

# Malaysia's Forests

*Looking ahead to 2020*



Malaysia's tropical rainforests form extremely complex ecosystems that are richer in tree species than similar areas of Africa and South America. They are the most species-rich plant communities known anywhere, with at least 15,000 species of flowering plants including 2,500 tree species.

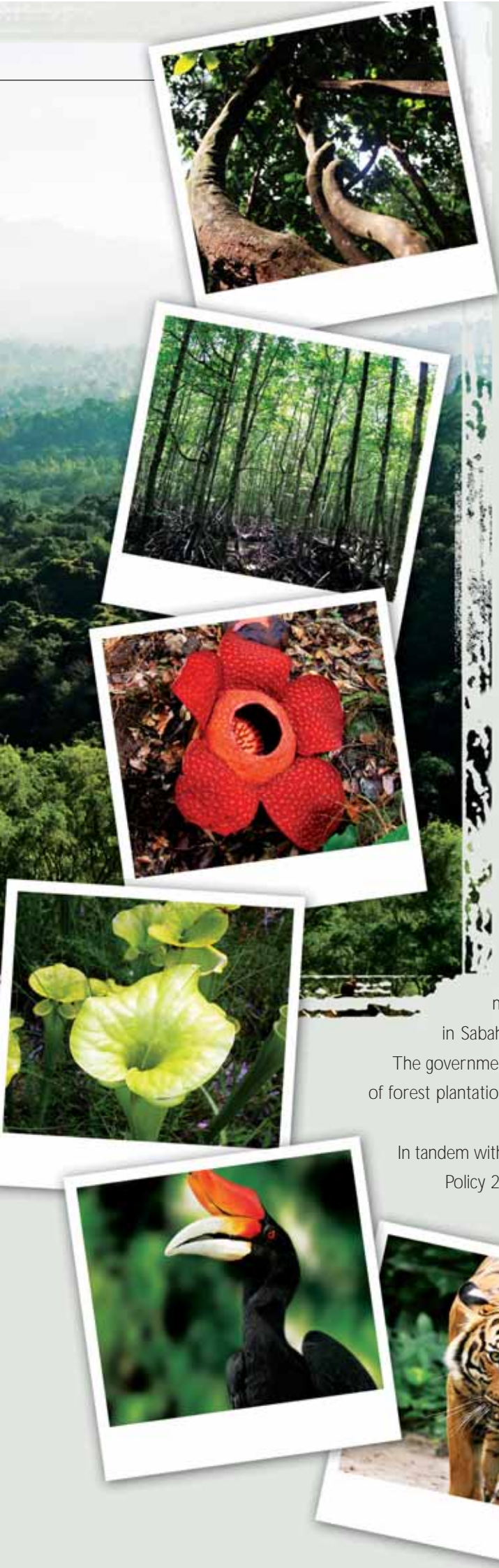
The forests are classified into three broad types, namely the dry inland forest or dipterocarp forest; peat swamp forest; and mangrove forest.

The area gazetted as Permanent Reserved Forests (PRFs) has increased steadily over the years. From 14.19 million ha in 1995, the PRF had increased to 15.3 million ha in 2005 (Table 1) with a major increase recorded in Sarawak.

This has contributed to meeting the four global objectives of the United Nations Forum on Forests, especially Global Objective 1 which advocates the reversal of the loss of forest cover worldwide through sustainable forest management.

The increase is also consistent with the goals and aspirations of Malaysia's Vision 2020 to ensure that 50% of its land area remains under permanent forest cover, as pledged at the United Nations Conference on Environment and Development in 1992.

Generally, a decline in forested land is inevitable due to conversion to permanent non-forest uses, such as for expansion of agriculture, infrastructure and settlements to meet population needs.



**Table 1: Malaysia - Forestry Sector Outlook**

	1985	2005	2020 (est)
Population	15.68 million	26.75 million	32 million
	1985	2005	2020 (est)
	(million ha)	(million ha)	(million ha)
Forested land	20.53	18.31	16.65
Permanent forest reserves	14.19	15.30	16.30
Forest plantations	0.06	0.41	3.94
	(50,000ha in Sabah)	(210,000ha in Sabah)	(500,000ha in Sabah)
	(1,910ha in Sarawak)	(130,000ha in Sarawak)	(3,000,000ha in Sarawak)
	(10,430ha in Peninsular Malaysia)	(74,000ha in Peninsular Malaysia)	(440,000ha in Peninsular Malaysia)
Agricultural tree crops	3.75	5.55	-
Oil palm plantations	1.47	4.05	-
National parks & bird/wildlife sanctuaries	-	2.44	-

Source: Timber Malaysia, Vol 14, No. 4, July-Aug 2008

To mitigate the impact of forestry activities in Malaysia, the Environmental Quality Act 1974 was amended to include Environmental Impact Assessment (EIA) in 1985. This requires project proponents to prepare a preliminary EIA report when:

- development schemes convert 500ha or more of forest land to a different land use;
- logging in an area of 500ha or more; and
- converting mangrove forests for industrial, housing and agriculture development covering 50ha or more.

The area under forest plantations is expected to increase by 3.94 million ha by 2020. About 500,000ha of forest plantations will be established in Sabah, with three million ha in Sarawak and the balance in Peninsular Malaysia. The government has also provided soft loans to the private sector to establish 375,000ha of forest plantations.

