies	Min. of Tourism, Port Louis Tel (230) 2117930 Fax (230) 2086776
Agricultural Services Horticulture Division Plant Genetic Resource Unit	Government	Ex-situ conservation of certain endangered plant species and their rescue	Horticulture Division Reduit Tel/Fax (230) 4644857
Agricultural Research Extension Unit	Research Institute	Conservation of crops' germplasm and their use in crop improvement programmes	AREU, Q.Bornes Tel (230) 4663885 Fax (230) 4648809
Food and Agriculture Research Council	Research Institute	Research	FARC, Reduit Tel (230) 4651011 Fax (230) 4653344
University of Mauritius	University	Training Research Tissue culture of endemic and medicinal plants	UoM, Reduit Tel (230) 4037400 Fax (230) 4549642
Ministry of Agro Industry and Food Security	Government	Development of forest and biodiversity policies, strategies and action plans	Min.of Agro Industry & FS Port Louis Tel (230) 2127931 Fax (230) 2124427
Ministry of Environment and Sustainable development	Government	Development of policies, strategies and action plans. Issue of Environment Impact Assessment (EIA) license	Min. of Environment & SD Port Louis Tel (230) 2036200 Fax (230) 2119524
Ministry of Housing and Lands	Government	Physical land use planning	Min. of Housing & Lands Port Louis Tel (230) 2136454 Fax (230) 2136457
Mauritius Police Force	Government	Enforcement of environmental laws	Police Head Quarters Line Barracks – Port Louis Tel (230) 2080034
Mauritius Institute of Education	Training Institute	Teacher training and curriculum development including biodiversity and environment	MIE, Reduit Tel (230) 4016555 Fax (230) 4541037
Sir Seewoosagur Ramgoolam	Government	Conservation of germplasm	SSR Botanical Garden

Botanical Garden			Pamplemousse Tel (230) 2439401 Fax (230) 2439402

5.7 Research, Training and Education/Public awareness

5.7.1 *Research*

Research programmes in the field of biodiversity/genetic resources are undertaken mainly by the University of Mauritius, the MSIRI, FARC and AREU. Although research works have increased during the last decade much remain to be done in the field of forest genetic resources. The level of research is still inadequate and limited mainly due to lack of funding and trained personnel.

The University of Mauritius has carried out inventories of all medicinal plants through an Indian Ocean Commission Project (Inventory and study of the Medicinal and Aromatic Plants of the states of the Indian Ocean). A computerized database on these plants now exists at the University. Biodiversity research by students for higher degrees is encouraged and supported. Moreover, there are modules that have been devised on ecology (biodiversity and have incorporated in courses imparted at the under and post graduates levels. The Mauritius Research Council (MRC) has funded several projects submitted by the University of Mauritius. The aims are to validate traditional data and to test for the biological activity of indigenous/endemic plant extracts.

5.7.2 *Training*

Scientific and technical training in the field of conservation and sustainable use of biodiversity/genetic resources are being undertaken both as part of formal training programmes at the level of tertiary education as well as hand on trainings at the level of institutions involved in natural resources management.

The University of Mauritius degree in biology now incorporates four modules related to Ecology. Some Mauritians students have received training at MSC level in Ecology and conservation in overseas Universities during the last decade. Several PhD and Masters students are also being trained in the field of photochemistry and ethno botany at the University of Mauritius.

5.7.3 *Education/Public Awareness*

Public education and awareness forms an integral part of the routine activities carried out by institutions involved in natural resources management. Talks on forest biodiversity and conservation are effected at schools as well as guided tours in the forest for pupils and students. Moreover, the curriculum of primary and secondary schools includes a component on forest biodiversity. Nature corner is being created in school's compound. Posters, brochures, films and newspaper articles are produced regularly. Exhibitions are held every year, especially during the celebration of a world event like Environment Day, Food Day, Biodiversity Day, etc. A campaign of awareness against invasive alien species (IAS) has been started with the launching of quarantine posters at the airport and production of posters about IAS for schools. The MWF published calendars, diaries and produce souvenirs with endangered species photos, engraving etc. Talks on forest biodiversity on TV and Radio have been significantly increased during the last decade.

