Chapter 13
Food Security in Accra

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It was difficult to hear her speak over the loud din of neighborhood traffic. Her hands gestured gracefully as she patiently answered all the questions I had prepared in my food security survey. Cristina (whose name has been changed to protect her identity and privacy) was 41 years old, living in a family compound with 19 other adults and a dozen children. Several scrawny goats and a chicken roamed the cement floors of the compound's common area. Laundry was hung neatly to dry beneath the searing equatorial sun not far from the battered cooking area.

She wore an old loose t-shirt and skirt. Her flip-flops were well worn and stained by the ruddy African soil. Cristina could have been any of the number of women I interviewed in Nima, one of Accra's poorest and most crowded neighborhoods (see Chap. 7). She had four of her own children to feed. Her husband was the main wage earner, she explained, and though he was paid once a month, his earnings only really lasted 2 weeks. Since food was the family's largest expenditure, it was her responsibility to make sure they could afford to eat for the whole month. Their diet was heavily based on corn, the cheapest staple at the market, and supplemented with rice, yams, and "banku" (fermented cassava dough). Proteins were hard to come by on little more than two dollars a day (which is a typical level of income in Accra, see Fink et al. 2012). She had other payments to think of, including public tap water, school fees, and rent. And though so far she had managed to adequately feed her family, except for a week or so a month, she had reason to worry. Food prices were rising quickly and wages were not keeping up.

It was the summer of 2007 when I interviewed Cristina as part of my food security survey in Accra, the capital city of Ghana. Though it was hardly front page news at the time, global food prices were barreling upward towards crisis

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proportions. The women I interviewed were well aware of the difficulty that lay ahead. Globally and locally the pieces were falling into place that could throw these women and their families into a state of potentially greater food insecurity.

13.1 What Is Food Insecurity?

Accra, the capital city of Ghana, is hardly a place of food shortages. To the casual observer it may seem that so much of the city's economy revolves around food that one may even assume it is available in abundant quantities. With the break of each dawn, trucks ripe with goods from the countryside rumble to the city's food markets, where vendors lay out their colorful offerings of fruits, vegetables, and pre-prepared snacks beneath their market stalls. Women neatly balancing large aluminum tubs of carrots, bananas, and lettuce on their heads amble down the busy avenues of the city centre. Supermarkets open their doors to the day's customers, and fast-food restaurants begin serving hungry folks on their way to work. Food shortages and food insecurity would seem unlikely in this crowded city of two million people. Indeed, it should be rare. But food insecurity is a more subtle form of going without food, and it affects millions of urban dwellers in the world's poorest countries year round.

The United Nations Food and Agriculture Organization (FAO) defines food security as when *all people, at all times, have physical, social and economic access to sufficient, safe and nutritional food that meets their dietary needs and food preferences for an active and healthy life* (1996). FAO (2000) identifies four principal (scale-neutral) factors of food security: *food availability, stability of supply, food access,* and *biological utilization*. Together, these factors encompass a holistic view of food security which ranges from sufficient food production to sufficient food intake. A complete study of food security would theoretically examine all four areas of food security. In a sense it would trace a "farmer to plate (or stomach)" pathway that would measure the efficiency or success of a food security system. However, the complexity of the interactions between these factors (relationships are not necessarily linear) and the colossal amounts of data needed would require enormous computing resources. Food security studies, therefore, tend to focus on one or two of these areas and are often divided among supply issues versus access issues.

Because supply is generally not an issue in urban areas, my study focused on household *access* to food. In urban areas of developing countries, consumers can spend up to 80 % of their income on food purchases (Maxwell et al. 1999; Aragrande and Argenti 2001). The large proportion of income dedicated to a basic need like food puts households in an economically precarious position. After taking into account other necessary expenditures such as rent, school fees, and health related costs, households have little or nothing left for savings. Consequently, with a rise in food prices, or some other economic shock to the household (e.g., loss

of employment, illness, etc.), food consumption may suffer. Therefore, urban households that dedicate a large proportion of their income to food are highly vulnerable to food insecurity. This is compounded by urban households' lack of access to natural resources necessary for growing their own food. Additionally, many of the poorest households buy small quantities of food daily and are unable to profit from buying foods in bulk. With no safety-nets in place to help poor urban households, hunger has become an urban reality.

