

In Brief

This report is part of an occasional series that distills learning and highlights resources around specific development issues.



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Building an appetite for urban food systems



As agricultural land in Kenya comes under pressure, research by the East African Institute of Aga Khan University and Canada's University of the Fraser Valley is showing how sustainable urban farming can be part of the solution.

The challenge: growing demand, dwindling land

Africa has the highest rate of urban growth in the world. By 2030, half of its people are expected to live in cities, up from just over one-third in 2010. As cities grow, their ecological footprint also increases: urban sprawl consumes land and water available for agriculture, even as the pressure on food supplies increases.

In East Africa, urbanization has fueled a real estate boom on the fringes of major cities in Kenya, Uganda, and Tanzania. This land pressure, along with volatile global food prices, increasing drought, and climate variability, is squeezing farmers and the city dwellers they feed.

By promoting urban agriculture, cities can encourage residents to produce and consume more of their own food. But with poor distribution networks and local supply chains favoring food imports, small urban growers struggle to market their food. To support local producers, city officials need research evidence to guide the allocation of resources such as land and water, and put in place the right infrastructure, incentives, and standards to ensure safe and reliable food production.

By the numbers:

Nairobi's fragile food supply network

- Urban population: **3.8 million**
- Number of wholesale food depots: **1**
- % of food markets designated temporary: **77**
- Average food sourcing distance: **175 km**

The research: new knowledge and skills to expand urban food systems

Researchers from the East African Institute of Aga Khan University (AKU-EAI) and Canada's University of the Fraser Valley (UFV) are working together to

address the gap, by pinpointing the barriers, opportunities, and benefits related to ramping up urban agriculture. In Kenya's capital, Nairobi, they are using satellite data to map land available for food production, and documenting the city's patchwork of food markets. To better understand distribution and supply chains, and to test the appetite for more local food production, they are surveying food producers and vendors, supermarkets, and consumers. And with youth facing high rates of unemployment, they are creating audio-visual tools to encourage young city dwellers to try their hand at growing food.

“This has been an incredible opportunity to take my learning outside the classroom and apply it to real world situations.”

- Lisa Harrington, UFV intern

Through faculty and student exchanges, the partnership is giving a new generation of young researchers the chance to make their mark on the growing field of urban agriculture. For example, urban planning students from the University of Nairobi have assisted in data collection, while a UFV intern worked with one of Nairobi's most successful urban farmers to develop a handbook on urban food production.

The results: revealing bottlenecks and opportunities

Early findings underscore the gaps and bottlenecks in Nairobi's food procurement system and the long distances food travels to reach urban consumers. Over 2014-2015, AKU-EAI surveyed 18 city markets. While food sources travel an average of 175 kilometres to reach Nairobi, vendors are served by only one major wholesale depot - Wakulima market. Most produce is then re-distributed to retail markets across the congested city, mainly by handcart. Meanwhile, nearly eight out of 10 of the city's retail markets are temporary, with poor infrastructure – lacking water, sanitation, electricity, and parking. Without legal status, these markets cannot expand or upgrade.

The long distances that food travels, and the lack of a system for tracing food sources, point to environmental impacts and potential problems with hygiene and food safety. Food diversity is also a concern, according to AKU-EAI Research Fellow Stephen Otieno. While surveys found 51 different food products in local food markets,



“We want to start a conversation, to get people asking where their food comes from and how it is grown.”

- Stephen Otieno, AKU-EAI Research Fellow

many were of a single variety. “Most markets stocked only one type of cabbage, for example. This means food supplies may be prone to shocks such as pest infestation or low prices due to over-supply,” he says.

Supermarkets, meanwhile, are a growing food source in Nairobi, especially among those with higher incomes. While they currently ask few questions about where their produce comes from, Otieno believes that growing consumer awareness of the health and environmental benefits of locally-grown food will be key to driving new demand for fruits, vegetables, and livestock raised in or near Nairobi.

Looking forward

In 2015, Nairobi City County adopted a new bill to promote urban food production. By sharing their findings with county officials and other stakeholders, AKU-EAI and UFV are building an evidence base that can help turn this vision into reality. Research results have been shared with county and national authorities, market officials, urban farmers, youth groups, and other key stakeholders.

The project is also having an impact beyond Kenya. To deepen the East African research base on urban food systems, AKU-EAI and UFV have partnered with Tanzania’s Ardhi University to replicate the food market surveys in Dar es Salaam. And research efforts are helping to shape Seeds to Market, an online course developed by UFV faculty and offered by UN HABITAT as part of a certificate program targeting youth groups across developing countries.

Aga Khan Foundation Canada

Aga Khan Foundation Canada (AKFC) is a non-profit international development agency, working in Asia and Africa to find sustainable solutions to the complex problems causing global poverty. Established in 1980, AKFC is a registered Canadian charity and an agency of the worldwide Aga Khan Development Network.

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The Institutional Partnership for Human Development (IPHD) is a crosscutting project of the Partnership for Advancing Human Development in Africa and Asia (PAHDAA) that is funded by Global Affairs Canada and AKFC. IPHD aims to mobilize Canadian expertise and institutions to respond to a broad set of needs within indigenous institutions in their efforts to improve human development. In total, eleven partnerships between Canadian universities and colleges and overseas institutions have been supported by IPHD.

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