

Urban Nutrition



The world is rapidly urbanising

The number of people living in urban environments is growing at a rapid rate. Urban living fundamentally changes how people eat, as they are more reliant on needing paid employment and are more limited with growing their own food. This shift towards more urban living is also seeing big changes in food environments for most people, and what food is available, affordable and accessible to them. This is contributing to fast shifting patterns of malnutrition among and between different income groups. Altogether, urban areas pose unique challenges and opportunities around diets and nutrition. This factsheet summarises some of these major shifts and points to the challenges that we face feeding cities with nutritious and affordable diets.

Today over half of the world's population live in cities. By 2050, this share is predicted to increase to 68% (Figure 1). About 90% of this increase in urban populations will take place in low- and middle-income countries (LMICs) in Africa and Asia, as a result of natural population increase, reclassification of urban areas, and migration to urban areas (1).

What is an urban area?

The United Nations (2) defines a large city as having five to ten million inhabitants and a megacity as a city with over ten million inhabitants. Cities with one to five million inhabitants are considered medium; small cities are those with fewer than one million inhabitants. But how cities and urban areas are defined by different countries varies and can change over time. Examples of the minimum requirements used to define an urban area include (3):

- **Iceland** and **Denmark** – at least 200 inhabitants.
- **The Netherlands** and **Nigeria** – at least 20,000 inhabitants.
- **Cambodia** – at least 2,000 inhabitants, with less than 50% of men employed in agriculture.
- **Germany** – at least 150 people per km²
- **China** – at least 1,500 people per km².