Rodrigues has a dedicated MWF education officer who visits schools regularly and organize weekly weeding and planting for volunteers in the forest.

5.8 National Legislation

The following laws that are relevant to forest genetic resources in Mauritius are:

(i) The Forest and Reserves Act 1983
(ii) The Wildlife and National Parks Act 1993
(iii) The Environment Protection Act 2002
(iv) The Plant Protection Act 2006
(v) The Genetically Modified Organism Act 2004

These laws together with the forestry-related international conventions of which Mauritius is a signatory (UNCBD, UNCCD, UNFCCC) demonstrates real political will to address biodiversity issues. Mauritius has also signed the Cartagena Protocal on Biosafety in 2002 and the International Treaty on Plant Genetic Resources for Food and Agriculture.

A Seed Bill and a Plant Breeder's Right Bill have been drafted and these are at an advanced stage. The former will help to control and regulate seeds coming in and leaving Mauritius.

Although Mauritius has a proper legal framework for the protection and conservation of forest biodiversity, there is a need for strengthening forest legislation to better protect forests, especially privately-owned forest lands. Improvement is needed regarding protection of endangered species, increasing penalties for law contraventions and increasing the area of forest land currently under legal protection. All forests found in environmentally sensitive areas (water catchment/hotspot of biodiversity) should be declared National Forest under the Forest and Reserves Act 1983. According to the Act, any area declared to be a National Forest shall be inalienable and shall not be devoted to any use other than forest land. National Forest has not yet been declared in Mauritius. Another setback is the unsuccessful attempt of the National Invasive Alien Species Committee (NIASC), set up in 2003, to include a Black list of the worst invasive weeds in the Plant Protection Act 2006 with a view to prevent their entry in Mauritius.

There is a need to make provision for the protection, conservation and sustainable use of forest genetic resources in national legislation. The issue of Intellectual Property Right must also be addressed. The implementation of legal instruments is beset by constraints like financial and qualified human resources.

Chapter 6

The State of Regional and International Collaboration (Tables 20 and 21)

The Government of Mauritius is signatory to many International Conventions relating to sustainable use, development and conservation of biodiversity/genetic resources including:

- The IUCN Convention for the Protection of Nature and Natural Resources
- The African Convention for the Protection of Nature and Natural Resources
- The United Nation Convention on Biological Diversity (UNCBD)
- The Convention on International Trade in Endangered species of Fauna and Flora (CITES)
- The Convention of Wetlands of International Importance especially as Waterfowl Habitat (RAMSAR)
- The United Nation Framework Convention on Climate Change (UNFCCC)
- The United Nation Convention to combat desertification (UNCCD)

The Government is also Member/Party/Signatory to the following organization/committee/commission:

- FAO and Commission on Plant Genetic Resources
- Inter-African Phytosanitary Council of the Scientific and Technical Commission of the OAU
- Committee for Agricultural Collaboration of the Mascarene islands
- The World Conservation Union (IUCN)

The Government has strong ties with a host of international organizations like the Durell Wildlife Conservation Trust (UK), Peregrine Fund (USA), World Wide Fund for Nature (WWF), Kew Gardens, Flora and Fauna International and Island Council for Bird Preservation. There is memorandum of understanding with some of these organizations.

Mauritius has established many bilateral relations in the field of biodiversity and plant genetic resources. A few of these are:

- Indo-Mauritian Commission
- Mauritius and China in the field of medicinal plants
- Indian Ocean Commission (IOC)
- South African Development Community (SADC)
- SADC Plant Genetic Resource Centre

Regional and International collaboration is essential for the effective conservation and sustainable use of biodiversity/genetic resources in the Republic of Mauritius. The country has benefitted a lot in the field of conservation and biodiversity in terms of capacity building, expertise, funding and collaboration. International organization like GEF, UNDP and FAO contribute in the funding of important conservation projects like 'Capacity Building for Sustainable Land Management in Mauritius and Rodrigues and "Expanding coverage and Strengthening Management Effectiveness of the Terrestrial Protected Area Network on the Island of Mauritius".

