

A Framework to assess adoption of agroforestry technologies Nexus: Food security and landscape restoration in semi-arid areas of Tanzania

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Abstract

Ongoing land degradation is a major challenge for food production in most developing countries, and agroforestry is considered a win-win solution to enable farmers to combat degradation. Tanzania's dryland consists of a wide range of arid, semi-arid, and dry sub-humid areas and covers about 61 % of the total landmass. Ranking low in economic and human development indicators, Tanzania is at risk of meeting food demand as the majority of the population depends on rainfed agriculture for livelihood. Even though agroforestry opportunities exist, there is still a wide range of constraints facing the adoption of agroforestry technologies in Tanzania. The proposed study aims to develop a methodological framework to facilitate the identification of underlying constraints for wider adoption of agroforestry technologies in the semi-arid areas of Tanzania. The assessment is based on the (ex-ante) evaluation of the adoption potential considering socio-economic and institutional factors. Two assessment frameworks (MESMIS and Scala) are selected for the current study and will be adapted and contextualized to fit the study area's local condition. Assessment indicators will be identified based on sustainability attributes from Scala and MESMIS methodological principles. New indicators for the specific context will be developed using a participatory approach by involving farmers, local experts,

and researchers. The findings to be presented will provide a methodological framework that enables wider adoption of agroforestry technologies. The new framework will take Tanzania's context into account but will also be applicable to other similar and comparative settings.

Keywords: adoption, agroforestry, indicators, semi-arid areas, sustainability assessment

Biography - Mahlet Degefu Awoke

Mahlet is currently a first-year Ph.D. student in the subject Agricultural Sciences at the Humboldt University of Berlin, specializing in Economics and Governance of Agriculture, Food and Natural Resources. Her doctoral research focuses on the adoption and scale-up of agroforestry practices in Tanzania, supervised by PD Dr. Stefan Sieber, head of SusLAND "Sustainable Land Use in Developing Countries" Leibniz Center for Agricultural Landscape Research (ZALF). She is particularly interested in sustainable agriculture and forestry. Mahlet holds a master's degree in environmental and resources management from the Brandenburg University of Technology, Cottbus-Senftenberg, Germany in which she researched forest restoration in Ghana and she holds a B.Sc in water resource and environmental engineering from Haramaya University, Ethiopia. Mahlet has more than five years of professional experience working in international organizations and private sectors in Ethiopia, Uganda, and Germany.

Topic Areas

Agroecology