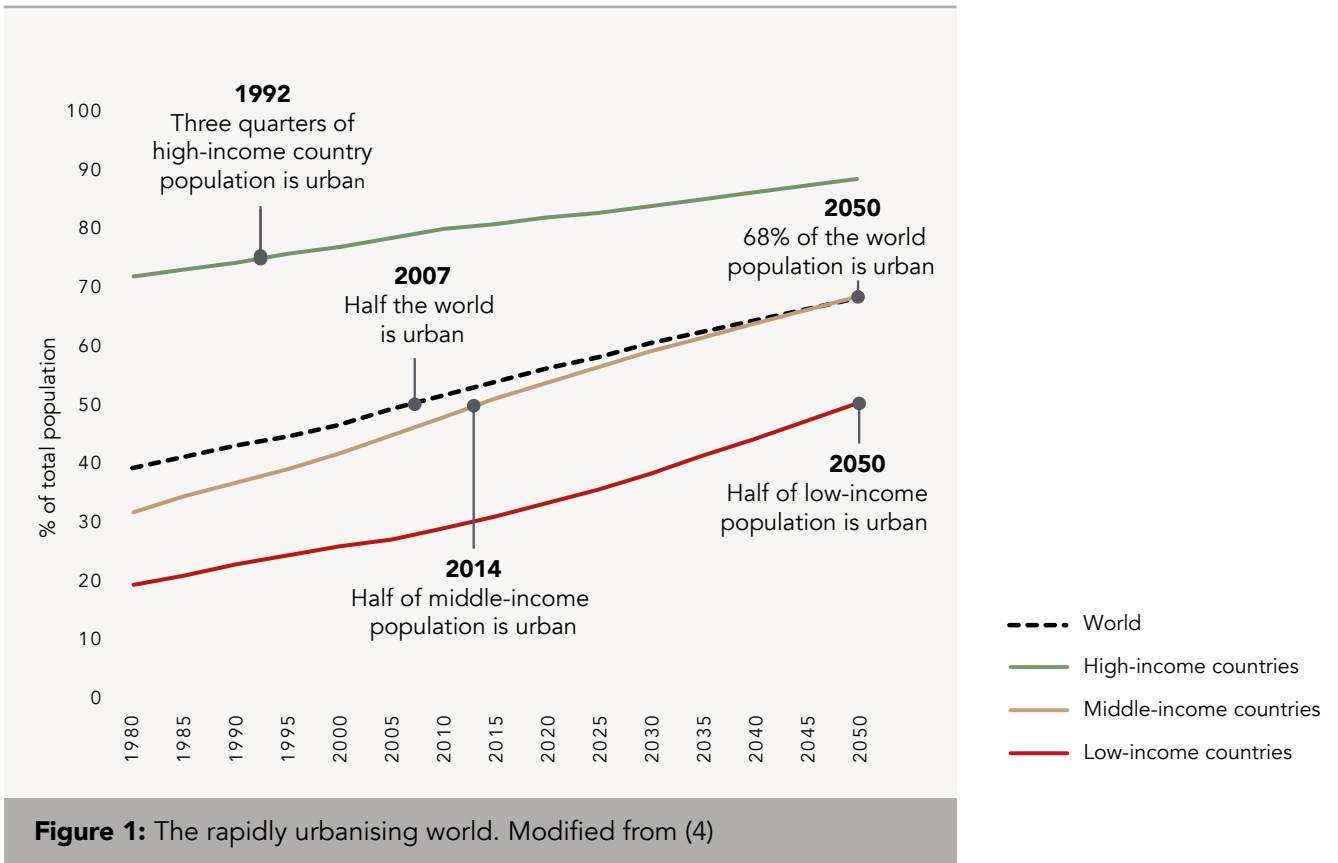


Figure 1: The rapidly urbanising world. Modified from (4)

As a result of increasing urbanisation¹, the number of megacities is growing. Currently, there are 33 megacities worldwide with 27 of them in LMICs. By 2030, ten more cities will become megacities with nine of them being in LMICs in Africa and Asia (Figure 2) (5). Small cities will continue to be the most common type of urban areas. By 2030, 8.8% of the world’s population is estimated to be living in megacities, and 46% in small and medium cities (2).

1. Urbanisation refers to the shift in population from rural to urban areas and is defined as the rate at which the number of people in urban areas increases relative to those living in rural areas (30).

