

Forestry in Malaysia : An Institutional Overview¹

Salleh Mohd. Nor²

Forest Research Institute, Malaysia

ABSTRACT

Forestry as with all land matters, under the Constitution, is a State matter. Thus the States, numbering 14, have considerable autonomy in decisions on forestry and related matters. However, the Federal Government, having jurisdiction over such issues as defence, education and research, endeavours to coordinate, standardise and advise the States on matters where the States have jurisdiction. However, forestry being a major revenue earner, is jealously guarded by the States. Under such circumstances and recognising the interdependencies of impacts of decisions at the State level, the institutional organisations play an important role in coordinating state activities to ensure that the benefits to the country as a whole are not sacrificed in favour of interests of individual states. Various legislative mechanisms have been established to ensure this coordinated effort.

A National Forestry Council forms the apex of national political coordination. The Federal Forestry Department is responsible for coordination of developmental activities at the State level, which are implemented by the State Forestry Departments within Peninsular Malaysia. Research is carried out centrally by the Forest Research Institute of Malaysia (FRIM), a statutory body formed in 1985 from a research division of the Forestry Department. The States of Sabah and Sarawak have their own Forestry Departments, independent of the Federal Department, and each with its own research unit independent of FRIM. Tertiary education in forestry is the sole responsibility of the Agricultural University at Serdang with a campus for Diploma level training in Sarawak.

In the developmental area in the State of Sabah, institutions have been formed to focus on specific areas of activities. The Sabah Foundation is responsible for the long term development of the State forests with a concession of about one million ha. Sabah Forest Development Authority (SAFODA) was formed to carry out reforestation of denuded areas. Sabah Forest Industries Ltd. (SFI) is responsible for the country's only integrated pulp and paper industry with its own afforestation program to support its resource supply. In Peninsular Malaysia various states have established State Corporations to manage large "sustained yield" concessions.

While wildlife and state parks are managed by the respective forestry departments in Sabah and Sarawak, it is the responsibility of a separate department in Peninsula Malaysia called the Department of Wildlife and National Parks (under the Ministry of Science, Technology and Environment). Timber trade legislation and promotion in the Peninsular is the responsibility of the Malaysian Timber Industries Board (MTIB) for Peninsular Malaysia and the Sarawak Timber Industries Development Corporation (STIDC) in Sarawak.

In the area of NGOs : the Institute of Foresters Malaysia, is the professional body of forestry in the country. A Malaysian Forestry Society caters for the public participation and interest. Other environmentally related

NGOs such as the Malayan Nature Society, the Environmental Protection Society, World Wildlife Fund, Friends of the Earth and the Consumers Associations also involve themselves in specific forestry activities.

A number of timber trade associations are also formed by the private sector to assist the industries.

INTRODUCTION

Malaysia is a federation of 14 states situated at the southeastern end of continental Asia. Twelve of the states are on Peninsular Malaysia while two large states, Sabah and Sarawak, are on Borneo Island, west and northwest of Kalimantan. Peninsular Malaysia has an area of 13.2 million ha, Sabah 7.6 million ha, and Sarawak 12.4 million ha. Forest covers 6.3 million ha in Peninsular Malaysia, 4.6 million in Sabah, and 9.4 million in Sarawak-20.3 million ha in all, or about 61 percent of the land area of 33.2 million ha.

Malaysia is a tropical country with hot and humid weather. Mean annual rainfall is about 180 cm, and average daily temperature is between 21° to 32°C. There is generally an absence of distinct wet and dry seasons, but certain regions are affected by seasonal monsoon weather, which results in heavy rainfall. The natural vegetation consists of humid tropical rain forest with the tree component dominated by Dipterocarpaceae. However, over 30 percent of the whole country has been converted to agriculture, especially tree crop agriculture. Rubber plantations occupy about 2 million ha and constitute the usual scenery in many parts of the country. Oil palm plantations cover about one million ha.

THE FOREST ENVIRONMENT

The forests of Malaysia are estimated to be over 130 million years old and are acknowledged as among the most complex and heterogeneous in the world. They contain an estimated 12,000 species of flowering plants, of which over 3,700 are trees. More than 800 species of orchids, 500 species of ferns, and 300 species of mushrooms are also native to these forests. The richness in floristic

composition is a manifestation of the favorable growing environment, which is capable of supporting a high degree of specialization. Fauna consist of over 200 species of mammals, 570 species of birds, 100 species of snakes, nearly 250 species of freshwater fish, and some 1,000 species of butterflies.

