

Cropping Systems and Post-Cultivation Vegetation Successions: Agro-Ecosystems in Ndop, Cameroon

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ABSTRACT The sustainability of traditional farming systems in many parts of Africa is threatened by losses in the variety of species, reduction in land, forest, soil and water resources under demographic pressure. Together with foreign influences these farming system are no longer in equilibrium with local culture and ecology and are therefore disintegrating due to the lack of local capacity to adjust to these changes. This has led to environmental degradation. The paper employs a combination of qualitative and quantitative techniques to: analyse the farming systems, assess the effect of cropping intensification on the climatic climax vegetation, and to establish the post-cultivation vegetation successions in fallows. It reports four crop fallow rotations: crop 3 years with 1 year bush fallow, crop 5 years with 1-2 year bush fallow, crop 10 years with 1-3 year bush fallow and continuous cropping. The post-cultivation successions present a plagioclimax dominated by *Hyparhenia* species with scattered shrubs maintained by cycles of cultivation and burning. The paper concludes that these shifting cultivation cycles involving cropping intensification and post cultivation savannization have deprived the farming system of its ecological benefits, that is, nutrient recycling through a long and mature fallow. The inability of the vegetation to reconstitute itself requires the development of farming systems that combine trees and crops in the field because of proven micro-ecological and ecological benefits. The paper therefore identifies the scope for the development of ecologically sustainable agro-ecosystems as a development path for shifting cultivation systems.