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Smallholder Farmers' Willingness to Contribute for Watershed Development in Ethiopia

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Abstract

Although the contribution of smallholder agriculture to the Ethiopian economy is immense, it has been seriously challenged by land degradation problems. Consequently, various sustainable land management (SLM) practices have been implemented since the 1980s through the concept of "community-based watershed development" to tackle the adverse effects of land degradation on economic, social, and environmental wellbeing. Despite considerable conservation efforts to reverse land degradation and improve land productivity in the Upper Blue Nile Basin (UBNB) of Ethiopia, the achievements have been below the expectations, and they are still underway with debatable success. Moreover, the scheme has failed to consider farmers' potential labour willingness to contribute (WTC) for implementing SLM practices, as well as basic biophysical, socio-economic, extension communication, and policy and institutional heterogeneity. This study estimated farmers' potential labour WTC and analysed the drivers behind it. Two-stage random sampling technique was employed to select 300 representative samples from three watersheds in the UBNB. A contingent valuation method and Tobit econometric model were used to estimate the potential labour that farmers were willing to contribute, and analyse the determinants behind it, respectively. About 76 % of respondents were willing to contribute labour, ranging from 3.5 to 28 man-days yr–1. The mean labour contribution was 9.4 man-days yr–1, which is almost equal to the median value of 10 man-days yr–1. However, the mean value was three times lower than the government's expectation (28 man-days yr–1). The farmers' potential labour contribution economic value at the watershed scale was estimated to be US$55,572 yr–1. The Tobit econometric model results revealed that location, sex, age group, farmland size, SLM-related training, household perception of land degradation, and land-use policy's economic effectiveness significantly influenced farmers' potential labour contribution. To this end, revising the ongoing scheme by considering the estimated farmers' WTC, and farmers' heterogeneity preference would help to make the scheme demand-driven. Moreover, the provision of gender and resource-disaggregated training and the introduction of economic incentives to increase the economic productivity of SLM practices would enhance farmers' maximum willingness to invest capacity and assure sustainable community participation.

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