Depending on the classification used and the extent of detail, the forests can be classified into a number of types. Dipterocarp forests are the most extensive and the most important commercially. The family Dipterocarpaceae contains 10 genera and over 350 species of trees. After Dipterocarpaceae, the second most important family of trees is Leguminosae. The Leguminosae family is not as gregarious as some species of the Dipterocarpaceae and usually forms a mixture with other families. On the basis of changes in the dominant species, the dipterocarp forests are often divided into elevation classes, namely lowland, hill, and upper hill. In the mountainous regions, oak and ericaceous forests are present.

Another major type is mangrove, covering the coastal zones. These forests are quite extensive in certain locations and are important as a source of fuel. The mangrove forests in Matang in Peninsular Malaysia, covering 40,527 ha, have long been managed under a closely monitored working plan primarily aimed at providing wood for a charcoal industry.

The other major type is the peat swamp, which covers over 1.5 million ha in Sarawak. These ramin (*Gonystylus bancanus*) forests produce valuable timber and have a long history of exploitation. No extensive areas of virgin ramin forests are left in Sarawak, and hopes of renewal are diminished by difficulty in regenerating this valuable species. Some peat swamps occur in Peninsular Malaysia but are not of major importance. Most of them have been converted into

agriculture for rice, pineapples, coconuts, and oil palm.

The montane forests, although of little economic value, are of botanical and esthetic interest. Mount Kinabalu, in Sabah, is the highest mountain in Southeast Asia at 4,100m. Its accessibility offers an excellent opportunity for studies of ecologies ranging from the rich lowland dipterocarp forests at its base to the mossy forests at above 2,000m. Within this region is also found the largest flower in the world. It belongs to the parasitic plant *Rafflesia hasseltii*, with a flower diameter of about 1m.

FOREST OWNERSHIP AND POLICY

Virtually all of the forestland in Malaysia is owned by the state governments. Only in Sabah are there any private forests, and these are forest plantations. Federal responsibility is limited to education, research, and technical assistance. A national forest policy for the 12 states of Peninsular Malaysia was accepted by the National Forestry Council in April 1978. This policy has been presented to the various states governments and is now in the final stages of formal acceptance. It calls for the establishment of a permanent forest estate, sufficient in area, strategically located throughout the peninsula, and managed under a concept of rational land use to protect water supplies and soil, and provide commercial products and amenities.

The forest policy of Sarawak was approved by the governor-in-council in 1954 and has remained the basis for practices in that State. It is similar to that for Peninsular Malaysia, but a revised version incorporating funds for forest development and provisions for converting natural forests to plantations has been presented to the government for approval. Sabah's forest policy is similar to that of Peninsular Malaysia, emphasizing the need for a permanent forest estate and for comprehensive inventory.

A National Forestry Council(NFC) was esta-

blished in 1971 by the National Land council, with the objective of creating a forum where the State Governments could formulate policies and coordinate activities related to the management and the development of the nation's forest resources. All the State Chief Ministers are members of the NFC which is chaired by the Deputy Prime Minister.

FOREST ADMINISTRATION

By reason of historical developments, Peninsular Malaysia and the states of Sabah and Sarawak have their own forestry departments. The structure and organization of all three departments reflect a strong influence from the British colonial government of the past. The Forestry Department in Peninsular Malaysia was proposed in 1883 but was officially set up in 1901. It was first conceived as a small department under the director of botanic gardens in Singapore. In 1901 also, A.M. Burn-Murdoch became the first chief forest officer of the Federated Malay States and Straits Settlements. The first conservator of forests for Sabah (then North Borneo) was appointed in 1915, and the first for Sarawak in 1919.

In Peninsular Malaysia, that humble beginning has developed into a fairly large organization. There are a number of technical units or divisions and headquarters, each headed by a director, including a training division located at the campus of the Forest Research Institute of Malaysia at Kepong. Eleven of the twelve states in Peninsular Malaysia(the exception being the Federal Territory of Kuala Lumpur) have a state forest service headed by a director with a number of district forest officers. The department in Peninsular Malaysia is "federal" in that the senior staff (graduates and diploma staff) are "federal" officers and transferable within Peninsular Malaysia. However, they are paid by the states in which they serve. Junior or uniformed staff, called foresters and forest rangers, are state staff and are not transferable between states.

The department in Sabah is headed by a conservator with its headquarters in Sandakan. This state is divided into forest circles or regions, each under a forest officer. Within each circle are a number of districts, each under a district forest officer. Similarly, the Sarawak department is headed by a director with a number of section forest officers.

While the administration of the state forests by the state departments are fairly independent of Federal control, there is close rapport and frequent and free exchange of ideas between states. A Pan Malaysian Forestry Conference has been held regularly since 1966 and is now held biennially as a forum for this exchange.

