Studies on Peat in the Coastal Plains of Sumatra and Borneo: Part I Physiography and Geomorphology of the Coastal Plains

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Abstract

The physiography and geomorphology of the coastal plains in Jambi and South Kalimantan were studied with the aim of describing the recent sediments deposited there. For this purpose, borings were made along transects from inland to the coast to a depth of up to 6 meters. The results of these studies indicate the presence of five physiographic regions and fifteen geomorphic units in the coastal plain of Jambi. In the coastal plain of South Kalimantan, four physiographic regions and eleven geomorphic units were established. The landforms in both of these coastal plains were developed by peat and mineral soil deposits. These deposits started to accumulate during the Holocene period. In Jambi, peats situated in the ombrogenous peats zone, which sometimes exceed 6 meters in depth, have been deposited since the terrestrial soils on the Pleistocene terrace were transformed into fluviatile swampy soils to form the so-called peat-capped terrace. Peats on mangrove deposits situated in the riverine to brackish deposits zone were formed in later periods. In the brackish to marine deposits zone, the thin peats are very young. In South Kalimantan, peats situated in the riverine to brackish deposits zone have been deposited on mangrove deposits and on sand or gravel. I believe that the peat formation on sand or gravel is of the same age as the older peat in Jambi.