



Tropentag, September 20-22, 2017, Bonn

“Future Agriculture:
Socio-ecological transitions and bio-cultural shifts”

FOSEZA - Food Security in Rural Zambia: Integrating Traditional Fruit and Vegetable Crops in Smallholder Agroforestry Systems

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Abstract

The FOSEZA project addresses the extreme malnutrition observed in the northern regions of Zambia. The project is going to develop sustainable diets through diversifying the farming system currently dominated by cassava and maize and characterised by significant nitrogen deficiencies. Target crops for diversification are traditional fruit trees and vegetables, such as Loquat, Intungulu, Wild Orange, Bambara nut, African eggplant and Amaranth. It will also be tested if the designed agroforestry system can be combined with small scale fish farming and insect production to increase protein availability. Fish farming is particularly suited for the wetland regions in Zambia; however, current productivity is quite low and the entire production chain needs to be considered to improve the system. The designed farming system will be implemented in a remote village by considering the linkages to input markets and extension services. We look at food security from a gender and community perspective. Developed participatory education tools, agricultural demonstration fields, as well as a community managed tree nursery are aiming to disseminate the knowledge necessary to improving nutrition quality and food distribution within households.

Looking at the options for “future agriculture”, particularly the consideration of natural resource depletion and associated environmental costs have changed the beliefs about what agricultural systems will prove to be the most efficient in the long run. Recent concepts like “sustainable intensification”, “water-smart agriculture”, and “wildlife-friendly farming” all address the issues of planetary boundaries and place their emphasis on gender related, smallholder and community oriented strategies. Diversified farming systems managed through an ecosystem approach at the landscape level are believed to increase yields with low external inputs and minimum environmental impact, which will consequently strengthen local food sovereignty. However more sound case studies are needed to test the assumptions and derive options for upscaling. FOSEZA shall contribute to this research gap through a transdisciplinary and interdisciplinary approach. By combining on-station research and participatory field research the project also supports the development of networks between identified action groups.

Keywords: Agricultural diversification, food sovereignty, integrated agroforestry-fish farming, nutrition quality, participatory action research