Tropentag, September 10-12, 2025, hybrid conference

"Reconcile land system changes
with planetary health"

Food environments in Africa: Addressing malnutrition using a syndemics approach (FoodSAMSA)

Carmen Klinger[1], Jillian Hill[2], Nicole Holliday[1], Martina Lembani[3], Magnifique Nkurunziza[3], Elochukwu Christopher Okanmelu[1], Eva Rehfuess[1], Peter Delobelle[4], Zandile Mchiza[2], Peter von Philipsborn[1]

[1] *LMU Munich, Inst. for Medical Information Processing, Biometry, and Epidemiology (IBE), Germany*
[2] *South African Medical Research Council, NCD Research Unit, South Africa*
[3] *University of the Western Cape, School of Public Health, South Africa*
[4] *University of Cape Town, Chronic Disease Initiative for Africa, South Africa*

Abstract

Malnutrition in all its forms, including undernourishment, micronutrient deficiencies, unhealthy diets, and obesity, is a leading risk factor for premature death and disease worldwide. Despite progress in reducing chronic undernourishment, rates remain high in regions like Sub-Saharan Africa and South Asia, with global improvements stalling since 2010. Simultaneously, obesity rates have surged among both adults and children. In many low- and middle-income countries, these contrasting forms of malnutrition coexist, creating a 'double burden of malnutrition' – a syndemic requiring integrated, systemic and evidence-based responses to address its complex, interconnected drivers.

The four-year research project 'Food Environments in Africa: Addressing Malnutrition using a Syndemics Approach' (FoodSAMSA) aimed to address the double burden of malnutrition with a multi-level approach, by assessing its determinants and by exploring interventions at the macro (policy), the meso (community) and the micro (interpersonal) level. The project used South Africa as an anchor country, while reaching out to other countries in Sub-Saharan Africa through strong existing networks. It is a collaborative effort involving three South African partners – the South African Medical Research Council, the University of the Western Cape, and the University of Cape Town – alongside LMU Munich from Germany.

Over the course of FoodSAMSA, we achieved three broad outputs. First, we refined and adapted existing approaches for assessing and improving food environments to contexts characterised by a double burden of malnutrition and other features typically found in low- and middle-income countries. Second, we applied these approaches in South Africa to identify levers for change on policy, community and interpersonal levels, while using integrated knowledge translation methods to ensure practical and policy impact at these three levels. Third, we strengthened capacities and networks among food environment and food system researchers, policymakers, business and civil society actors in South Africa and regionally, thus facilitating further research and action for improved food environments across Sub-Saharan Africa. We will present the background, structure and objectives of the project and showcase selected results, for example the adaptation and implementation of methodological frameworks to assess public policies and food industry policies in South Africa.

Contact Address: Carmen Klinger, LMU Munich, Inst. for Medical Information Processing, Biometry, and Epidemiology (IBE), Elisabeth-Winterhalter-Weg 6, 81377 Munich, Germany, e-mail: cklinger@ibe.med.uni-muenchen.de

Keywords: Capacity building, community interventions, double burden of malnutrition, food environments, food systems, health promotion, knowledge translation, nutrition policy, public health nutrition, South Africa