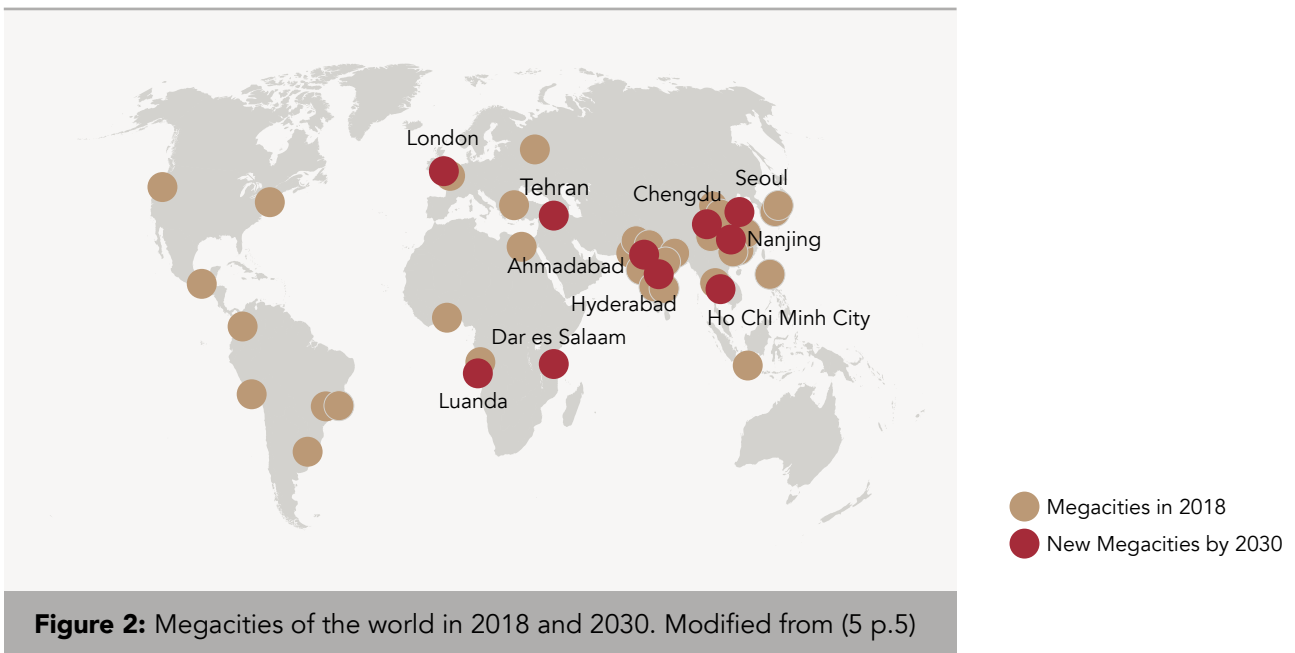


Figure 2: Megacities of the world in 2018 and 2030. Modified from (5 p.5)

Urban malnutrition

In cities malnutrition is prevalent in many forms, including stunting, micronutrient deficiencies, and overweight and obesity² (Figure 3). While the number of stunted children fell worldwide between 1985 and 2011 mainly due to declines in rural areas, the number of stunted children stayed largely unchanged in urban areas. As a result, an increased proportion of stunted children now live in urban areas, though overall stunting remains relatively more common in rural areas (6). Global estimates comparing prevalence of micronutrient deficiencies in rural and urban areas are mainly available for anaemia. Anaemia in children is more prevalent in rural areas, but is also frequently seen in urban areas (Figure 3) (1). Overweight and obesity rates are rising worldwide. In 2016 it was estimated that 44% of adults were obese or overweight, of which over 70% live in LMICs (7). Obesity is more common in urban than in rural areas (Figure 4) (6).

- Stunting:** a child is defined to be stunted when its height-for-age is too low. This generally indicates a longer period of suboptimal health or nutritional conditions (31).

Micronutrient deficiencies indicate a shortage of micronutrients that are not produced by the body and must be derived from food, such as iodine, vitamin A and zinc (32).

Overweight and obesity: a person is said to be overweight or obese when body mass index (BMI) is respectively above 25 kg/m² or 30 kg/m² (33).