The impact of International Conventions (UNCBD, CITES, UNFCC, UNCCD etc) on the conservation of forest genetic resources is positive and much progress has been achieved during the last decade. Mauritius is committed to the cause of environment/biodiversity protection and sustainable development. However, the help and collaboration of regional and international organizations need to be strengthened in the field of forest biodiversity and genetic resources. Priority areas of collaboration are in-situ and ex-situ conservation, capacity building, research, and technology transfer.

Chapter 7

Access to Forest Genetic Resources and sharing of Benefits Arising out of their use

A Material Transfer Agreement (MTA) for any biological material (native and exotic) has been approved by the State Law Office and is in place. MTA allows access to the native genetic resources for non commercial purposes. The MTA is in line with CBD objectives and the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGR FRA).

A plant Breeder's Right Bill has already been drafted to take on board the issue of Intellectual Property Rights (IPR). This bill includes a section on accession of Plant Genetic Resources, sharing of benefits and sustainability.

The Plant Genetic Resources Unit of the Ministry of Agro Industry and Food Security is bound by the conditions of sharing of benefits by the UNCBD, SADC GRC and other international organizations with which it shares germplasm.

Chapter 8

Contribution of Forest Genetic Resources to Food Security, Poverty Reduction and Sustainable Development (Refer to table 22, p. 39)

Most of the forests of Mauritius are strategically located in the uplands and as such play a vital role in soil and water conservation. By virtue of their location, their protective function is of great significance to the national economy as most of the agricultural crop plantations are found at mid and low elevations. The environmental functions of forest are now widely recognized in the contribution of food security and sustainable development on Small Island Developing States (SIDS).

The forests of the Republic of Mauritius do provide a range of wood and non-wood forest products that benefit the population especially the lower-income groups. Poor people collect firewood, honey, grass, leaves, fruits, etc, in the forests free of charge for their own consumption and for sale, and thus earn additional revenue. Moreover, the handicraft sector, in both Mauritius and Rodrigues, has a degree of reliance on these forest products.

The remaining native forests harbour a rich biological diversity of fauna and flora that represent a huge potential in term of genetic resources. The medicinal properties of many of these plants have been traditionally used by the local inhabitants. However, many of the native/endemic plants are endangered. Many species exist as few individuals in the wild leading to genetic impoverishment and ultimately extinction before their potential for drugs/pesticides have been evaluated. The priority of the moment is to save and propagate these endangered plants through both in-situ and ex-situ conservation so as to safeguard the remarkable native plant genetic resources of still mostly untapped potential.

Chapter 9

Challenges, Opportunities and National Needs

The challenge for the conservation and sustainable use of forest biodiversity/genetic resources is really daunting in the Republic of Mauritius. The task of reducing and ultimately reversing the trend of biodiversity loss and forest genetic erosion is gigantic. Being a Small Island Developing State (SIDS) with its own characteristics such as high population density, limited land mass, remoteness, prone to natural calamities, limited natural resources endowment and a high ratio of coastline to land area, Mauritius faces a lot of constraints in the path of sustainable economic development. Forest biodiversity resources are unfortunately characterized by extensive habitat degradation and high rates of species extinction. The problem is being exacerbated by climate change.

However, the Government of Mauritius has shown its commitment to the cause of biodiversity conservation and environment protection. Most of the remaining state native forests have been declared Nature Reserves and National Parks with proper management plans for most of them. A legal framework, although inadequate, exist for the sustainable management of natural resources and the environment. National policies, strategies and action plans related to Forestry/Biodiversity/Environment have recently been reviewed and updated. The overall objective is the conservation, protection and sustainable use of natural resources for the benefit of present and future generations. The Government is fully committed to the project "Maurice Ile Durable" and a green paper has recently been published. Sustainable development is high on the agenda. Mauritius is a signatory to the Forestry/Biodiversity related International Conventions like UNCDB, UNFCCC, UNCCD and CITES. Regional and international collaboration offer new opportunities in the sustainable management of forest genetic resources.

