

# FROM SMALL FARMS TO BIG CITIES – LEVERAGING FOOD SYSTEMS FOR ENDING HUNGER AND MALNUTRITION

Two 2017 IFPRI and FAO reports suggest that strengthening food supply chains can immensely contribute to ending malnutrition and reducing poverty. Our author explains the complex interdependencies between rural and urban regions.

By Rob Vos

Rapid urbanisation, particularly in developing countries, is reshaping food security and nutrition in both rural and urban areas. Over half the world's population now lives in cities, and by 2050, 66 per cent of the world's population is projected to live in urban areas, with the increase concentrated in East and South Asia and Africa.

Urbanisation and population growth are expected to put mounting pressure on the global food system as agricultural production comes under stress from environmental degradation, climate change and extreme weather conditions. And as urbanisation has accelerated in some developing countries, so has the triple burden of malnutrition: the coexistence of hunger, under-nutrition, and over-nutrition in the form of overweight and obesity. Poverty, food insecurity, and malnutrition are increasingly becoming urban problems in all regions of the world. Child stunting now affects one in three urban children, for example. Among adults, the global rise in overweight and obesi-

ty had been concentrated in urban areas. Poor urban residents, especially slum-dwellers, face unique food security and nutritional challenges related to accessing nutritious food, employment, social protection, and adequate water and sanitation. Food security in urban areas requires access to cash, which jeopardises the poor, who depend heavily on unstable, informal sector employment. In many developing countries, extremely poor urban households spend more than 50 per cent of their budgets on food. Limited safety nets often fail to protect the poor, while food security and nutrition problems are aggravated by an unhealthy living environment, especially in slums.

## GROWING POPULATION, CHANGING DIETS

Urbanisation is also accelerating the “dietary transition” involving increased shares of animal-sourced foods, sugars, fats and oils, salt and processed foods in consumption baskets. This

change in diets is associated with increased risks of overweight, obesity and diet-related illnesses such as diabetes and heart disease. The most easily available and affordable diets, particularly for the urban poor, are often unhealthy. Food policies must be designed to transform urban – often “obesogenic” – food environments to increase accessibility of nutritious diets and create healthier, supportive environments for the urban poor. This will require not only working with actors at the retail end of the food value chain, such as supermarkets, but also building linkages with rural producers.

The International Food Policy Research Institute (IFPRI)'s 2017 Global Food Policy Report (GFPR) and the United Nations Food and Agriculture Organization's 2017 report on The State of Food and Agriculture (SOFA) provide compelling evidence showing that strengthening rural-urban economic linkages and developing and modernising the midstream of food supply chains (i.e. transportation, storage, processing, distribution and services) can make

Photo: G.M.B. Akash/Panos



**Figure 1: Food from small farms to big cities****SUPPLY CHAIN ACTIVITIES AND ACTORS****RURAL-URBAN CONTINUUM**

Very rural — Rural — Small towns — Intermediate cities — Peri-urban — Very urban

**FOOD-SECTOR FLOWS**

Source: Joachim von Braun, 'Rural-Urban Linkages for growth, Employment and Poverty Reduction', Presentation at Fifth International Conference on the Ethiopian Economy, Ethiopian Economics Association, Addis Ababa, June 7-9, 2007, as adapted by José Graziano da Silva and Shenggen Fan. 2017. Strengthening Rural-Urban Linkages to End Hunger and Malnutrition. In: IFPRI, Global Food Policy Report 2017, page 16.

a major contribution towards accelerated poverty reduction and sustainably end malnutrition in developing countries. Strong linkages between agricultural producers, particularly smallholders, and urban consumers can propel economic development and improve food security and nutrition for both rural and urban areas. Expanding urban markets provide enhanced income and employment opportunities for actors along food supply chains, including through greater demand for more nutritious foods like fish, meats, dairy products, fruits and vegetables, as these food items tend to have higher economic value and greater requirements for cooled storage and transportation, packaging, and processing than most staple crops like grains and pulses. The two reports detail the linkages that should be strengthened across the broader rural-urban continuum and across the food system (see Figure 1).

