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Urban poverty, food security and climate change

Increasing food production is the main policy prescription for addressing food security, but this neglects the crucial importance of access and affordability for low-income urban residents. More than half the world's population lives in urban centres, and urban food insecurity is an emerging challenge that is exacerbated by climate change. Although low and irregular incomes are its root cause, environmental hazards and inadequate housing and infrastructure contribute to higher levels of malnutrition in low-income settlements than in rural areas. Addressing urban food security requires attention to incomes, living conditions, access to formal and informal markets and the interconnections between rural and urban food security.

Policy pointers

- **In the context of climate** change, food insecurity is seen primarily as a problem of insufficient production rather than of insufficient consumption, and urban food security is often neglected.
- **Food insecurity is deeply** connected to poverty. As low- and middle-income countries urbanise rapidly, both poverty and food insecurity will concentrate in urban areas.
- **Low incomes are the** primary cause of urban food insecurity, but poor living conditions, local environmental hazards and limited access to markets contribute, and are exacerbated by climate change.
- **Improving access to** affordable food by the urban poor will require boosting their capacity to adapt to climate change impacts, and their access to secure incomes and to both formal and informal food markets.

After the major spikes in food prices in 2007 and 2008, food security is again at the top of the policy agenda. In the period 2010–2012, 12.5 per cent of the world's population was estimated to be undernourished, a proportion that rose to just under 15 per cent in low-income countries.[1] Food prices are widely expected to remain high in the foreseeable future. This is the combined result of changes in demand (higher quantities of food are needed to feed a growing world population) and changes in supply (because of competition for increasingly scarce resources such as land, water and energy and the liberalisation of international trade). Greater climate variability and climate change pose an additional and arguably much greater challenge to food security, and will disproportionately affect low-income individuals and communities with the least capacity for adaptation.[2]

Food security is a primary concern for all those who rely on buying, rather than producing, food. This includes a large proportion of rural residents but also the vast majority of urban dwellers.[3] Yet most policy prescriptions focus on rural food production and neglect the factors that determine urban food security. Indeed, urbanisation is often portrayed as contributing to rising food prices — by increasing demand for meat and dairy products, and through changing land use from agricultural to residential. But urbanisation in itself does not drive food prices upwards.[4]

In many low and middle-income countries, the unwelcome corollary of rapid urbanisation is rising numbers of people with low and unstable incomes who live in settlements with inadequate infrastructure and limited if not non-existing basic services. Poverty and food insecurity are deeply interconnected. With the majority of the world's population living in urban centres, poverty increasingly becomes an urban issue and so does food security.

The key sources of urban food insecurity

Insufficient income is the major cause of urban food insecurity. A large majority of the urban poor rely on informal sector activities and casual labour, which only provide low and irregular earnings. In low-income nations, informal employment accounts for half to

Food security policies need to address both production and consumption

three-quarters of all non-agricultural employment.[5] The global economic crisis that started in 2008 has had a devastating impact on informal sector workers, leading to rising costs for food, fuel and transport and increased competition from workers laid-off from formal sector jobs.[6]

Food insecurity is the most severe impact of the crisis: poor urban households typically spend over half their earnings on food, and any decline in incomes that are already low is strongly felt. Recent research in eleven Southern African cities shows that four out of five urban households are food insecure.[7] A common coping response is reducing the quality and quantity of food and skipping meals, while at the same time working longer hours. This clearly has long-term health consequences. Women tend to work longer hours than men as they need to combine income-generating activities with care responsibilities, often with little help from men, and in many cases they forego food to ensure that their children have enough.[8]

