

ABSTRACT

This study is a comparison between physical parameters and soil characteristics of two mangrove habitats on Carey Island. Selected parameters were conducted at three stations in mangrove habitat (Site 1) along the Langat River which contain a good community of mangrove forest. Similar study was also conducted in a degraded mangrove habitat along eroding sea line (Site 2). In Site 1; the water parameters featured high and almost constant salinity, high water temperature, high conductivity but relatively low dissolved oxygen concentration and high TDS. On the other hand, Site 2 recorded high in salinity but lower water temperatures. Site 2 also featured relatively low dissolved oxygen and high TDS. The water pH for both sites ranged from 6.54-8.16. There was a significant difference in temperature, pH, salinity and light intensity between both sites. Light intensity for Site 1 ranged between 3300 - 103600 Lux. In degraded mangrove site (Site 2), the light intensity ranged from 15400 Lux to 109 700 Lux. It was found that Site 1 was dominated with silt and content of silt ranges from 60% to 93%. Site 2 was dominated with sand and silt loam. The sand content ranges from 60% to 99% while silt content ranges from 59% to 89%. For vegetation survey, Site 1 was dominated by four species (*Avicennia* sp, *Rhizophora* sp, *Sonneratia* sp. and *Bruguiera* sp.). Only *Rhizophora* sp and *Bruguiera* sp were found at Site 2.

ABSTRAK

Satu kajian perbandingan di antara parameter fizikal dan ciri-ciri tanah diantara dua habitat paya bakau telah dijalankan di Pulau Carey. Beberapa parameter dikenalpasti untuk dikaji di 3 stesyen habitat paya bakau (tapak kajian 1) sepanjang Sungai Langat yang masih mempunyai komuniti paya bakau yang baik dan tidak terjejas. Kajian yang sama juga dilakukan di habitat paya bakau (tapak kajian 2) yang telah mengalami kemerosotan bakau sepanjang pantai yang terhakis. Di tapak kajian 1, parameter air yang dikaji menunjukkan saliniti yang tinggi dan sekata, suhu yang tinggi dan konduktiviti juga tinggi tetapi kepekatan oksigen terlarut dan TDS yang rendah. Manakala tapak kajian 2 merekodkan saliniti yang tinggi tetapi suhu yang rendah. Tapak kajian 2 juga mempunyai kandungan kepekatan oksigen terlarut yang rendah tetapi nilai TDS yang tinggi. Nilai pH kedua-dua tapak adalah di antara 5.54- 8.16. Terdapat perbezaan yang signifikan antara suhu, pH, saliniti dan keamatan cahaya diantara kedua-dua tapak kajian. Keamatan cahaya di tapak kajian 1 merekodkan bacaan antara 3300 Lux ke 103600 Lux. Di habitat paya bakau yang mengalami degradasi, keamatan cahaya adalah 15 400 Lux - 109700 Lux. Didapati bahawa tapak kajian 1 didominasi dengan tanah lumpur dan kandungannya antara 60% -93%. Tapak kajian 2 pula didominasi pasir dan lumpur loam. Kandungan pasirnya di antara 60% -99% manakala lumpurnya antara 59% ke 89%. Bagi tumbuhan pula, tapak kajian 1 diliputi oleh empat spesies bakau iaitu (*Avicennia* sp, *Rhizophora* sp, *Sonneratia* sp dan *Bruguiera* sp). Hanya spesies *Rizophora* sp dan *Bruguiera* sp ditemui di tapak kajian 2.

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