**THE QUIET REVOLUTION IN FOOD VALUE CHAINS**

In many developing countries, these vital linkages are already strengthening. A “quiet revolution” is affecting staple food value chains. Growing use of modern inputs, information and communications technologies and expanding midstream sections of the value chain all figure in this transformation. For example, farmers are more likely to adopt new technologies, such as improved seeds, when transport costs to major urban markets are low since it eases their access to markets and increases pay-off from adopting new technologies. Cities are serving as engines of growth that support rural development and meet urban needs.

Such benefits will not come automatically but will require adequate infrastructure and the right market incentives. Trade-offs, especially greater environmental pressures resulting from higher energy use and resource intensity associated with the production of livestock, fruits, vegetables, and processed foods, as well as obesity and health risks associated with excess consumption of animal fats, salty foods and sugary beverages will need to be addressed in tandem.

Supply chains bring food produced by rural smallholders to urban consumers and inputs produced in cities or towns to smallholders. However, weak links along the value chain may disrupt this flow (see also Box on page 13). A deficit of inputs, such as seeds and fertilisers, or physical and financial impediments to accessing inputs faced by smallholders, can weaken the value chain upstream. A lack of processing, milling, cold storage, and transportation can sever the midstream of food systems. Poor transportation infrastructure can make it too costly for smallholders to sell their

produce downstream to urban consumers and can contribute to greater food losses and waste. Strong value chains are important for improving livelihoods, food security and nutrition.

**LINKAGES FOR ACHIEVING MULTIPLE SDGs**

Rural infrastructure, including quality rural and feeder roads, electricity and storage facilities, is essential for pro-poor growth, agricultural development and improved livelihoods. Inadequate rural infrastructure leads to isolation of communities and is significantly associated with poverty and poor nutrition. Weak transport infrastructure tends to be a major constraint in low-income countries, despite the potential for rural roads to pave the way for other investments that can improve areas as a means of nutrition – such as schools, health services, and security services. Lack of paved roads and electricity also contributes to substantial post-harvest food losses along the value chain, since cooling the goods after harvesting is not secured and the transport routes become longer (see Figure 2).

**WEAK GOVERNANCE OF NATURAL RESOURCES**

Inadequate shared governance of natural resources tends to weaken links between rural and urban areas. With existing predominant production methods, rising food demand will increase pressures on natural resources and the environment (see also article on pages 17–19). These pressures will be exacerbated by shifts in land use for livestock production (including in peri-urban areas) that are associated with changing dietary patterns. Proper land

Figure 2: Rural-urban linkages can help achieve improved food systems and multiple SDGs

Activities for enhancing rural-urban linkages	Benefits to food systems and residents in		SDGs supported*													
	Rural areas	Urban areas	1	2	3	8	9	10	11	12	13	15	16	17		
Investing in rural feeder roads and cooled transportation	Connects smallholders to input and output markets, generates employment, improves incomes and value-added, and diversifies food production and diets	Improves availability and accessibility of staples, high-value foods and other agricultural products and generates non-farm employment and incomes	●	●	●	●										
Establishing processing centres and storage facilities	Increases value-added of agricultural products and incomes, spurs employment, and reduces food losses	Improves availability of diverse foods and increases incomes	●	●		●	●		●		●					
Using information and communications technologies (such as mobile phones) to link farmers to processors, retailers, and consumers	Improves market participation, incomes, and livelihoods of smallholders	Improves availability of diverse foods	●	●			●		●							
Facilitating in-country movement of people while providing assistance to people who move to cities	Allows rural workers to mitigate income risk through migrant work and remittances, improving income and livelihoods	Improves food security and nutrition through social safety nets and rural-to-urban food and cash transfers	●	●		●			●							●
Improving co-ordination and planning between rural and urban areas, especially as related to food and agriculture	Opens labour opportunities and markets for smallholders	Helps manage land use and reduces food insecurity and malnutrition	●	●	●	●	●		●	●	●	●	●			●
Leveraging small and medium-sized cities as key nodes to link smallholders to big cities	Allows for growth in scale of markets (such as processing, cold storage) and improves access to input, output, and credit markets and can dynamise employment generation	Increases food access, consistency, and quality and dynamises employment generation	●	●	●	●	●									

\*SDGs supported by enhancing rural-urban linkages



use planning and regulation of land tenure are often missing in urban and rural governance structures in developing countries, hampering the development of urban and peri-urban agriculture. Urban sprawl will affect food security and natural resource availability in places where it causes significant loss of productive peri-urban agricultural land and contributes to degradation of environmental resources. The expected increases in the urban population in the developing world will be accompanied by a tripling in the built-up area of cities from 200,000 to 600,000 square kilometres between 2000 and 2030. The way in which cities are built up will have major implications for establishing connectivity and securing adequate rural-urban linkages.