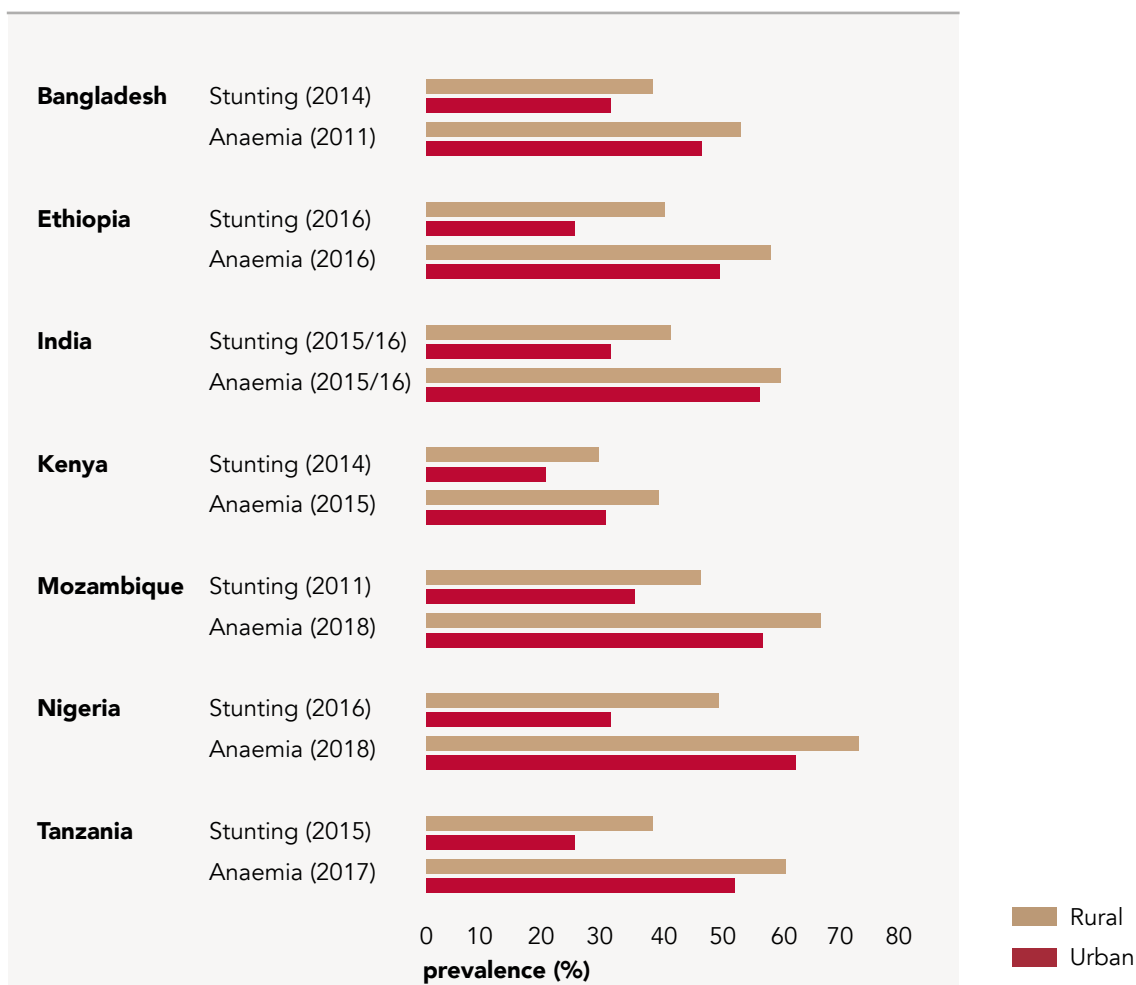


Figure 3: Prevalence of stunting and anaemia among children under five. Selection based on available data for GAIN countries, modified from (8, 9).

