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## Community Characteristics and Risk Perception in Agriculture: A Case Study in Rural Northern Ghana

ALEXANDER MEWES

University of Passau, Comparative Development and Cultural Studies, Germany

## Abstract

Reducing risk in agriculture is the aim of many interventions in West Africa. Target groups predominantly consist of smallholder farmers threatened by the present and future impacts of climate change. Smallholder farmers in northern Ghana live in culturally and socio-economically diverse communities with similar environmental challenges. This study identifies non-environmental community characteristics related to risk perception in agriculture on the inter- and intra-community level. We want to show how risk reduction interventions such as improved seeds and sustainable planting practices affect communities and individuals differently. We use Participatory Risk Mapping (PRM) as an analytical tool to measure and identify the local ranking, frequency, and coping strategies for perceived risks in four communities in north Ghana. For every community we gather data from four focus groups with five participants. The groups are divided by the participants' gender and economic endowment. The data allows us to compare groups of individuals between and within the four communities. We identify patterns in inter- and intra-community characteristics which are linked to risk perception. By focusing on the characteristics we collect additional data to test and support our findings. The results indicate that communities exposed to similar environmental challenges are perceiving risks in agriculture differently. Furthermore, the perceptions of groups within communities vary widely. On the inter-community level the accessibility to lucrative markets for selling and networks outside of the community have a major impact. Culturally defined roles of men and women and coping strategies are the most influential characteristics on the intra-community level. Coping strategies depend on the prevalent sharing system for labour and goods but also on business opportunities apart from farming. The results underline the complexity of communities in northern Ghana. Similar risk reduction interventions can have diverse impacts within and on communities. The identified non-environmental characteristics provide a systematic approach to understand the diversity of communities and its influence on risk perception in agriculture.

**Keywords:** Agriculture, risk perception, rural development