

Relationship between Economic Value and Species diversity of Timber Resources in a Hill Forest in Peninsular Malaysia

ABSTRACT

Timber resource is a major component of tropical forest and usually undervalued economically. This paper attempts to examine the relationship between economic value and species diversity of a hill dipterocarp forest in Peninsular Malaysia. The rank-abundance curve described a lognormal distribution pattern, indicating high diversity communities. The species diversity indices obtained were high: Fisher's alpha diversity index ranged from 96.53 to 109.56, Shannon-Weiner index were 5.29 to 5.39, while values of Simpson Index ranged from 134.02 to 151.11. The estimated mean stumpage value per hectare was Malaysian Ringgit RM25 413 and the main contribution was from the family Dipterocarpaceae. The regression analysis showed that the relationship between stumpage value and species diversity was not significant at the 5% level ($p>0.05$). Timber volume, size of trees and the presence of high timber value have great influence on the stumpage value for a given forest area.

Keyword: Economic value, Species diversity index, Regression analysis, Residual value technique