The Study of Shifting Cultivation in the Bago Mountains, Myanmar: Traditional Knowledge, Influences on Soil Properties and Vegetation, and Local People's Perceptions

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Abstract

In Myanmar, over 75% of the total population is rural and dependent on forest resources for their livelihoods, particularly shifting cultivation in forested areas. This study intended to explore the results to help the debating issue on whether shifting cultivation causes forest degradation and soil deterioration through exploring traditional knowledge of shifting cultivators, impacts of traditional shifting cultivation on soil properties and vegetation, and socio-economic condition of local people and their perceptions on shifting cultivation. The soil MC and soil pH in the fallow stands were higher than degraded old growth forests (DOGFs) and old growth forests (OGFs). The content of total nitrogen (TN), total carbon (TC) and the forest structure gradually increased with increasing the fallow period. The stem density and species richness were high in the fallow stands although the highest total basal area was occupied by OGFs. Common dominant species such as *M. rotundifolia* and *X. xylocarpa* were found in the fallow stands as well as DOGFs and OGFs due to the traditional knowledge. It was observed that traditional knowledge on shifting cultivation supports not to cause forest degradation and deforestation because such knowledge are followed by the cultivators and includes leaving long fallow period, avoidance of the cultivation on steep slope and on the places close to the natural water source and stream, and selection of the area where bamboos are abundant rather than trees. About 70% of respondents agreed to replace shifting cultivation with an appropriate land use system (agroforestry plantations), but they have great concern on whether they have adequate knowledge, skills and resources to implement the new land use system. Therefore, this study is greatly beneficial not only for the local people but for the government sector in managing the forest with a sustainable manner.

Key words: shifting cultivation, traditional knowledge, soil properties, vegetation, perceptions, forest degradation, deforestation, the fallow stands, agroforestry