The major constraints, gaps and national needs for the effective conservation and utilization of forest biodiversity/ genetic resources are:

1. Inadequate financial and human resources;
2. Limited area under protection and inadequate active conservation management of native ecosystems ;
3. Weak security of land tenure for forest lands;
4. Lack of training and limited human capacity at all levels;
5. Inadequate protection of biodiversity, especially on private land;
6. Incomplete inventory;
7. Habitat fragmentation;
8. Limited inter-institutional communication and collaboration;
9. Limited research or monitoring to support adaptive management;
10. Limited awareness of the population at large;
11. Limited development of conservation as a profitable venture;
12. Commitment to conservation not necessarily a priority for government;
13. Research in new cheaper methodologies to control IAS with a view to rehabilitate degraded native forests rich in biodiversity on a large scale;
14. Involvement of volunteers in conservation work;

15. Review forest/biodiversity legislation to include forest genetic resources conservation and provide better protection to all types of forests and the endangered native/endemic plants;
16. Providing incentives to private land owners to conserve biodiversity/genetic resources on their land;
17. Create centralized biodiversity forest genetic resources database for easy and efficient access to information;
18. Setting up of a National Spatial Data Infrastructure (NSDI); and
19. Intensification of awareness-raising and mass education on biodiversity and forest genetic resources.

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12. Environment Protection Act 2006, Government of Mauritius

13. Plant Protection Act 2006, Government of Mauritius.

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Abbreviations

AREU	Agricultural Research & Extension Unit
CITES	Convention on International Trade in Endangered Species of fauna & flora
CMAs	Conservation Management Areas
FARC	Food and Agricultural Research Council
FLIS	Forest Land Information System
GEF	Global Environment Facility
IAS	Invasive Alien Species
ITPGR FRA	International Treaty on Plant Genetic Resources for Food and Agriculture
IUCN	International Union for the Conservation of Nature
MRC	Mauritius Research Council
MSIRI	Mauritius Sugar Industry Research Institute
MTA	Material Transfer Agreement
MWF	Mauritian Wildlife Foundation
NBSAP	National Biodiversity Strategy and Action Plan
NEP	National Environment Policy
NFAP	National Forestry Action Programme
NFP	National Forest Policy
NGO	Non-Governmental Organization
NIASC	National Invasive Alien Species Committee
NIASSAP	National Invasive Alien Species Strategy and Action Plan
OAU	Organization of African Unity
PAN	Protected Area Network
SADC GRC	South African Development Community Genetic Resources Centre
SIDS	Small Island Developing States

UNCBD United Nations Convention on Biological Diversity

UNCCD United Nations Convention to Combat Desertification

UNDP United Nations Development Programme

UNFCCC United Nations Framework Convention on Climate Change

ANNEX I	
List of indigenos mediinal plants of Mauritius	
1. Acalypha integrifolia	***51. Mussaenda landia***
2. Acanthophoenix rubra	***52. Nuxia verticillata***
3. Agauria salicifolia	***53. Ochrosia borbonica***
4. Allophylus cobbe	***54. Olea lancea***
5. Antidesma madagascariense	***55. Phyllanthus casticum***
6. Antirhea borbonica	***56. Phyllanthus lanceolatus***
7. Aphloia theiformis	***57. Phyllanthus phillyreifoliuss***
8. Asparagus umbellulatus	***58. Piper borbonense***
9. Bacopa monnieri	***59. Pisonia lanceolata***
10. Badula insularis	***60. Pittosporum senecia***
11. Bakerella hiyifolia	***61. Plectranthus madagascariensis***
12. Bruguiera gymnorhiza	***62. Polygonum poiretii***
13. Bulbophyllum nutans	***63. Potamogeton thunbergii***
14. Canarium paniculatum	***64. Premna serratifolia***
15. Carissa xylopicron	***65. Protium obtusifolium***
16. Cassine orientalis	***66. Psidia arguta***
17. Chassalia coriacea	***67. Psidia terebinthina***
18. Clematis mauritiana	***68. Psidia viscose***