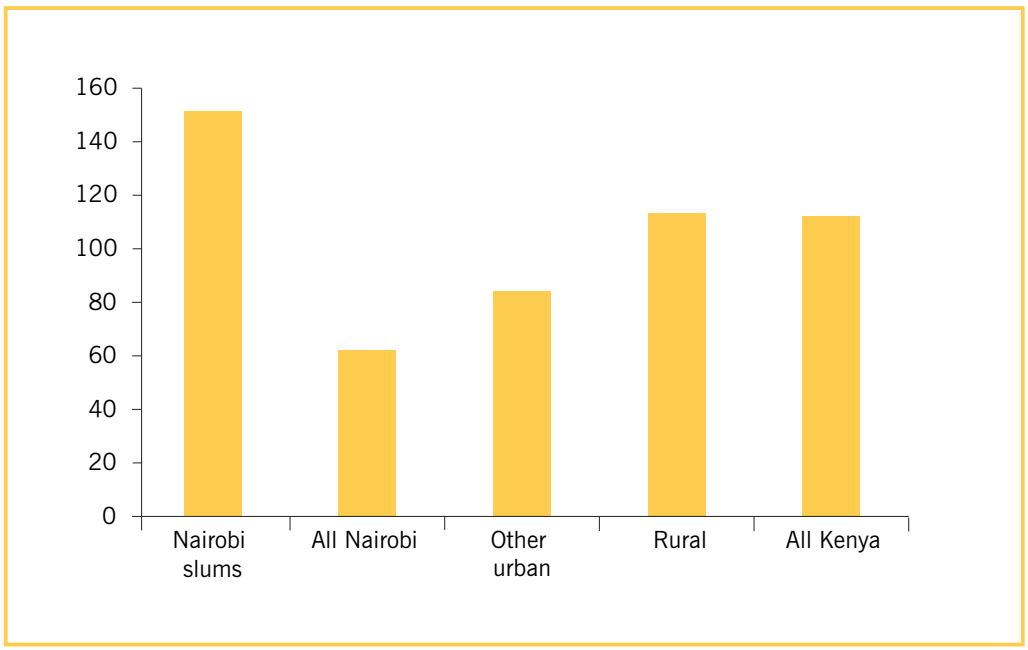
Income poverty is, however, not the only source of food insecurity. A large proportion of urban residents in low-income countries live in congested and overcrowded housing that leaves insufficient space for cooking and storage. Food must be bought in small quantities and at higher prices. Inadequate access to clean water sources, and the extremely poor sanitation and waste collection provided for the majority of residents of cities in Asia and Africa are major causes of high levels of severe diarrhoea, malnutrition and stunted growth. In Nairobi's informal settlements, infant and under-five mortality rates are not only higher than in the city's wealthier neighbourhoods, but also than those in rural areas[9] (see Figure 1).

Low-income and informal urban settlements are exposed to environmental hazards that climate change further exacerbates. These settlements are often located in flood plains and have little, if any, surface water drainage systems. So floods are one of the most frequent and devastating results of changing rainfall patterns. In 2010 alone, 178 million people were affected by floods globally.[10] In a large proportion of cities in Africa and Asia, destructive floods have become an annual event. Floods affect incomes (and so food security) in several ways. They reduce people's ability to go to work and increase expenses as household property including furniture, kitchen utensils and clothes are lost. Disruption to transport infrastructure increases food costs and difficulties accessing markets. Water-borne diseases such as cholera, dysentery and skin infections also increase dramatically, especially in areas with poor sanitation, and this increases malnutrition. At the most basic level, floods affect people's ability to store food and to cook at home.

Food markets for the urban poor

Urban agriculture can be an important food source for urban residents and can support urban ecological cycles by recycling organic waste. The extent of urban farming varies greatly between cities, but overall the urban poor are a minority among urban farmers. This is because access to urban and peri-urban land is expensive, and

Figure 1. Infant and under-five mortality rates in Kenya. (Source: APHRC[9])



the density of low-income settlements is generally very high, leaving little space for growing crops and raising livestock. High land values encourage the production of high-value foodstuff, such as fresh fruit and vegetable, dairy and meat. Staples such as rice, maize and wheat come from more distant locations and are increasingly imported.

