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“Bridging the gap between increasing knowledge and decreasing resources”

Certified Carbon Small-Scale Agroforestry around Mount Kenya Region: Determinants of Adoption by Smallholder Farmers

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Abstract

Sub-Saharan Africa remains one of the most vulnerable regions to climate change threatening agriculture, food security and income of smallholders. The contribution of climate mitigation strategies such as certified small-scale agroforestry projects and corresponding payment for ecosystem services (PES) may therefore be crucial for smallholders. What role does awareness play in facilitating adoption of this innovation amongst smallholders? As economic and non-monetary factors influence smallholder's adoption decision of such projects. Is participation therefore restricted to a selected group of small farmers? This analysis explores the objectives of smallholder conservation programs which, amongst others, seek to alleviate poverty while preserving the environment.

This paper uses a random utility model and a probit/logit regression to investigate the factor that influences agroforestry adoption. We investigate non-monetary factors, amongst others information spillover, that influence the decision to adopt conservation. We collected data in a non-government run agroforestry mitigation program with PES from the Mount Kenya region. A total of 210 smallholder farmers were interviewed, approximately half of the farmers participated in small-scale agroforestry with PES and the other half were non-participating conventional smallholder farmers.

Participation by smallholders is not influenced by education, land and asset endowment rather by spread of information and peer involvement in such programs. Non-government project developers and relevant institutions may have developed an operation model which precludes selection bias in programme participation.

Formulation of climate mitigation policies for developing countries should target social capital to increase the adoption rate amongst smallholders, deploying a bottom-up strategy which encourages inclusiveness.

Keywords: Climate smart agriculture, household decision-making, payment for ecosystem services, small-scale agroforestry adoption, social capital