Urban food and nutritional security in developing countries remains underserved by existing theory on food security. The current body of literature on hunger, famine, and food security in the Global South targets mostly rural communities reliant on subsistence farming or agriculture-related livelihoods (Kracht and Schultz 1999). In this body of literature, poverty and failing agricultural systems, poor governance, ailing economies, conflict, and natural disasters are recurrent themes. While scholars address the vast and pressing problem of global hunger which afflicts over 800 million of the world's population, they fail to address policy imperatives by skewing research as though there were an underlying assumption that *all* 800 million hungry people live in rural environments. However, it is important to recognize that the majority of the world's population is now urban and the cold reality is that one in six of the planet's humans lives in a slum area (UN Habitat 2006). In a 2003 report (UN Habitat 2003; Popkin 2002) the UN stated that the absolute number of urban poor is rapidly increasing, as is the number of urban undernourished. Because of the paucity of research in this area, urban hunger may be routinely underestimated (Biritwum et al. 2005). Urban food security studies have failed to adequately and extensively disaggregate figures *within* urban areas, resorting to cross-urban comparative studies, or rural-urban studies.

Because urban households use cash/income to purchase food, affordable food prices are critical for maintaining food security. In the 1960s and 1970s, development policies to encourage industrialization called for subsidized food prices in the cities to appease the working class. Later, in the 1980s and 1990s, structural adjustment policies or neo-liberal economic theory dismantled many of these government programs. Consequently, urban dwellers usually pay much higher prices for food than their rural counterparts. Regular production failures, fuel and transportation costs, inefficient and mismanaged wholesale economies, and undeveloped retail markets can keep urban food prices high (Aragrande and Argenti 2001).

Some mechanisms that urban households have developed to secure a food supply include maintaining social networks with the countryside, or harvesting foods from community gardens (urban agriculture). It is estimated that nearly 40 % of urban dwellers (mostly women) practice some form of urban agriculture in or around cities (FAO 2001). However, because urban agriculture requires access to land, there is some speculation as to whether or not these urban farmers are indeed among the poorest. Also, not all urban areas have enough land available for agricultural activities. Accra, for example, has very little viable green space which can be cultivated, and Stoler et al. (2009) found that plots of urban agriculture in Accra that were large enough to be visible in high resolution satellite imagery tended to be

in the somewhat more affluent suburban areas. As an alternative to growing plants, some households may raise small livestock in and around their urban homes, but again, livestock also require adequate space to thrive, although small goats are a fairly common sight in residential neighborhoods of Accra.

13.2 The 2008 World Food Crisis

The Nima market is of institutional fame in Accra. It thrives with vendors and shoppers on a daily basis and stretches across most of Nima's main thoroughfare. Everything from clothing, to hardware, and food is sold in the market. Cars, *tro-tros* (local minivan public transportation), and pedestrians come to an almost inconceivable knot of traffic at the market's central intersection. The constant symphony of honking horns, buzzing scooters, and shouting vendors is as inviting as it is intimidating. Many of Nima's women work here, either in their own market stalls or peddling their own goods on the street. Cristina came to the market twice a week to buy food for her family. Basic staples were more expensive than other years, she told me, and it wasn't on account of normal seasonal fluctuations. Rice, which was part of her daily nutrition, was the most expensive. The cost of rice seemed to be increasing on a weekly, if not daily, basis.

While I was interviewing Cristina and the other women of Accra, farmers in the northern regions of the country were experiencing some of the worst flooding in decades. Anomalies in weather patterns had brought unusual amounts of torrential rain in the normally drier north. Rice farmers saw their crops devastated and those who had managed to salvage some of their yields could not get it to market due to interrupted roadways.

Ghana imports much of its rice supply and in order to ease economic pressure on households, in 2008 the government decided to drop the import tariffs it maintained on the staple good. However, along with other grains, the global rice supply was facing challenges of its own. Severe droughts in global "rice baskets", spikes in oil prices, and the push for biofuel and animal feed production all converged to send rice prices soaring. The food crisis translated into popular uprising in many of the world's poorest nations. Protests were most notable in urban areas where average wages hover around two dollars a day. People could no longer afford to purchase food, and at the same time they were no longer tied to rural areas where subsistence agriculture was still an option.

