



CHAPTER 15: Protect, Restore and Promote Sustainable Use of Terrestrial Ecosystems, Sustainably Manage Forests, Combat Desertification, and Halt and Reverse Land Degradation and Halt Biodiversity Loss

Biodiversity is of high importance to the Republic of Mauritius. The native forests harbour a rich biological diversity of fauna and flora with high level of endemism.

Forests are estimated at 50,496 ha, of which 47,069 ha consist of the mainland and 3,427 ha in Rodrigues. Also, about 15,800 ha of forest, that is approximately 31 per cent of forests are privately owned and managed. There are, among others, 691 species of indigenous flowering plants, 52 native species of vertebrates and 30 species of land birds.

As a Small Island Developing State (SIDS), the country faces several challenges that impact its biodiversity.

In addition to the essential role forests, agriculture, inland water, wetlands, coastal, and marine biodiversity play in providing important ecosystem, they represent a key component of mitigation and adaptation measures for climate change impacts, disaster risk reduction, economy and human well-being.

Threats to our biodiversity

Pressures from human activities and natural factors have highly modified the ecosystems of Mauritius. The major threats to terrestrial biodiversity are the loss and the degradation of habitats biodiversity posing the risk of loss of species. Development in general, combined

Policy Framework:

1. **Native Terrestrial Biodiversity and National Parks Act to strengthen the protection, conservation and management of native, terrestrial biodiversity in Mauritius;**
2. **National Biodiversity Strategic and Action Plan (2017-2025) integrates Mauritius's obligations under the Convention on Biological Diversity into national development and Ministry of Agro-Industry and Food Security sectoral planning frameworks;**
3. **The Protected Area Network Expansion Strategy (In collaboration with the UNDP) to safeguard the remaining biodiversity, the Government of Mauritius has established a terrestrial protected area network (PAN).**

with the introduction of invasive species of plants and animals, has had a disastrous effect on the native flora and fauna. As a result, the Republic of Mauritius is part of one of the world's biodiversity hotspots.

It has been designated by IUCN as a *Centre of Plant Diversity* and is included in the *Madagascar and Indian Ocean Islands biodiversity hotspot*. The country is characterized by a high level of endemism, with 39 per cent of plants, 80 per cent of non-marine birds, 80 per cent of reptiles, and 40 per cent of bat species reported as endemic.

BRIGHT SPOTS

Mauritius does not trade its protected Mauritian flora and fauna. Government, through the *National Parks and Conservation Services* (NPCS) and the *Mauritius Revenue Authority* (MRA), ensures that there is no any illegal wildlife trade. The exotic unprotected long tailed macaques are traded for biomedical research purposes only.

Conservation Status of Endemic Birds

Mauritius is seen as a leader in conservation. Following decades of invasive species control and habitat restoration, including captive breeding programme, the *Mauritius Pink Pigeon*, which was down listed from *Critically Endangered* to *Endangered* in 2000, was down listed to *Vulnerable* in November 2018. The population grew from only 10 wild birds in 1990s to 300 by 2000 and 400 in 2018.

Positive trends have been registered for endemic species of which 5 fauna species 8 (4 birds and 1 bat) have been down listed the last four years on IUCN Red List of Threatened Species from *Critically Endangered* to *Endangered* (*Psittacula eques*, *Foudia rubra*), *Endangered* to *Vulnerable* (*Pteropus niger*), *Vulnerable* to *Near Threatened* (*Foudia flavicans*, *Acrocephalus rodericanus*).

Tree Planting Campaign and any collaboration with NGOs/Private Sector

A nationwide campaign/programme with the aim to plant 100 000 trees annually from 2016-2020 was launched to encourage individuals and institutions to take part in tree planting and protection activities, and to emphasize the importance of forests and trees in improving the natural environment for healthy living.

During the period January 2016 – December 2017, a total of 205,982 plants (106,721 plants in year 2016 and 99,261 in 2017) have been planted or issued under the national tree planting campaign to Schools, socio-cultural organisations, NGOs and public. The planting sites identified for planting included: State lands (approx. 30 ha), Mountain Reserves (2.5 ha), river reserves (2 ha), roadside of Motorway M1 and M2 (approx. 22 km) and other roadsides, government compounds, schools, botanical garden (SSRBG), Socio-cultural compounds and NGOs' compounds.

Successful Collaborations with private sector/international agency

Ile aux Aigrettes

Ile Aux Aigrettes is an Islet Nature Reserve of approximately 25 ha. It is located at 850 m from the South East Coast of Mauritius and harbours a relic of native coastal vegetation. It is managed by Mauritian Wildlife Foundation (MWF) which is a Non-Government Organisation (NGO) in collaboration with the Forestry Service. Prior to 1986, the island vegetation was heavily degraded and invasive species.

