

SOCIO-ECONOMIC AND ENVIRONMENTAL CHANGES WITH TRANSITION FROM SHIFTING TO SETTLED CULTIVATION IN NORTH-EASTERN INDIA: AN ERGONOMICS PERSPECTIVE

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ABSTRACT

‘Jhum’, a shifting agriculture technique pertaining to North-Eastern Region of India (NERI) is traditionally being practiced by local tribes from ancient ages. This practice accounts almost 86% of total shifting cultivation area of India, imposes a severe ecological threat to environment in hilly areas in recent years. Demographic density, expansion of trade networks, economic and social change are now pushing ‘Jhum’ into increasingly marginal. Most of the local people are gradually moving towards wet or settled cultivation as shifting cultivations hardly have any inclination to produce a surplus. Instead of this transition from shifting to settled cultivation, overall agricultural yield is insufficient to fulfil local need. Among predisposing factors at the background of low agricultural (both shifting and settled cultivations) productivity in NERI, use of local artisans made primitive tools/equipment which are ineffective/not well suited with user’s physical capacity and incapable of providing better performance for higher efficiency and inadequate irrigation facility are few worthy to mention. Current paper highlights present situation of agricultural practice, socio-economic-ecological changes due to transition from traditional to settle cultivation in NERI and root causes of low agricultural productivity of this region following extensive literature review. This paper has also been aimed to demonstrate existing scenario of ergonomic interventions and future direction to come up with better ergonomic design strategies for improvement of agricultural hand tools and machines for making NERI as self-dependent foodgrains producer.

KEYWORDS: Agriculture, Shifting Cultivation, Settled Cultivation, Socio-Economic, North-Eastern Region, Ergonomics