



Tropentag, September 16-18, 2015, Berlin, Germany

“Management of land use systems for enhanced food security:  
conflicts, controversies and resolutions”

## Scale-n: Study Design and the Current Status in the Case Study Villages: Morogoro and Dodoma-tanzania

KHAMALDIN DAUD MUTABAZI<sup>1</sup>, HADIJAH MBWANA<sup>1</sup>, CONSTANCE REIF<sup>2</sup>, STEFAN SIEBER<sup>2</sup>,  
MICHELLE BONATTI<sup>2</sup>, CHRISTINE LAMBERT<sup>3</sup>, HANS KONRAD BIESALSKI<sup>3</sup>

<sup>1</sup>*Sokoine University of Agriculture, Dept. of Agric. Economics & Agribusiness, Tanzania*

<sup>2</sup>*Leibniz-Centre for Agricultural Landscape Research (ZALF), Germany*

<sup>3</sup>*University of Hohenheim, Inst. of Biological Chemistry and Nutrition, Germany*

### Abstract

Food and nutrition security must be atop of Tanzania's development agenda as malnutrition is widespread in the country. Poor nutrition reinforces with poor health and sanitation to undermine well-being of the population especially the vulnerable groups (women and children) in rural areas. The domestic agriculture sector that largely feeds the country is not adequately planned and developed in ways that foster human nutrition and health focused food systems. That is why the country's food self-sufficiency has not helped to address malnutrition and nutrition-related health problems. Country-level severe stunting and underweight disorders among under-fives are estimated at 38 % and 22 %, respectively. The distribution and levels of malnutrition and health problems differ over space and time. However, the nutritional outcomes tend to correlate with local food systems in terms of what foods the crop and animal production systems and food markets offer to the local populations. Scale-N is designed to assess the local food systems (food production, markets, and processing), health and sanitation as to identify, test and promote promising upgrading strategies for better and sustainable nutritional and health outcomes. The nutrition profile in the Scale-N case study sites indicates that stunting is at 55 % in the semi-arid Dodoma and 30 % in the sub-humid Morogoro. About 49 % of households consume salt that is not iodized, exclusive breastfeeding is done by less than half (39 %) of the mothers' population and food consumption is mainly cereal based with limited intake of protein and micro-nutrient dense foods. Women of reproductive age and children below five years are the most affected. Scale-N project is expecting to reach around 4,000 rural farming households in its case study sites. In order to identify the major nutrition and health gaps, Scale-N will start by carrying out a situation analysis of local food systems, nutrition status of the population, and water, sanitation and health. Specific analyses will include nutrition-tailored value chain analysis, food characterisation and intake patterns, screening of soils on which crops are grown for existing mineral elements (e.g. iodine, iron, zinc and selenium), and establish the nutrient status of a variety of planted and edible wild foods, and those sourced from local food markets. Moreover, nutritional outcomes indicators to be analysed include anthropometrics and blood tests for detection of micronutrient deficiencies. Through a participatory process, promising upgrading strategies will be identified, tested and promoted in the case study villages. Last but not least in importance, pathways for wider up-scaling of nutritional upgrading strategies will be crafted and institutionalized across the nutrition development planning scales (local, sub-national and national).

**Keywords:** Agriculture, malnutrition, nutrition security, protein and micro-nutrient dense foods