Although temporary, the global spike in basic grain prices exposed the vulnerability of many poor urban households in urban and urbanizing areas of developing countries. Their food security depends largely on the low cost of food since wages for unskilled labor are unlikely to increase in the context of high rates of rural to urban migration. Many of the safety nets wealthier countries have in place, such as food stamps, community kitchens, and school meal programs, are unaffordable to cash strapped governments. When access to food is gone, food insecurity settles in, and families may have to go without adequate amounts of food for weeks at a time.

13.3 Food Insecurity in Accra

Cristina had no running water in her home. She had to pay for water at the nearest public tap. However, the one closest to her home had stopped working some time ago and there was no knowing when it would be repaired. She had to walk an extra ten minutes in her neighborhood to reach one that was dispensing water. For Cristina, that meant extra time and distance carrying home heavy ten liter jerry cans. Filling one cost her close to three cents. That may not seem like much, but for someone trying to feed her family on less than two dollars a day, the cost of water was a significant portion of her budget.

As I continued to interview women from different neighborhoods in Accra, I was struck by the frequency of food insecurity across my sample. My sense was corroborated by data from the first wave of the Women's Health Study of Accra (WHSA) (Duda et al. 2005 and see Chap. 1 for more details), a larger health survey of 3,183 women in Accra. In 2003, over half, or 57 % of the respondents in the Women's Health Survey of Accra were food insecure, indicating that the majority of women surveyed did not have access to the quantity and quality of foods they desire at all times. Furthermore, 17 % of respondents indicated that they had skipped meals during the preceding 12 months.

The second round of the WHSA was conducted in 2008–2009 (see Chap. 1 for details). Nearly all women interviewed in 2003 had agreed to be re-interviewed at a later date and in the second round 1,732 were successfully reinterviewed. Replacement respondents were selected for those women who were lost to follow-up. Among the women who were reinterviewed, the percent indicating that they had been food insecure in 2003 was 55 %. By 2008–2009 that had dropped to 44 %, indicating that, despite the food price hikes of 2008, the food security figures had improved by more than ten points. Somewhat disturbing, however, was the fact that among women who were lost to follow-up, 60 % had been food insecure in 2003, and that difference is statistically significant beyond the .01 level. Thus, women with food insecurity issues were seemingly at greater risk of either dying or moving in the 5–6 years between surveys.

If we look at the responses for all women in both waves of the WHSA, we find that the percentage of women who were food insecure in the sampled neighborhoods dropped from 57 % in 2003 (as noted above) to 46 %. Furthermore, the percent indicating that they had skipped meals during the prior 12 months dropped slightly from 17 % in 2003 (as noted above) to 15 % in 2008–2009. The descriptive statistics thus point toward a pattern of substantial, yet diminishing, urban food insecurity. Nearly one out of two respondents were food insecure both years the survey was given.

More research is needed to understand the dynamics behind the changes in these figures, but it is likely that this is due to an overall improvement in Accra's economy. The data in Table 13.1 reveal that in 2003, 64 % of women living in the low class enumeration areas (EAs) were food insecure, compared to 49 % in the high class EAs, representing a 15 percentage point gap. In 2008–2009, women in all classes of

Table 13.1 Percent food insecure by SES level of neighborhood

	Percent of women with food insecurity		
Socioeconomic level of the EA of residence	2003	2008–2009	Difference
Low class	64	58	6
Low middle class	58	44	14
Upper middle class	55	41	14
High class	49	41	8
Total	57	46	11

