



Tropentag, September 10-12, 2025, hybrid conference

“Reconcile land system changes
with planetary health”

How nairobi's food environments shape diets: A comparison of dietary diversity and nutrition across neighbourhoods

LUCY APIYO ADUNDO¹, TOMASO FERRANDO²

¹ *University of Antwerp, Belgium, Institute of Development Policy (IOB), Belgium*

² *University of Antwerp, Belgium, Institute of Development Policy (IOB),*

Abstract

The food environment serves as a critical interface within the wider food system shaping individual dietary patterns and nutrition outcomes. In the African cities, urbanisation has led to rapid population growth, the spread of informal settlements, increasing poverty and significant increase in food insecurity and poor nutrition. As African cities like Nairobi experience rapid urbanisation, ensuring sustainable food environments is essential for promoting healthful and sustainable food environments that promote healthy diets. This study compares three income-based neighbourhoods—Kilimani/Kileleshwa (high-income), Kasarani (middle-income), and Viwandani (low-income) — to examine how food environments influence shopping behaviours, dietary choices, agency, and nutritional health. Dietary diversity was assessed using the Minimum Dietary Diversity for Women (MDD-W) scale, based on 24-hour recall data across ten food groups. Nutritional outcomes were evaluated through Body Mass Index (BMI) measurements, while food security status was determined using the Household Food Insecurity Access Scale (HFIAS). Participants also reported on their agency in food decision-making within their local food environments. Findings reveal distinct differences across income regions in food access, consumption patterns, and nutrition outcomes. Key factors influencing food choices included food affordability (prices), nutrition and health, convenience, food availability and accessibility, and household preferences. These results underscore how food environments—mediated by socioeconomic and individual factors—shape dietary behaviours and individual nutrition outcomes. The study highlights the urgent need for equitable food environments within urban settings such as Nairobi, that enhance access to nutritious diets. It calls for inclusive urban food policies to improve food security and nutrition, ensuring healthier outcomes for all residents.

Keywords: Body Mass Index, dietary diversity, food agency , food environments