

Wood density and carbon estimates of mangrove species in Kuala Sepetang, Perak, Malaysia

ABSTRACT

Mangrove forests provide a broad array of ecosystem services including fisheries production, sediment regulation, wood production and protection from storms and waves. Mangroves also may have an important role as a pool in global carbon budgets and in mitigating climate change. Here we investigated the wood density and carbon content of the mangrove species in Kuala Sepetang, Perak. Using data from 13 mangrove species, the value for wood density and carbon were estimated. Wood density ranged from 0.33 gcm⁻³ to 0.64 gcm⁻³, where the lowest and highest values were given by *Sonneratia caseolaris* and *Ceriops tagal*, respectively. The carbon content was 42.48% on average, where *Bruguiera cylindrical* gave the lowest value at 45.13 % while *Lumnitzera racemosa* was the highest at 45%. These values suggest that Kuala Sepetang mangrove forest has the potential to sequester and store substantial amounts of atmospheric carbon.

Keyword: Allometric equation; Carbon content; Wood density; Mangrove species