PROFILE AND SPECIES DIVERSITY OF AGROFORESTRY PRACTICES IN KAMPUNG RATAU, MANGGATAL

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ABSTRACT

Agroforestry is the practice of natural resource management which is dynamic through the integration of trees and other vegetation on the farm or agricultural landscapes and aimed to improve the social, economic and environmental. A study was conducted in Kampung Ratau, Manggatal Sabah aimed in identifying areas in this village which have agroforestry practices. The objective of this study is to profile and details the different in agroforestry practices as well as to identify the species diversity of different agroforestry practices in Kampung Ratau, Manggatal. This study begins with the selection of the area which have agroforestry practice. Profile was drawn 20 m x 5 m is plotted to identify the diversity of species that exist in the selected area. Through the study, there were 4 agroforestry practices identified in Kampung Ratau, Manggatal, villagers also apply a few agroforestry practices such as riparian buffer (agrisilvicultural system), multispecies garden (agrisilvicultural system), homegarden (agrosilvopastural) and grazing land and forest at the boundary (silvopastural system). Profile was drawn to help identify species that exist. Three species diversity indices were used in this study namely the Shannon-Weiner Index, Evenness index and Simpson index. Home garden have higher species diversity compared to other practices with Shannon-Weiner index: 2.32, Evenness index: 0.96 and 0.94 for Simpson index. For the riparian buffer, the Shannon-Weiner index is 2.21, for Evenness index was 0.96 and 0.92 for the Simpson index. The grazing land and forest at the boundary practice have 2.05 for Shannon-Weiner Index, 0.85 and 0.85 respectively for the Evenness index and Simpson index. Multispecies garden had the lowest species diversity with value of 0.48 for Shannon-Weiner index, 0.30 for evenness index and 0.20 for Simpson Index. There are many species that can give benefit the public, especially residents of Kampung Ratau, Manggatal. In conclusion, the village's management need to take care of existing species from disappearing from this world. In order to maintain the forest resources, encouraging the preservation and conservation areas and research to the youth must be done to ensure the existence of the forest.