Unpacking farmer diversity to support inclusive climate-resilient agricultural practices

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Abstract

Across sub-Saharan Africa, smallholder farmers already face numerous risks to agricultural production. With destructive cyclones and severe droughts, Madagascar has been hit especially hard in recent years. Climate change is exacerbating existing vulnerabilities and is expected to disproportionately affect smallholder farmers, highlighting the need for climate adaptation in the agricultural sector. However, smallholder responses to climate change are not uniform. The adoption of climate-resilient agricultural practices is influenced by heterogeneous social, cultural, agronomic, economic, and institutional conditions. Hence, homogeneous representations of smallholder farmers can lead to further marginalisation and exacerbate existing vulnerabilities, in particular among women, elderly and illiterate people. In this study, we seek to capture the diversity of farm households and understand the adoption of climate-resilient agricultural practices, with particular attention to groups in vulnerable situations. Typology construction provides an efficient method to understand farm(ing) household diversity by delineating groups with common characteristics. Furthermore, it is a useful tool to improve both up- and out-scaling of climate-resilient agricultural practices. The proposed study will be based on household survey data collected in Atsimo Atsinanana, Anosy and Androy in Madagascar in April and May 2023. In a first step, we conduct a literature review and establish a typology framework, which we validate with local experts. In a second step, we use a statistical typology approach, a combination of principal component analysis for necessary data reduction and a cluster analysis to delineate different farm household types. Furthermore, we will use descriptive statistics to link the different farm household types to the adoption of climate-resilient agricultural practices. In terms of the results, we expect differences regarding asset ownership, gender and household composition, access to credit and education, as well as other household characteristics, highlighting the need for considering the nuances within farming communities to ensure inclusive adaptation planning for climate-resilient food systems.

Keywords: Adaptation, climate change, diversity, farmer types, food systems, gender, intersectionality, Madagascar, vulnerability

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