In tandem with the National Policy on Biological Diversity 1998 and the National Wetlands Policy 2004, more representative virgin forest areas are expected to be constituted by 2020, especially those representing the more fragile forest ecosystems – such as the lower and upper montane forests – and wetlands.

There will be more nature parks, wildlife and bird sanctuaries to cater for the projected increase of local and foreign visitors by 2020. Tourist arrivals are projected to reach 24.6 million by 2010.

A total of 48 priority sites – such as the National Park in Peninsular Malaysia, the Bako National Park in Sarawak and the Kinabalu Park in Sabah – have been identified to promote ecotourism. Kinabalu Park (75,370ha) and Mulu Caves National Park (52,865ha) have been designated as World Heritage Sites by the United National Educational Scientific and Cultural Organisation.

In addition, Malaysia joined Brunei and Indonesia in February 2007 in the 'Heart of Borneo' initiative to designate 24 million ha as protected areas, production forests and sustainable land-use areas. In 2005, Malaysia's conservation areas, which are totally protected by legislation, stood at 2.44 million ha. Of this, 2.05 million ha are located outside the PRFs, whilst another 0.39 million are located within the PRFs.

**Sustainable forest management**

By 2020 watershed management, especially in upland forested areas, will be better integrated into multiple-use forest management practices. This is to better safeguard water resources and protect agricultural land and settlements from flooding and landslides.

Currently, Malaysia has designated watershed areas covering 5.16 million ha with 4.08 million ha or 79.1% in Sarawak, 0.85 million ha in the peninsula and 0.23 million ha in Sabah.

A 'Central Forest Spine' (CFS) will be established under the National Physical Plan to serve as a reservoir for biological diversity, provide protection areas for catchments and create an environment for nature and ecotourism. The CFS will stretch from north to south of the peninsula covering an estimated 4.7 million ha.

Forest harvesting techniques, especially in the production forests of the PRFs, will be more conservative and benign to the an environment as a result of the wider application of reduced impact logging and the need to meet internationally by agreed criteria and indicators for sustainable forest management.

The experience gained from the five-year United Nations Development Programme-Global Environment Facility project on 'Conservation of Biological Diversity through Improved Planning Tools' is being implemented in Malaysia to harvest the forests.

Reduced impact logging (ground skidding) is being carried out in the peninsula, while low-impact logging (helicopter logging) is being carried out in Sarawak and, to a lesser extent, in Sabah.

All the areas in the PRFs will be sustainably managed by 2020, in accordance with agreed international criteria and indicators for sustainable forest management which could be certified by independent third party assessors, if required.

Under sustainable forest management, the harvesting prescriptions and cutting cycles prescribed for each forest type will depend on its stand structure, species composition and stocking as well as the soil and climatic conditions.



**Table 2: Log Production in Malaysia**

	<b>2005</b>	<b>2020 (est)</b>
Total log production	28.24 million m <sup>3</sup>	32.47 million m <sup>3</sup>
Total investment in the wood-based industry	-	RM25.4 billion (cumulative)
Timber product export receipts	RM21.5 billion	RM53 billion

By 2020, too, all timber products will be certifiable as legal and from sustainable managed forests by independent third-party assessors consistent with internationally recognised timber certification schemes, including the Malaysian Criteria and Indicators for Forest Management (2002) used by the Malaysian Timber Certification Council.

### **Downstream activities**

Log production in Malaysia is expected to increase to 32.47 million m<sup>3</sup> by 2020 from the 2005 level of 28.24 million m<sup>3</sup>, in tandem with projected increase of forest plantation, especially in Sarawak (Table 2).

Logs from PRFs are expected to contribute 28.30 million m<sup>3</sup> by 2020. Increased average production of almost 10 million m<sup>3</sup> will be seen between 2006-2010 and 2016-2020, mainly as a result of the aggressive forest plantation programme.

Under the Third Industrial Master Plan (2006-2020), investment in the wood-based industry is expected to reach RM25.4 billion or RM1.7 billion per annum. Exports of timber products are targeted to grow at an annual rate of 6.4% to generate RM53 billion by 2020. Most of the exports will be wood-based panel products and other high value-added products to cater to niche markets.

The industry is expected to convert wood waste materials into solid and engineered products for construction and household applications, such as flooring, door and decking.

Natural fibres like oil palm biomass, currently estimated at 30 million tonnes in the form of empty fruit bunches, trunks and fronds, can be processed into panel products – blockboards, particle boards, medium density fibreboards and even plywood. Future forestry R&D will focus on improving sustainable management practices of natural forest; silviculture of forest plantations; planting-stock production; and biotechnology.

Research will also enhance landscape and recreation; conservation of forest biological diversity; natural-products discovery; wood processing technology; wood protection and construction applications; downstream utilisation of wood residues for development of composite products, pulp and paper; and use of energy from biomass.

Malaysia may consider participating in forestry projects under the Clean Development Mechanism, especially if carbon sequestered from reduced impact logging and enrichment planting can be traded in the international markets.

Total carbon stock in the Malaysian natural forests at the end of 2005 was 3,440.5 million tonnes – 1,138.71 million tonnes in Peninsular Malaysia; 749.8 million tonnes in Sabah and 1,551.99 million tonnes in Sarawak.

*Source : Malaysian Timber Council*

*This article is based on an Executive Summary of a paper prepared for the Forestry Department of Peninsular Malaysia, Food & Agricultural Organisation and International Tropical Timber Organisation.*