The lack of co-ordination between governance mechanisms for food security and nutrition and those for the management of natural resources may arise from misperceptions about the economic and social roles of rural and urban areas. Urban food insecurity and malnutrition are often overlooked in low- and middle-income countries, as hunger and malnutrition are perceived to be mainly rural problems. On the other hand, a disproportionate focus on urban areas can bring about an “urban bias” against agriculture and the rural economy in the allocation of development resources and prioritisation of policies to address poverty.

Both the GFPR and the SOFA report emphasise that investments along the continuum between rural and urban – in small towns and medium-sized cities that constitute the hidden (and sometimes non-existent) geographic middle – are critical. Rural townships and medium-sized cities can serve as important inter-

### HOW BROKEN LINKAGES WEAKEN DOMESTIC DEVELOPMENT: THE RICE VALUE CHAIN IN NIGERIA

Rice has become one of Nigeria’s most-consumed staples, and the country has made boosting rice production a priority. Yet 60 per cent of rice purchased in urban areas is imported because of consumer concerns about locally produced rice. These concerns include inconsistencies in quality, labelling, and taste – problems that arise from poor vertical integration in the domestic rice value chain. For rice, post-harvest processing (milling, parboiling and cleaning) and marketing (weighing, bagging and branding) play key roles. Yet with a highly fragmented domestic value chain, the many small and medium-sized rice millers that process 80 per cent of Nigerian rice have varied skills and degrees of access to services and information, and little scope for upgrading varieties or technologies.

The result is wide variation in the quality of the final product in Nigeria, including unfavourable properties such as discoloration and the presence of stones. Lack of traceability along the value chain leads to inconsistencies between variety names and the final product, preventing a link between production and consumer preferences. That consumers prefer the quality, taste and texture of imported rice over domestic rice is in large part due to the broken rice value chain is not surprising.

Source: Taken from José Graziano da Silva and Shenggen Fan. 2017. Strengthening Rural-Urban Linkages to End Hunger and Malnutrition. In: IFPRI, Global Food Policy Report 2017, page 18.

mediary points to connect hinterlands to urban centres while providing social and economic benefits. They can act as service delivery nodes for rural areas and link the rural economy to markets, thereby reducing transaction and transportation costs. Towns and intermediate cities can also foster non-farm rural growth, affording smallholders access to employment in agri-food processing or other commercial or industrial activities.

### STILL A LONG WAY TO GO

While leveraging food systems by overcoming bottlenecks in the midstream and geographic middle thus can bring significant economic benefits, the consequences for human health and planetary sustainability associated with di-

etary change and the related greater environmental pressures should not be overlooked. Forged in the right way, stronger rural-urban linkages can help address such trade-offs as they can help reduce the price of healthy foods, such as fresh fruit and vegetables, in urban markets through improved transportation or storage. Along with other nutrition policies, this can contribute to healthier diets for urban populations, particularly for the poor, who are often limited to cheaper, unhealthy, and less nutritious diet options. While urbanisation and modern food systems have lengthened supply chains and increased environmental pressures, better connected markets and actors along the food chain also allow for policies and regulatory frameworks that more consistently promote environmentally sustainable practices from farm to fork. Unfortunately, reality is still at quite some distance from consistently addressing these challenges, but the GFPR and SOFA reports provide directives that would lay the seeds for the urgently needed transformative change.

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Rurally produced fruits sold at the market in Nairobi, Kenya.

Photo: Sven Torfinn/Panos

For references and further reading, see online version of this article at: [www.rural21.com](http://www.rural21.com)