

SOME PHYSICOCHEMICAL PROPERTIES OF MANGROVE SOILS OF THE BA LAT ESTUARINE, NAM DINH AND THAI BINH PROVINCES

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Summary

Physicochemical characteristics of mangrove soils of the Ba Lat estuary were evaluated by analyzing 60 soil samples collected in 2018. The results indicated that, the physicochemical characteristics of mangrove soils varied with the mangrove type (natural or planted mangroves) and species (*Kandelia obovata*, *Sonneratia caseolaris* or mixed of both species). In which, *K. obovata*, *S. caseolaris*, mixed species and natural mangroves have density 7,474, 1,343, 5,503 and 2,686 trees/ha respectively; stem diameter 3.54, 8.97, 5.64 and 5.10 cm respectively; tree height 3.03, 5.24, 4.11 and 2.21 m respectively. Soil of *K. obovata*, *S. caseolaris*, mixed species and natural mangroves have salinity of 11.5, 9.4, 12.2 and 13.9‰ respectively; pH of 6.9, 6.9, 7.0 and 6.8 respectively; E_h of -100.1, -96.9, -104.8 and -122.4 mV respectively; soil texture of *K. obovata* 53.8% sand, 32.0% silt và 14.3% clay, *S. caseolaris* 45% sand, 37.5% silt và 17.5% clay; mixed mangroves 51.7% sand, 26.8 silt và 21.5% clay; natural mangroves 52.6% sand, 24.9% silt and 22.5% clay. Soil of *K. obovata*, *S. caseolaris*, mixed species and natural mangroves have humus content of 1.5, 1.9, 1.7 and 2.5% respectively; nitrogen content of 104.3, 48.5, 44.2 and 140.9 mg/kg respectively; phosphorous content of 77.4, 54.1, 44.2 and 89.2 mg/kg respectively; potassium content of 628.2, 665.6, 629.5 and 866.3 mg/kg respectively.

Keywords: *Ba Lat estuary, mangroves, physicochemical properties, soil.*