

1.0 INTRODUCTION

Malaysia is endowed with lush, humid, tropical rainforest, often referred to as the wet equatorial rainforest. However, not all the forests in Malaysia have similar texture and structure. They differ with location and altitude and it would be a great mistake to have a single management procedure for all the forests in Malaysia, or to expect a forest to respond similarly to a particular management practice. The mangroves, for instance, certainly behave differently from the high forest which in turn differs from the lowland and the hill forests.

Issues on forest management and the sustainability of the world's forests have been widely deliberated in recent years. Public concern on environmental quality and stability has been rising and the fact that forest use is central to this anxiety cannot be over-emphasised. Countries rich in forest, including Malaysia, have been looked upon as likely saviours in regard to climate deterioration such as global warming and thinning of the ozone layer. Deforestation and industrialisation have been seen as contributory toward environmental instability and must be addressed wisely for the security and sustainability of mankind, biodiversity of flora and fauna, and national development.

2.0 PHYSICAL FEATURES

2.1 Location

Peninsular Malaysia lies at the southern-most tip of mainland South-east Asia, while the states of Sabah and Sarawak lie to the east on the island of Borneo. The total land area is approximately 32.9 million hectares with 13.2 million hectares in Peninsular Malaysia, which comprises eleven states and the Federal Territory of Kuala Lumpur; 7.4 million hectares in Sabah (including the Federal Territory of Labuan), and 12.3 million hectares in Sarawak. Peninsular Malaysia is separated from Sabah and Sarawak by 720 km of the South China Sea, and the country as a whole has a coastline of about 4,830 km.

2.2 Topography

Peninsular Malaysia consists of east and west coastal plains and central mountain ranges running roughly north to south and reaching up to 2,130 m in some places. The two largest rivers, the Perak River and the Pahang River, flow towards the Straits of Malacca and the South China Sea respectively. At their sources and upper reaches, the rivers are fast-flowing but in the lower reaches those on the west coast often meander through swampy land, while the east coast rivers are sometimes impeded by sand bars.

Sabah and Sarawak consist of alluvial and often swampy coastal plains with hilly rolling country inland and mountain ranges in the interior. In Sabah, the central mountain ranges rise abruptly from the west coast to Mt. Kinabalu which, at 4,100 m, is the highest mountain in South-east Asia. It is the source of many rivers flowing north-west and east to the South China Sea and Sulu Sea respectively. The largest river is the Kinabatangan which is navigable for considerable distances and has an extensive plain. In Sarawak, the eastern

mountain ranges rise to more than 1,520 m and contain the largest cave in the world. The largest river, the Rejang, is 564 km long and is navigable for about 160 km.

2.3 Geological Aspects

Peninsular Malaysia is generally hilly or mountainous, with about 40 per cent of the total land area rising above the 310 m contour and 23 per cent above 155 m. The only low-lying areas are near the coasts on both flanks of the peninsular from where they extend inland for a few kilometres up to a maximum of 64 kilometres before becoming moderately undulating, mostly between 15 and 150 metres above sea level. Further inland the very steep main mountain ranges rise abruptly from the surrounding lowlands.

The mountains occur as a series of parallel ranges running approximately north-south. The largest of these ranges, the Main Range, is a continuous granite ridge extending from the Perak-Thailand border to the Negeri Sembilan-Malacca boundary near Tampin. This range is usually regarded as the backbone of the country, but it is certainly not a central axis, as the highly-developed lowland region to the west represents only about a fifth of the total land area, while three-fifths lies to the east of this ridge.

Basically, Peninsular Malaysia can best be pictured as a land mass built around an intrusive core of solid granite, the uneven roof of which reaches the surface in a number of places to form the principal mountain ranges. The sedimentary rocks older than the granite, of Palaeozoic and Mesozoic age, occur along the flanks of these ranges and in the intervening lower-lying areas, while Recent, Quaternary and Tertiary sediments, which have accumulated since the emplacement of the granite, are confined principally to the coastal areas and to the main basins and valleys of the interior.

The geology of East Malaysia (Sabah and Sarawak) is more complex and dominated by the Borneo Basement ancient rocks. In Sabah, younger rocks are the result of past volcanic activities, though volcanoes are unknown in recent times.

2.4 Climate

The climate of Malaysia is typically humid tropical or wet equatorial and is characterised by year-round high temperatures and seasonal heavy rain, especially during the North-east monsoon from October/November to February/March. The mean temperatures during the day and night are 32°C and 22°C respectively.

3.0 THE FOREST

3.1 Forest Cover

Malaysia has been fortunate to be endowed with extensive areas of valuable natural tropical rainforest which are extremely complex ecosystems and rich in tree species as in similar areas of Africa and South America. In fact, Malaysia has one of the most species-rich communities in the world. The flora is estimated to comprise 7,500 species of seed plants in which 4,100 are woody. An estimated 2,900 species reach a diameter of 10 cm at breast height (dbh)