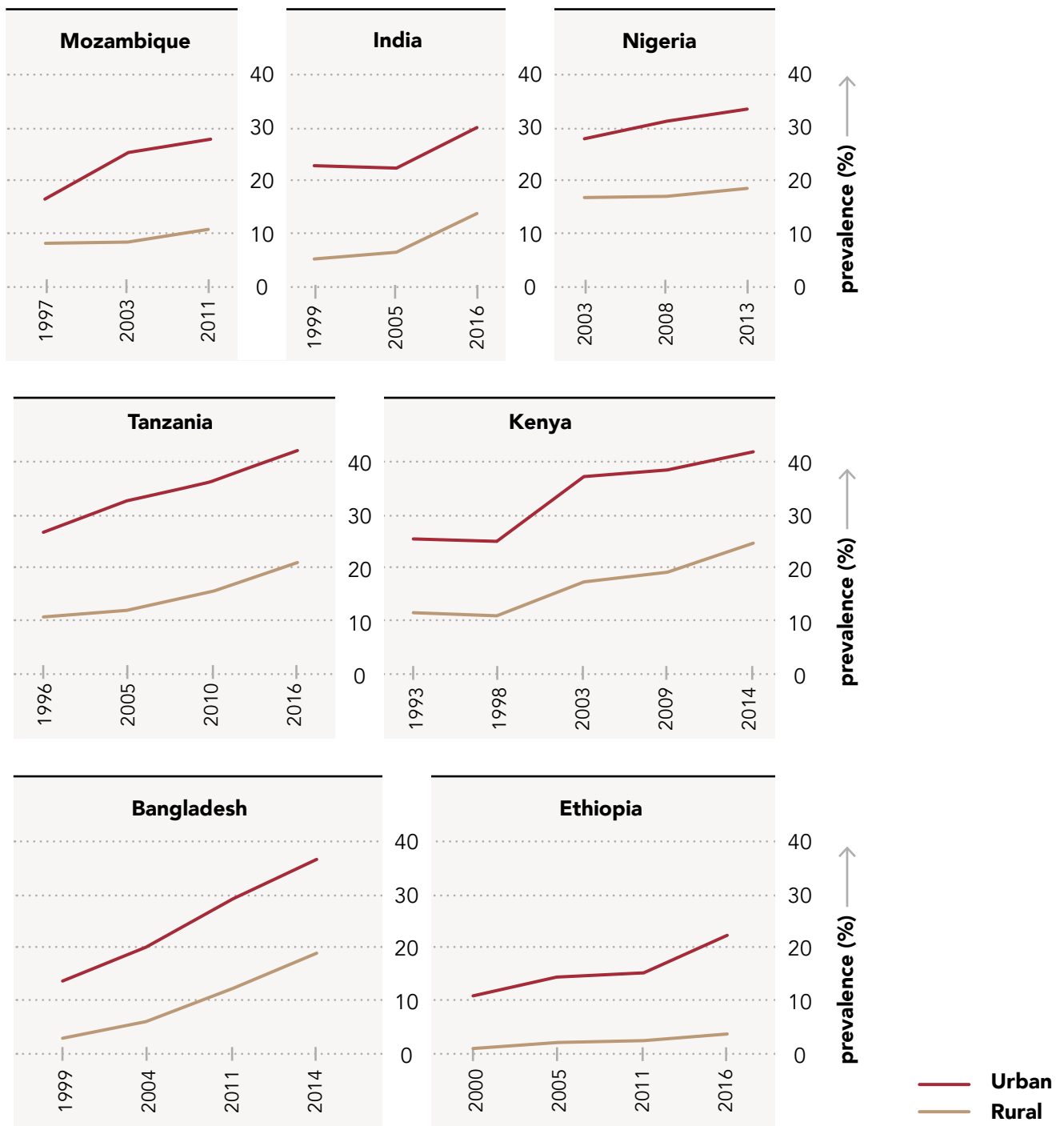


Figure 4: Prevalence of women (15-49) overweight or obese. Selection based on available data for GAIN countries, modified from (9).

The nutrition transition

With urbanisation and rising incomes, diets are changing too. Traditional diets in many LMICs tend to be rich in unprocessed or minimally processed cereals (maize, rice, wheat), starchy staples (potato, cassava, plantain), and fibre. But changing dietary patterns include much higher shares of sugar, fats, and animal-source foods. These dietary changes are referred to as the nutrition transition (10). When combined with increasingly sedentary lifestyles (e.g. as technology displaces manual labour or physical play) as well as demographic and epidemiological changes, this contributes to nutritional impacts such as overweight, obesity and other non-communicable diseases (see Table 1). The nutrition transition is particularly pronounced in urban areas in LMICs (1,11).





	 Rural	 Urban
 Typical diet	Coarse grains, staple cereals, other starchy staples, pulses	Processed and packaged foods, street food, sugar, fats and oils, animal source foods
 Nutritional impacts	High stunting, micro-nutrient deficiencies and communicable diseases	Increased overweight and obesity and non-communicable disease burden

Table 1: The nutrition transition and its nutritional impacts in low- and middle-income countries. Modified from (11).