Access to affordable food markets rather than own production is essential for poor urban residents. Nearby markets lower transport costs and make it possible to buy cheaper items before the stalls close for the day. But often such access is difficult because poor people work very long hours and markets are not generally located close to informal settlements. In Latin America, Africa and Asia, supermarkets' share of retail increased from 5–10 per cent in 1990 to 20–60 per cent in 2007.[2] There are large differences between countries, and this proportion is lower in lower-income and least urbanised countries. But in some countries, such as South Africa, supermarkets are rapidly gaining control of the retail sector.[11] Such concentration of retail outlets into supermarkets is unlikely to benefit the urban poor. Although supermarket prices may be low, this mainly benefits those who have storage space and electricity for refrigeration at home — not most residents of low-income settlements.

Informal food vendors in fact are the main source of food for the urban poor. Buying cooked food is often cheaper than cooking at home, and saves time. In Nairobi, beans are a popular cheaper alternative to meat, but preparation requires time and fuel. Buying small portions from street vendors who cook them in bulk makes sense. Food vendors are also an important resource when floods do not allow cooking at home. Food vending is a main income-generating activity for women living in the settlements as it makes it easier to look after children and also to save some food for the family. Yet vendors face the same constraints and risks as their neighbours: in Accra's Old Fadama informal settlement, lack of space forces vendors to forego bulk purchases of raw foodstuffs. Their only alternative is to rent storage space outside the settlement, increasing their costs. Like their customers, vendors are exposed to floods as well as to the risks linked to poor sanitation and limited access to clean water that can make their food unsafe.

Low-income urban residents' access to food depends on both physical accessibility and financial affordability. Local fresh markets and informal food vendors are more likely to respond to these needs than formal markets. So are small local shops, where higher prices are compensated by shopkeepers' willingness to grant credit to customers who are often neighbours. Exchanges in kind are also increasingly common: in Dakar's low-income settlements, women's revolving savings groups, the tontines, now tend to collect and redistribute food items rather than cash.

Migration and food security

Contrary to widely held beliefs, most of the urban poor are not migrants. But as environmental deterioration and competition for land and water affect livelihoods in rural areas, migration is an increasingly common strategy to diversify income sources. Many migrants to urban centres retain strong links with their relatives in home areas. Cash remittances from urban-based migrants are often the backbone of rural households' incomes. They cover education and health costs, and allow small family farms to hire seasonal labourers to compensate for the labour shortages caused by migration. Perhaps more importantly, remittances are often essential to ensure food security in rural areas. With decreased agricultural productivity due to disrupted rainfall patterns, changes in temperatures and soil degradation, rural residents increasingly depend on purchased food. In many cases, imported and processed foodstuffs are cheaper in towns and cities than in remote rural settlements, and migrant relatives may send them instead of cash. In exchange, rural residents may send locally produced foodstuffs to their migrant relatives in the cities.[12]

So flows of food between rural and urban areas are not unidirectional. Rather, they reflect the complexity of local, national and global food systems. They are also highly dynamic, and change in response to economic conditions. In Harare, the economic crisis has reversed exchanges between rural and urban areas, with urban residents getting more from their rural relatives than they send.[13] Understanding the interconnectedness of rural and urban areas, activities and people is essential for understanding the characteristics of food security in both.

Policy priorities

More than half the world's population now live in urban areas, and in the next 40 years virtually all global population growth will be in cities and towns of low and middle-income countries in Africa and Asia. Food security initiatives and policies need to take this into account and address both the production and consumption dimensions.

Income poverty is the root cause of urban poverty and of urban food insecurity. Access to decent and stable employment is clearly the first priority. Social protection programmes such as the Hunger Safety Net in Kenya,[14] the Productive Safety Net Programme in Ethiopia, Bolsa Familia in Brazil and Progresa-Oportunitades in Mexico have been shown to increase food security by providing more stable incomes.

Such programmes are also important in building capacity to adapt to climate change impacts. However,

these safety nets are non-existent or insufficient in almost 80 per cent of the world's poorest countries. Moreover, because of the formal requirements for people to have an address and for businesses to be registered, such schemes often do not include those living in urban informal settlements and those working in the informal settlements — in other words, they may exclude precisely those who need them the most.