The Islet has been leased to Mauritian Wildlife Foundation from 1986 to 2006 and now it has been renewed up to 2036 for conservation works. Coastal ecosystem and low land native species are restored and continuous management of the site is undertaken by the NGO including volunteers. Species of Flora include endemic ebony trees other rare species. Species of fauna include Pink Pigeon, Mauritius Fody, Gecko and Telfair Skink among others.

Ebony Forests

Ebony Forest is a privately-owned forest located near Chamarel and covers an extent of approximately 50 ha. The native forest is highly invaded. The aim of this company is to completely restore the native forest. Since 2006, over 15 ha of invaded forest have been weeded and over 110,000 native plants, propagated in the onsite nursery, planted. A visitor

centre was opened in 2016 to attract local visitors and tourists to learn about the historic forest and to reconnect the public with nature. Funds generated from this ecotourism project will be used to fund the long-term restoration of the forest. The Forestry Service has issued more than 4000 plants free of charge for the restoration of the forest within the mountain reserve.

Ferney vallée

Ferney vallée is a privately-owned forest of an extent of approximately 200-hectare located in the north of Mahébourg in Grand Port District. The native forests have been partially restored. The forest is managed for ecotourism purpose.

People – Wildlife conflict in Mauritius

Fruit Bats (*Pteropus niger*)

The Mauritius Fruit Bat (*Pteropus niger*) also commonly referred to as the Greater Mascarene Flying Fox, is endemic to the Mauritius and Reunion, although it has become extirpated from Reunion island in the early eighteenth century. Given its endemism status, this unique endemic mammal was classified as an “Critically Endangered” species (IUCN Status). It is important to note that two fruit bat species (*P. subniger* and *P. rodricensis*) has already become extinct on Mauritius due to cyclones, habitat loss and overhunting (Racey and Hutson, 2012).

Over the years, the Mauritius Fruit Bat population has evolved considerably across the island due to the absence of strong cyclones and with an increase in the availability of food (fruits, litchi, mangoes). The exponential population growth evidenced in fruit bats became a major concern for fruit growers in the island since they caused significant damage and economic loss to commercial fruit farms. There was a major public outcry identifying bats as a public nuisance and a serious “fruit pest”. Fruit growers simultaneously claimed fruit damages scaling up to 20-40% for Litchi, 10-100% for longane and 10-30% for mangoes.

The policy to subsidise the costs for netting of trees to orchard growers and backyard tree owners was not very successful in preventing economic loss for fruit growers. It was not found to be effective if the nets were not fixed appropriately.

The choice of a selective culling of the fruit bats was, thereon, approved after a Special Technical Committee composed of a group of multi-disciplinary experts reviewed scientific reports and recommended the selective culling of fruit bats in orchards and forests to limit the damage caused by the animal.

Following the policy of selective culling, the IUCN has revised the conservation status of the species from endangered to Critically Endangered.

Export of live long tailed macaques for non - human primates biomedical research

Mauritius has been one of the countries targeted by the international organisation for being one of the biggest suppliers of non-human primates for biomedical research. An average of 7000 live macaques from Mauritius are exported annually to European countries, USA. International animal welfare organisations have complained about the conditions under which the captive breeding is conducted in Mauritius. These international organisations have been protesting against vivisection and using animals for biomedical research

However, following monitoring conducted by authorities it has been confirmed that the conditions under which the captive breeding centres are operating abide to international norms. The captive breeding industry contributes to the employment of more than thousands of employees with six breeding centres operating in the country.

FUTURE CHALLENGES AND OPPORTUNITIES

| Challenges | Opportunities |
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| The rapid rate of degradation of native habitat, a result of invasive alien species infestation, raises significant concerns about the general state of forests, | More legal frameworks to be put in place |

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| <p>mountain and river reserves, including other protected areas</p> | |
| <p>Forest genetic resources Genetic analysis carried out on a few native species (palms, Coffea genus, etc). Most of genetic studies were carried out by universities and research institutions</p> | <p>No specific legislation for access to forest genetic resources and the fair and equitable Sharing of benefits arising from their utilization.</p> |
| <p>Rapid industrialization during the past few decades has resulted in higher standards of living and new aspirations of the people of Mauritius. This led to increased demand for leisure and recreation in natural surroundings. Ecotourism is on the rise.</p> | <p>More Monitoring is required to counter check the balance</p> |