

THE ROLE OF PADDY FIELD LANDSCAPES IN RELATION TO PLANT SPECIES DIVERSITY IN CENTRAL LAOS

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This paper reports the role of paddy field landscapes in providing habitats for multiple plant species. The survey of vegetation and plant use was conducted at two neighboring villages in central Laos: Bak village is located in the uplands and includes an extensive forest area, fallow fields, shifting cultivation fields, grassland, waterside areas, and paddy fields; Nakhou village is in a lowland area and includes small areas of remnant forest, grassland, waterside areas, and extensive paddy fields. The results were analyzed at three spatial scales: landscape, topographical, and micro-topographical. The landscapes of this study site were composed of different land-uses providing a mosaic of habitats, which enhanced the number of plant species present in the villages at the landscape level. The intensive survey of the paddy fields at the topographical level showed that four types of paddy field harbored unique species, which contributed to the overall species richness. Moreover, paddy levees, which are artificial microhabitats, played a role in providing habitat for multiple plant species at a micro-topographical scale. Thus, paddy field landscapes are heterogeneous landscapes under the influence of topography and human management, which results in the coexistence of multiple plant species. This type of evaluation on the biological diversity of agricultural landscapes is an important contribution to natural resource management in the local community.

Keywords: Agricultural landscape, Natural resources management, Spatial scales