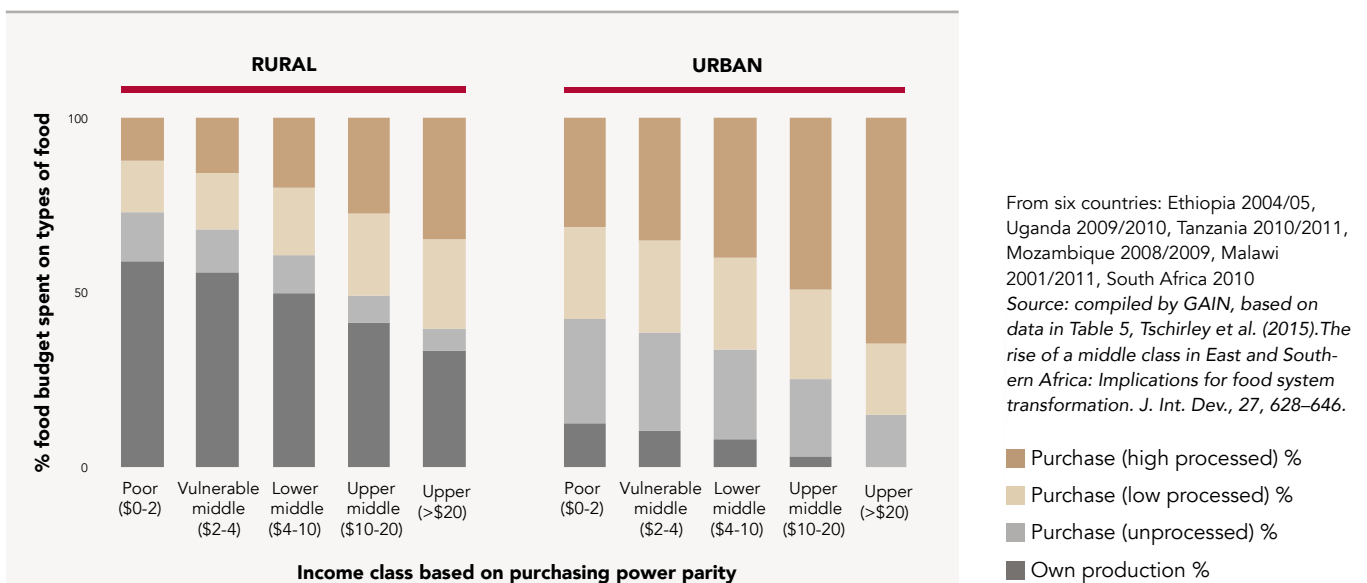
Urban food environments

An urban food environment³ has much to offer: cities are home to a large variety of formal and informal food outlets such as kiosks, retail stores, daily markets, supermarkets, informal food vendors, (fast food) restaurants, and street food vendors.

There are fewer options to grow food in cities than in rural areas. Therefore, urban residents are more reliant on purchasing their food from different retail points. The variety of urban diets depends on what food is available and affordable (12). Compared to rural inhabitants, urban dwellers are more exposed to marketing and advertising, as well as to unhealthy foods. As they often have limited access to cooking facilities and little time to prepare meals, they consume more processed and convenience foods, street food and fast food. Accompanied with a more sedentary lifestyle, these consumption patterns can increase the risk of overweight and obesity which are linked to non-communicable diseases such as cardiovascular diseases and diabetes (11,13).

In East and Southern Africa analysis shows that urban inhabitants spend more of their food budget on highly processed foods than rural residents. For both rural and urban areas, the higher the income, the more of the food budget was spent on highly processed foods (Figure 5) (14).

3. Food environments are defined as 'collective physical, economic, policy and sociocultural surroundings, opportunities and conditions that influence people's food and beverage choices and nutritional status'. (34: p. 2)



From six countries: Ethiopia 2004/05, Uganda 2009/2010, Tanzania 2010/2011, Mozambique 2008/2009, Malawi 2001/2011, South Africa 2010
 Source: compiled by GAIN, based on data in Table 5, Tschirley et al. (2015). *The rise of a middle class in East and Southern Africa: Implications for food system transformation. J. Int. Dev., 27, 628–646.*

Figure 5: Shares of total food budget by income class in rural and urban East and Southern Africa. Modified from (14).

Food consumption in Surabaya

In Surabaya, the capital of East Java, Indonesia, households spend on average 38% of their total expenditure on food. Nearly half of the food expenditure (47%) is used to buy prepared and processed foods and beverages, including bread, cakes, fried foods, one-dish meals, carbonated drinks and other beverages (15).

Nutrition challenges for those on low incomes

In many LMICs, fresh vegetables, fruits and animal source foods tend to be more expensive than highly processed and convenience foods. Eating a healthy, nutritious and safe diet can therefore be challenging, particularly for those on low incomes in LMICs. Household resources for food of low-income families are often small, making them more vulnerable to price fluctuations. Families cannot always afford fresh produce and micronutrient-dense food and instead purchase foods high in energy, fat and sugar (13,16). The costs of the healthy and sustainable diet proposed, for example, by the EAT-Lancet commission (17) exceeded the total income of 57% of the population in sub-Saharan Africa and 38% of the population in South Asia (18). As own production is limited in urban areas, purchasing food is often the only option. When a healthy diet is not affordable, this may lead to malnutrition and related ill-health.

