ABSTRACT

WOLFRAM YAHYA MOFU. Vegetation Diversity and Biomass of Certain Types of Peatland Use In Kepulauan Meranti Regency, Riau. Under academic supervision of ISTOMO and LAILAN SYAUFINA.

The purpose of this study was to assess the diversity of vegetation and biomass on the three different peatland use types; natural forests, gardens, and industrial forest plantation of sago areas (HTI sago). The results showed that the composition of plant species for three growth rates, saplings, pole, and trees stages, were different among three different peatland use types. The dominant species in natural forests were Shorea parvifolia, Shorea uliginosa, Baccaurea bracteata and Palaquium rostratum. In gardens, the dominant species are Metroxylon spp., Artocarpus sp., Palaquium ridleyi, and Alstonia spatulata Blume.; while in HTI sago areas, including Metroxylon spp, the presence of other species of forest vegetation were Ficus microcarpa, Combretocarpus undatus, Baccaurea bracteata and Palaquium rostratum. The higher diversity index of three different growth rates; saplings (2.75), pole (2.99) and trees (3.15) respectively, were only found in the natural forest. On the contrary, the lower diversity index of sapling stage (1.95) was in gardens and both the pole (0.77) and tree (0.44) were belonged to the HTI sago. Potential biomass of pole stages figured out the higher and the lower value were 359.01 ton ha⁻¹ in HTI sago, 97.5 ton ha⁻¹ in gardens and 67.79 ton ha⁻¹ in natural forest, respectively. This trend also occurred nearly equal to the higher stages of trees and a lower value were 209.20 ton ha⁻¹ in HTI sago, but the natural forest 161.13 ton ha⁻¹ higher than the gardens, 107.22 ton ha⁻¹, respectively.

Keywords: Vegetation diversity, Dominant species, Biomass, Peatland use types.