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“Bridging the gap between increasing knowledge and decreasing resources”

## Assessing Innovation Needs in Tanzanian Mixed Smallholder Farming Systems: A Participatory Situation Analysis

MARIA HÖHNE, MARGARETA AMY LELEA, BRIGITTE KAUFMANN

*German Institute for Tropical and Subtropical Agriculture (DITSL), Germany*

### Abstract

Tanzanian smallholder farmers are increasingly confronted with production system problems due to volatilities in the environment and market that necessitate innovations in farming practices. Innovations need to fit both the context and the capabilities of people involved in order to be effective, as there is no “one size fits all” solution.

This study aims to identify potential points of entry for innovations by analysing constraints and opportunities while recognising available capitals (natural, physical, economic, human, social) and responding to commonly held livelihood problems and shared challenges in agricultural production processes.

Field data collection was carried out from January until April 2014 in four representative case study sites (CSS) in the Morogoro (semi-humid) and Dodoma (semi-arid) regions of Tanzania. Methods combine a participatory livelihood analysis with a participatory assessment of agricultural activities. Per village approximately 100 people participated in 14 group sessions using livelihood illustration and charting, net maps and problem trees as tools in groups segregated by gender. Resource maps and seasonal calendars were developed with mixed groups.

Results show that livelihood in all CSS is centred on agricultural activities on smallholder farms, followed by casual labour. This lack of diversification leads to increased vulnerability as the agricultural sector becomes increasingly erratic from both climate and market. Available capitals differ the most at regional scale. For example, farmers in Dodoma have been in the midst of drought scenarios for many years, while in the semi-arid Morogoro, this situation is relatively new to farmers. Important is also the difference of multi-ethnic, multi-religious communities in Morogoro where farming schedules and livestock kept vary within households. In the mono-ethnic traditional Mgogo communities in Dodoma crop farming and livestock keeping is integrated much stronger.

During the assessment of agricultural activities participants reported problems due to lack of rainfall, soil fertility, pest and diseases, lack of input and market availability and accessibility as well as low prices. In Morogoro additionally the conflict between crop farmers and pastoralist was named as a dominant problem. Farmers expressed an interest in gaining more information to assist them as they make decisions to adapt to changing conditions.

**Keywords:** Innovation needs, livelihood, local knowledge, participation, smallholder, Tanzania