A major difference between the Departments in Peninsular Malaysia, Sabah and Sarawak, is that while the Forestry Department in Peninsular Malaysia has no legal jurisdiction over wildlife and national parks, the Sabah and Sarawak Departments are also responsible for both wildlife and national park management in the states. In Peninsular Malaysia, this responsibility lies with the Department of Wildlife and National Parks, which is under the Ministry of Science, Technology and Environment.

FORESTRY RESEARCH

Forestry Research began in Peninsular Malaysia in 1918 by the Forestry Department. A Forest Research Institute(FRI) was established in 1929 as a unit within the Department. Research started in Sabah with the appointment of a Forest Botanist in 1954 and in Sarawak, research started in 1958. In all three regions, forestry research was taken up initially by a Division of the respective Forestry Departments.

The FRI Kepong developed some strength through the years but the Government recognised the need to upgrade forestry research and to create an appropriate environment for research scientists consistent with the research establishments of the other major commodities such as rubber and oil

palm. Thus, in October 1985, a Malaysian Forestry Research and Development Board was formed under which FRI Kepong was taken out of the Forestry Department Peninsular Malaysia and established as an independent statutory body and renamed as the Forest Research Institute Malaysia (FRIM). FRIM currently has a staff of about 450 comprising 90 professionals. With this significant change, it is hoped that forestry research could be developed further to cater not only for the needs of the Forestry Department but more so of the wood-based industries.

Research in Sabah and Sarawak continues to be carried out by small units within the respective State Forestry Departments as FRIM currently does not extend to the two states. Nevertheless, FRIM is in a position to assist both states in any research if so called upon to do so.

Besides FRIM, research in forestry is carried out by the Faculty of Forestry in the University of Agriculture, Serdang. Other Universities, in particular University Malaya, University Kebangsaan Malaysia, University of Science and University Technology also carry out research in various aspects of forestry and forest products.

FORESTRY EDUCATION

The Faculty of forestry was established as one of the foundation faculties together with the Faculty of Veterinary Medicine and Animal Science and the Faculty of Agriculture when Universiti Pertanian Malaysia(The Agricultural University of Malaysia) was incorporated in 1971.

The Faculty of Forestry, has three basic functions—education, research and extension. It offers courses in Forestry at the professional and the semi-professional levels. Research projects are carried out with the aim of contributing to the existing wealth of knowledge required for forestry development and for broadening the base for academic programmes in the faculty and similar institutions elsewhere. The faculty also aims to bring out public consciousness and appreciation of

the values of the forest so that the masses would develop positive attitude towards forestry development.

The faculty was to initially train professional level foresters to meet the staff requirement in the forestry sector of the country. Prior to the establishment of the faculty, professional level officers were trained in overseas universities, taking courses and carrying out research which drew examples from situations different from those in this country. In order that the professional level staff can be of immediate use to the forestry sector in this country, it is deemed desirable that their training must be done locally and this course was started with the first intake of students for Bachelor's degree in June, 1973.

From June, 1976, the faculty has the additional responsibility of organising a Diploma Programme in Forestry. Semi-professional training in Forestry have been offered at Institute Technology MARA, Shah Alam, Selangor since 1968 and at the Forestry College, Kepong since 1972, which are now taken over by the Faculty. The Diploma course is run in the Sarawak Campus of the University at Kuching. Annually, the Faculty produces about 20 graduates and about 20 diplomates. Post graduate courses leading to a Masters and Ph. D., have been recently started.

THE TRADE

The timber trade is fairly well organised in the country with the Government playing a facilitating and supervisory role. In Peninsular Malaysia, this had been the traditional role of the Forestry Department. However, recognising the need to push the promotion of the industry, the Government set up the Malaysian Timber Industries Board (MTIB) in 1973. MTIB was established by an Act of Parliament but its jurisdiction covers only Peninsular Malaysia. The Board, among other things, is responsible for initiating appropriate development in the various sectors of the industry and also regulates and oversees business conduct to

ensure orderly trading. It is also a licensing agency and issues licenses for export of timber products. The MTIB is wholly financed by a levy on exported timber and therefore not dependent upon government grant.

In Sarawak, there is a Sarawak Timber Industry Development Corporation (STIDC) formed in 1973, with the objectives of drawing policies, strategies and plans for the development and promotion of the forestry industries in the state. There is no similar institution in Sabah.

AGENCIES IN FORESTRY

The main agency in Sabah involved actively in forestry is the Sabah Foundation. Locally referred to as Yayasan Sabah, the Foundation was formed in 1966, as a vehicle to promote social change in the state. In order to provide the financial resources to implement social projects, the Foundation became a commercial institution with about one million ha of forest concession as a base. The Foundation is therefore involved in logging, log export, timber processing, plywood production, forest plantation establishment and natural forest management and conservation of the natural forests.

