

Dynamic Changes of Shifting Cultivation: Past, Present and Future Perspective of an Agroforestry System from Sri Lanka

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Abstract : Shifting cultivation (Chena, Slash & Burn) is a cultivation method of raising, primarily, food crops (mainly annual) where an area of land is cleared off for its vegetation and cultivated for a period, and the abandoned (fallow) for its fertility to be naturally restored. Although this is the oldest (more than 5000 years) farming system, it is still practiced by indigenous communities of several countries such as Sri Lanka, India, Indonesia, Malaysia, Myanmar, West & Central Africa, and Amazon rainforest area. In Sri Lanka, shifting cultivation is mainly practiced during the North-East monsoon (called as Maha season, from Sept. to Dec.) with no irrigation. The traditional system allows farmers to cultivate for a short period of cultivation and a long period fallow period. This was facilitated mainly by the availability of land with less population. In addition, in the old system, cultivation practices were mostly related to religious and spiritual practices (Astrology, dynamic farming, etc.). At present, the majority of the shifting cultivators (SC's) are cultivating in government lands, and most of them are adopting new technology (seeds, agrochemicals, machineries). Due to the local demand, almost 70% of the SC's growing maize is mono-crop, and the rest with mixed-crop, such as groundnut, cowpea, millet, and vegetables. To ensure continuous cultivation and reduce moisture stress, they established 'dug wells' and used pumps to lift water from nearby sources. Due to this, the fallow period has been reduced drastically to 1- 2 years. To have the future prosperous of system, farmers should be educated so that they can understand the harmful effects of shifting cultivation and require new policies and a framework for converting the land use pattern towards high economic returns (new crop varieties, maintaining soil fertility, reducing soil erosion) while protecting the natural forests. The practice of agroforestry should be encouraged in which both the crops and the tall trees are cared for by farmers simultaneously. To facilitate the continuous cultivation, the system needs to develop water harvesting, water-conserving technologies, and scientific water management for the limited rainy season. Even though several options are available, all the solutions vary from region to region. Therefore, it is only the government and cultivators together who can find solutions to the problems of the specific areas.

Keywords : shifting cultivation, agroforestry, fallow, economic returns, government, Sri Lanka

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