19. Clerodendrum heterophyllum	***69. Psyloxylon mauritianim***
20. Cnestis glabra	***70. Rhizophora mucronata***
21. Crinium mauritianum	***71. Sarcostemma sp.***
22. Danais fragrans	***72. Scaevola taccada***
23. Dodonaea viscose	***73. Scolopia heterophylla***
24. Dombeya acutangula	***74. Scutia myrtina***
25. Doratoxylon apetalum	***75. Senecio lamarckianus***
26. Dracaena reflexa	***76. Sideroxylon grandiflorum***
27. Ehretia petiolaris	***77. Smilax anceps***
28. Embelia angustifolia	***78. Stadmania oppositifolia***
29. Embelia micrantha	***79. Stillingia lineata***
30. Erythroxylum laurifolium	***80. Syzygium glomeratum***
31. Erythroxylum sideroxyloides	***81. Tabernaemontana persicariifolia***
32. Eugenia tinifolia	***82. Tambourissa quadrifida***
33. Euphorbia pyrifolia	***83. arenna borbonica***
34. Faujasiopsis flexuosa	***84. Terminalia bentzoe***
35. Ficus reflexa	***85. Toddalia asiatica***
36. Ficus rubra	***86. Turraea casimiriana***
37. Foetida mauritiana	***87. Turraea oppositifolia***
38. Gaertnera psychotrioides	***89. Tylophora coriacea***
39. Gouania tiliifolia	***90. Vepris lanceolata***
40. Grangeria borbonica	***91. Zanthoxylon heterophyllum***
41. Ipomea pes-caprae	
42. Jumella fragrans	
43. Labourdonnaisia glauca	
44. Leea guineensis	

45. Lemna perpusilla	
46. Lomatophyllum purpureum	
47. Maytenus pyria	
48. Mimusops maxima	
49. Molinaea laevis	
50. Mussaenda arcuata	

ANNEX II

<u>List of Most Threatened Native Plants of Mauritius (less than 50 individuals)</u>

(IUCN Mauritius- 2007)

S.N.	**Species**	**Family**
1	Dictyosperma album var conjugatum	Arecaceae
2	Diospyros hemiteles	Ebenaceae
3	Hyophorbe amaricaulis	Arecaceae
4	Elaeocarpus bojeri	Elaeocarpaceae
5	Gaertnera hirtiflora	Rubiaceae
6	Psiadia cataractae	Asteraceae
7	Croton vaughanii	Euphorbiaceae
8	Eugenia bojeri	Myrtaceae
9	Hyophorbe vaughanii	Arecaceae
10	Polyscias paniculata	Araliaceae
11	Ficus lateriflora	Moraceae
12	Badula crassa	Myrsinaceae
13	Badula reticulata	Myrsinaceae
14	Cylindrocline commersonii	Asteraceae
15	Gaertnera longifolia var. pubescens	Rubiaceae

16	Albizia vaughanii	Leguminosae
17	Barleria observatrix	Acanthaceae
18	Xylopia amplexicaulis	Annonaceae
19	Eugenia vaughanii	Myrtaceae
20	Faujasiopsis reticulata	Asteraceae
21	Gaertnera longifolia var. longifolia	Rubiaceae
22	Gaertnera truncata	Rubiaceae
23	Memecylon myrtiforme	Melastomataceae
24	Monarrhenus salicifolius	Asteraceae
25	Pandanus carmichaelii	Pandanaceae
26	Pandanus palustris	Pandanaceae
27	Pilea laevicaulis	Urticaceae
28	Pilea pollicaris	Urticaceae
29	Polyscias gracilis	Araliaceae
30	Polyscias neraudiana	Araliaceae
31	Tambourissa pedicellata	Monimiaceae
32	Tetrataxis salicifolia	Lythraceae
33	Weinmannia tinctoria	Cunoniaceae
34	Chassalia coriacea var. johnstonii	Rubiaceae
35	Claoxylon linostachys ssp.pedicellare	Euphorbiaceae
36	Ochrosia borbonica	Apocynaceae
37	Diospyros neraudii	Ebenaceae
38	Chassalia boryana	Rubiaceae
39	Chionanthus boutonii	Oleaceae
40	Myonima vaughanii	Rubiaceae
41	Pandanus pseudomontanus	Pandanaceae

42	Dombeya populnea	Sterculiaceae
43	Syzygium bijouxii	Myrtaceae
44	Syzygium guehoi	Myrtaceae
45	Mussaenda landia var stadmanii	Rubiaceae
46	Tambourissa tetragona	Monimiaceae
47	Hibiscus boryanus	Malvaceae
48	Ocotea obtusata	Lauraceae
49	Euodia obtusifolia subsp gigas var. brachypoda	Rutaceae
50	Gaertnera cuneifolia	Rubiaceae