The Foundation has a number of joint ventures both in the processing and afforestation fields. Sabah Softwoods is a joint venture of the Foundation which has established the largest man-made forest in Malaysia. The company has planted about 24,000 ha of *Albizia falcataria*, *Acacia mangium* and *Gmelina arborea*.

Another major institution in Sabah set up by Government actively involved in reforestation, is the Sabah Forestry Development Authority (SAFODA). Formed in 1976, with financial grants from the state, SAFODA was established to promote rural development through forestry and with the specific objective of reforest the denuded lands of Sabah, mainly as a result of shifting cultivation, with *Acacia mangium*. To date SAFODA has established about 13,000 ha of plantation.

The Sabah Government also established in April 1974 the only pulp and paper company in the country called Sabah Forest Industries. This company will also be responsible for establishing its own resource through the establishment of fast growing hardwood plantations. The pulp and paper factory is yet to be operational but it is expected to use mixed hardwoods from the natural forest as its initial pulping material.

A number of States in Peninsular Malaysia also have set up State Cooperations to develop forestry and forest industries in the States. The best known is ASPA (Amanah Saham Pahang) which has been given responsibility to develop forestry in the State of Pahang with large concession areas and a number of industrial concerns.

THE INDUSTRY

The industry however is mainly in the hands of the private sector. There are a total of 985 sawmills, 58 plywood and Veneer mills, 2 pencil factories and over 2000 wood working factories in the country. The total export value of timber products exceed M\$4.6 billion in 1986. In 1986, Malaysia produced about 29.8 million cu. m. of logs, (of which 19 million cu. m. were exported), 5.2 million cu. m. of sawn timber, 0.9 million cu. m. of plywood and veneer and 0.2 million cu. m. of mouldings. The Government has a policy of increasing value added processing, especially under the Industrial Master Plan.

To cater for the needs of the individual sectors of the industry, there are a large number of associations to assist, coordinate and support the development in the various sectors. The major ones include The Malaysian Plywood Manufacturers Association, the Timber Trade Federation, The Timber Exporters Association, The Bumiputra Timber Business Association, The Timber Association of Sarawak and The Timber Association of Sabah.

THE NON-GOVERNMENTAL ORGANISATIONS (NGO's)

The professional forestry body in the country is the Institute of Foresters Malaysia (IRIM - Institut Rimbawan Malaysia) which was inaugurated in February 1979. IRIM was formed to promote and advance the science and practice of forestry and to improve the standard and practice of professional forestry in the county. The Institute has a membership of about 60. The main activity of the Institute has been to organise seminars and educational tours for members.

A Malaysian Forestry Society was formed in 1972. This Society is a social body open to all members of the public with the main objective of promoting forestry and nature study to the public at large. This is also a relatively small society with about 90 members.

There are a number of other NGO's in the country active in fields related to forestry. The Malayan Nature Society (MNS) formed in 1940, has a membership of over 3000 and is very active in promoting awareness of the natural environment. It also plays a watch dog role on environmental issues and interacts actively with the authorities. The Environmental Protection Society of Malaysia (EPSM) was formed 1974 and has a membership of about 100. The EPSM is a vocal lobbyist organisation on the environment and playing a very useful public role. Other NGO's such as the Friends of the Earth and the Consumer Association of Penang are very vocal on issues of the environment including forestry.

The World Wildlife Fund of Malaysia was established in 1972 and is active in promoting research in the conservation of the natural environment and forests. It launched a programme on drawing up Conservation Strategies for various States in Malaysia following the launching of the World Conservation Strategy by IUCN, UNEP and WWF in 1980.

CONCLUSION

It is obvious from the array of institutions that exist in Malaysia, that the institutional foundation exists for the implementation of forestry development activities in the country. With the government policy of privatisation, it would seem appropriate that many of the developmental activities should more and more be given to the private sector. The forestry departments would then be responsible for ensuring that the long term needs of society be met through judicious application of rules and regulations.

The division of broad responsibilities in the

existing organisations are fairly clear but there is need to look into mechanisms for cementing closer ties between the various institutions that exist, not only within Peninsular Malaysia but throughout the country.

Malaysia has been endowed with rich forest resources and it is the responsibility of the institutions present to ensure that the benefits of these resources are enjoyed not only for the present generation but also for the generations to come. It should also be recognised that forests play a wide ranging and varied role in the national economy and these roles from production of resources to conservation of the environment should remain a rational and objective balance.