

# **LOCAL LAND USE TECHNOLOGIES: ADAPTIVE STRATEGIES FOR RICE-BASED CROPPING PATTERNS IN CHAKMA VILLAGE, CHITTAGONG HILL TRACTS, BANGLADESH**

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A field survey of rice-based cropping patterns was conducted in the ethnic-minority village of Chakma in Dighinala Upazila, part of the Khagrachari District in the Chittagong Hill Tracts of Bangladesh, to explain the existing patterns of paddy cultivation, especially in terms of environmental conditions and farm size. Three major rice-based cropping patterns were used in the village: single, double, and triple. Single rice cropping under rain-fed conditions was predominant; however, some villagers have introduced a more intensive cropping pattern by manually lifting stream water with bamboo baskets for irrigation. Both plain land cultivation and 'jhum' (shifting) cultivation were used in the village. The hydrological condition of the area was the primary factor in the selection of cropping patterns, as it resulted in differences in accessibility to irrigation water and soil fertility. The selection of cropping patterns was also related to farm size. Because the Fallow–Rain-Fed Rice–Fallow pattern does not require an irrigation facility, it was predominantly practiced by households with small and medium-sized farms that could not afford such technology. Most of the households with large farms practiced more intensive cropping patterns that included irrigation facilities. Jhum cultivation was conducted mostly by households with small farms and played an important role in the livelihood of the farmers.

**Keywords:** Chittagong Hill Tracts, Cropping patterns, Agricultural land, Paddy field