Vegetation composition and structure across land use types in a rotational cultivation system in Meratus Mountain, South Kalimantan, Indonesia

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Abstract. *Rezekiah AA, Ruslan M, Kadir S, Mahmud. 2022. Vegetation composition and structure across land use types in a rotational cultivation system in Meratus Mountain, South Kalimantan, Indonesia. Biodiversitas 23: 4234-4242.* The rotational cultivation system has become a local ecological knowledge of the Meratus Dayak community in South Kalimantan, Indonesia. This land management applies a cultivation system by dividing land into four types, namely *pahumaan* (cultivated area of annual crops), *balukar anum* (former cultivated field aged 3-6 years), *jurungan* (former field aged 7-12 years), and *kabun buah* (former fields aged more than 15 years). This study is aimed to investigate the floristic structure and composition of the vegetation in each land use type in the rotational cultivation system conducted by the Dayak Meratus community in three villages (i.e., Loksado, Lok Lahung and Haratai). Vegetation sampling was conducted purposively across four vegetation levels (i.e., seedlings, saplings, poles and trees) and the data was analyzed to calculate Important Value Index (IVI), Shannon-Wiener diversity index, species richness index and evenness index. The results showed that each land type had a certain vegetation structure and composition. In *pahumaan*, the dominant plant species were annual plants, especially crops. The *balukar anum* and *jurungan* were dominated by woody plants, while the *kabun buah* was dominated by fruit plants. The changes in vegetation structure and composition suggested that the succession process was in progress. The diversity index for each type of land use in the three villages was in the medium to high category. The species richness index was in the low to the high category, while the evenness index for all land uses in the three villages was at a high level. These findings suggest that traditional rotational farming activities carried out by the community did not damage the forest.

Keywords: Abundance index, diversity index, equality index, rotation, vegetation analysis