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“Agricultural development within the rural-urban continuum”

Resource conservation and Rice Production in Mangrove Forests of Yanbye Township, Rakhine State, Myanmar

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Abstract

Agricultural encroachment in the mangrove forests in Yanbye Township has been witnessed for the last 10 decades and has been exacerbated by population pressure and misleading agricultural development policies during 1980–2010 to increase rice production at regional and national level. The policy of the agricultural department failed to address the environmental impact, and as a consequence the mangrove ecosystems are exploited at an alarming rate with a great loss of important environmental services and economic goods. Conservation of the regional mangrove ecosystem is urgently needed and an immediate envisaged policy is to relocate the existing farms outside the reserved mangrove forest.

This study aimed to assess farm level productivity and profitability, and the contribution of existing mangrove-dependent rice farming to local food security and employment opportunities to be considered in the mangroves reforestation and farm relocation program. Descriptive analysis, cost-return analysis and factor share analysis were conducted by using secondary and field survey data of 147 farmers for the 2011 - 2012 production year.

The results revealed that farming systems are profitable at a very low level with 1.49 tons per acre of average yield giving 37.36 US\$ ac⁻¹ net benefit with a benefit-cost ratio of 1.28. One acre rice farm offers seasonal employment to 41 labourers in the growing season. The total revenue comprises 36.49 % of farmer share while other cash and in-kind benefits contribute 63.5 % of total revenue. For the rice farm area in reserved forest of 1370 acres, where 620 households are currently working, to be aborted for mangrove reforestation, the minimum loss of rice production would account for 4.5 % of the township's total production amounting to 3579 t year⁻¹ with a simultaneous loss of 98482 working days for a rice growing season, leaving 1860 rural people unemployed. Although estimation was at the minimum level, rice production and unemployment indicate for the implementation of reforestation and farm management policy from decision level. There should be looking for alternative employment and income generation to conserve over exploitation of resources in the name of local food security and employment opportunity.

Keywords: Employment opportunity, food security, mangrove ecosystem