Affordability of nutritious diets in urban Asia

The affordability of healthy and nutritious foods is also a concern across urban Asia. In Pakistan, an estimated 64% of the urban population could not afford a nutritious diet in 2016. Even in large and relatively wealthy cities such as Pakistan's capital Islamabad or the Indonesian city of Surabaya, roughly 20% of the population cannot afford a diverse and nutritious diet (19).

Urban areas can result in higher income levels, but also higher levels of inequality. There are large differences in income and housing. In 2014, just under a third of the urban population lived in informal settlements and slums⁴ (20). With a total urban population of just over four billion, this means that that over a billion people in cities live in conditions which harm their health, safety, prosperity and opportunities. As urbanisation is most pronounced in Asia and sub-Saharan Africa, the absolute number of people living in informal settlements will continue to grow in these regions (Figure 6) (21).

Slum dwellers are confronted with severe environmental and health issues including pollution, open sewage and poor solid waste management. Use of dirty water and limited sanitation, cooking and (cold) storage facilities raise issues of food safety and hygiene concerns. This increases the risk for food-borne diseases, such as diarrhoea (13,22,23).

4. **Slum** Inhabitants of a 'slum household' lack one or more of the following household features (23):
- Access to improved water source,
 - Access to improved sanitation facilities,
 - Sufficient living area,
 - Housing durability, and
 - Security of tenure

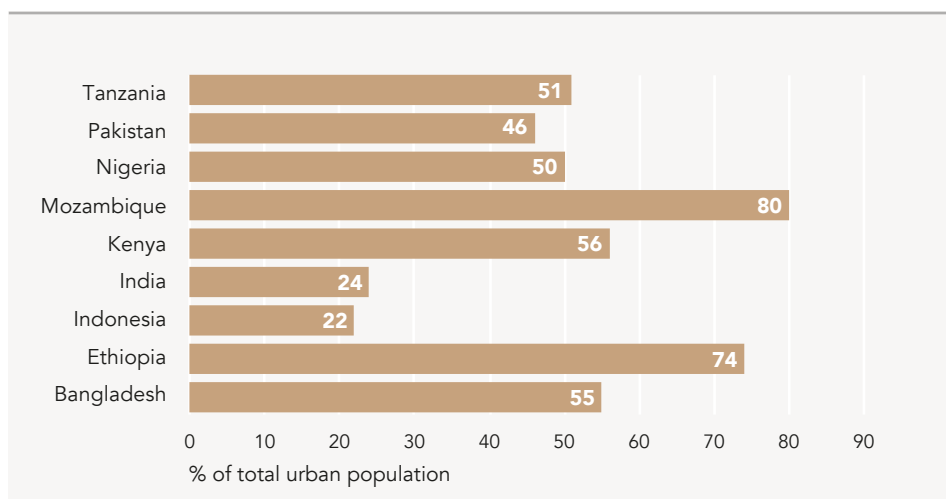


Figure 6: Percentage of urban population living in slums in 2014. Selection based on available data for GAIN countries, modified from (24).

Better nutrition needed in Nairobi's informal settlements

Between 60-70% of Nairobi's urban population lives in slums, which covers only five percent of total urban residential land area in the city (25). Stunting rates in slum areas are particularly high. A 2008 survey of children in Kibera (Nairobi), Africa's largest urban slum, found rates of stunting among under-fives at 47% (25). By comparison, the Kenyan average rate for stunting in the 2008/09 DHS was 26% in urban areas and 37% in rural areas (26).

Seventy percent of households in Nairobi experience food insecurity, a quarter of which are severely food insecure. Many eat for survival but cannot afford a variety of quality food items. Sometimes they are not able to eat for an entire day, due to lack of money or other resources (27,28). Food is most frequently purchased from informal retailers, such as street sellers and traders. These selling points are visited on a daily basis by at least 60% of the households, because prices of fresh produce are often relatively low and packaging size small, keeping food affordable (28,29).

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