Forest Dependence and Household Food and Nutrition Security in Kenya

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Abstract

About 1 billion extremely poor people globally depend on forests for part of their livelihoods, with about 350 million depending heavily on forests. While there is growing recognition that forests and tree-based systems complement farmland agriculture in providing food security and nutrition (FSN), few studies have focused on this dimension of livelihood. This paper assesses the effects of forest dependence on household food security in rural western Kenya. Data for this paper was collected using a cross sectional survey of 924 households in Mt Elgon, Western Kenya. Forest dependency was measured in terms of both a count of total number and aggregate value of forest products extracted while FSN was measured using three indicators – Food Insecurity Experience Scale (FIES), Household Dietary Diversity (HDD) and the share of food expenditure. The influence of forest dependency on FSN was analysed using a set of Poisson and two-stage residual inclusion (2SRI) regressions. The results show that about half (48.9 %) of the households were engaged in forest extraction. The mean annual value of forest products extracted was approximately KES 31930 (about US$ 320) which accounts for about 23 % of overall household annual expenditure. Of the 73.5 % of the respondents who were food insecure, 13.9 % and 21.7 had slight, moderate levels of insecurity while 40.9 were severely food insecure. The results further show that although dietary patterns on a weekly basis were rather diversified, (6.3), consumption of Vitamin A (2.7) and iron rich foods (0.92) was limited suggesting possibility of high micronutrient deficiencies. The share of expenditure spent on food was generally on average accounting nearly half (47.5 %) of the household expenditure. The econometric results show that while the value of forest products extracted had a positive influence on household food security, forest dependency measured as a count of products extracted was associated with higher levels of food insecurity. The findings suggest that while forests can play an important role in the food system, household forest use decisions can have a mixed influence on food security, depending on the nature, type and extent of extraction.

Keywords: Food expenditure, food security and nutrition, forests, household dietary diversity, Poisson regression, two-stage residual inclusion (2SRI)

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