Increasing incomes is only part of the solution. Improving living conditions and reducing environmental hazards in low-income urban settlements is also essential for food security. National and local governments make limited efforts to do this, citing the difficulty of providing basic infrastructure to rapidly expanding informal neighbourhoods, and lack of resources. Yet there are several examples of how infrastructure and housing can be improved through co-production that brings together local governments and organisations of the urban poor, pooling financial resources and negotiating over the types of interventions and priorities.

Urban planners need to make the urban poor's access to affordable markets a central concern. At the same time, own production through urban agriculture requires better access to urban and peri-urban land. Transfers of food between rural and urban-based relatives also need to be better understood and supported: urban food security and rural-food security are closely interlinked, and successful policy prescriptions need to build on this, rather than ignore it.

In short, local and national governments, as well as development agencies, need to better recognise and support the initiative and capacity found among residents of low-income settlements as they strive to improve their living conditions. This, in turn, will help ensure food security as well as urbanisation that contributes to sustainable development.

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Notes

[1] FAO, WFP, IFAD. 2012. *The state of food insecurity in the world 2012: economic growth is necessary but not sufficient to accelerate reduction of hunger and malnutrition.* FAO, Rome. See: www.fao.org/publications/sofi/ [2] Vermeulen, S., Campbell, B.M., Ingram, J.S.I. 2012. Climate change and food systems. *Annual Review of Environment and Resources.* 37:195-222 [3] FAO. 2011. *The State of Food Insecurity in the World: How does international price volatility affect domestic economies and food security?* FAO, Rome [4] Stage, J., Stage, J., McGranahan, G. 2012. Is urbanisation contributing to higher food prices? *Environment and Urbanization* 22(1), 199-215. See: http://pubs.iied.org/10573IIED [5] Chen, M. 2010. Informality, poverty and gender: evidence from the Global South. In: Chant, S. (ed.) *The international handbook of gender and poverty: Concepts, research, policy.* Edward Elgar, Cheltenham, UK. [6] Horn, Z. E. 2011. *Coping with crises: lingering recession, rising inflation and the informal workforce.* Inclusive Cities Study. WIEGO and Inclusive Cities. See: http://wiego.org/sites/wiego.org/files/publications/files/Horn-Global-Economic-Crisis-2_0.pdf [7] Frayne, B. *et al.* 2010. *The state of urban food insecurity in Southern Africa.* Urban Food Security Series No. 2. Queen's University and AFSUN, Kingston and Cape Town. See: http://queensu.ca/samp/afsun/files/Afsun%202%20web.pdf [8] Heltberg, R., Hossain, N., Reva, A. (eds). 2012. *Living through crisis: how the food, fuel and financial shocks affect the poor.* The World Bank, Washington DC. [9] African Population and Health Research Center. 2002. *Population and health dynamics in Nairobi's informal settlements. Report of the Nairobi Cross-Sectional Slums Survey.* APHRC, Nairobi. [10] Jha, A. K., Bloch, R. Lamond, J. 2012. *Cities and flooding: a guide to integrated urban flood risk management for the 21st Century.* The World Bank, Washington, DC. See: https://www.gfdrr.org/urbanfloods [11] Crush, J., Frayne, B. 2010. *Pathways to insecurity: Urban food supply and access in Southern African cities.* Urban Food Security Series No. 3. Queen's University and AFSUN, Kingston and Cape Town. [12] Tacoli, C. 2011. *Not only climate change: mobility, vulnerability and socio-economic transformations in environmentally fragile areas of Bolivia, Senegal and Tanzania.* Human Settlements Working Paper 28. IIED, London. [13] Crush, J. 2012. *Migration, development and urban food security.* Urban Food Security Series No. 9. Queen's University and AFSUN, Kingston and Cape Town. See: http://queensu.ca/samp/afsun/files/AFSUN_9.pdf [14] www.hsnp.or.ke

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