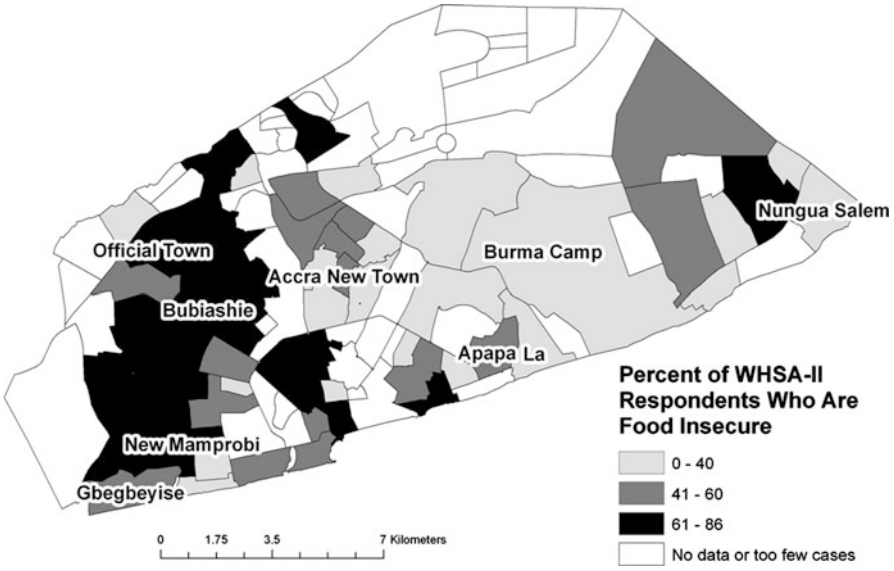

Fig. 13.1 Percent food insecure by neighborhood, Accra, 2008–2009 WHSA-II

neighborhoods were less likely to be food insecure, suggesting that the improvement was evident throughout the city, indicative of an overall economic improvement. Nonetheless, the gap between top and bottom not only continued to exist, but it widened to a 17 point difference between low class EAs (58 % food insecure) and high class EAs (41 %).

The data in Table 13.1 suggest that food security is not randomly distributed in the city, and this impression is confirmed in Fig. 13.1, which maps the percent of WHSA-II respondents who reported food insecurity according to the neighborhood in which they lived. The boundaries are groupings of EAs into what are called "field-modified vernacular" (FMV) neighborhoods, as described by Weeks and his associates (Weeks et al. 2012; and see Chaps. 1 and 2 of this volume). Among the neighborhoods for which we have enough cases (a minimum of 10) to create a percentage of households, the pattern is for food insecurity to be lowest in

the higher status central portions of the city, with insecurity rising as one moves toward the periphery. Neighborhoods with at least 50 respondents, representing three low (Nungua Salem, Burma Camp, and La), three moderate (Accra New Town, Gbegbeyise, and Apapa), and three high food insecurity areas (Official Town, New Mamprobi, and Bubiashie) are labeled as examples. Note that Nima and Maamobi are relatively low with respect to food insecurity, probably because of the important role played in the neighborhood by Nima Market. We do not yet have a sufficient database of market characteristics throughout the city, however, to draw more than tentative conclusions about the factors that explain the spatial patterns observed in Fig. 13.1.

13.4 Discussion and Conclusion

It was clear after speaking with women in Accra that the mechanics of food availability, access, and purchase depended on three main factors: income availability, food market location, and price fluctuations. The latter was particular apparent within the context of the food crisis. The first two factors emerged as themes while completing my food security survey.

The economic conflict between food purchases and other household expenses was particularly striking. Many households had to choose between paying quarterly school fees (required at all levels of education) or feeding their families. This seemed to be a particularly wrenching decision for women, all of whom expressed their desire to see their children educated. Out of the subgroup of women who found it particularly challenging to pay for school fees, nearly all of them expressed prioritizing the fees over food. They did not want to see their children drop out of school and therefore felt that a week or so with less to eat was well worth the expense. As food prices have steadily increased over the past several years this budgetary conflict has affected women who had not struggled with the issue in past years.

The task of acquiring food for the households was inhibited or enhanced by the distance between household and fresh food markets. If markets were not available within a neighborhood, the cost of traveling to another part of the city was considerably higher in terms of time and money, especially for lower-income households. Households that were within short walking distance of fresh fruit markets had access to healthier and cheaper foods than households that were not.

Two variables were of particular importance in this study when considering food policy: geographic location of food markets and household economic vulnerability to food prices. The evidence collected from three different neighborhoods of Accra showed that neighborhood experience can influence household access to food. These differences, which are typically concealed beneath aggregate figures for urban areas, demonstrate the need for a neighborhood or small community approach to urban food security.

Opening regulated and appropriate spaces for food markets in all neighborhoods may be one of the best and cheapest ways of helping women with limited resources gain more access to food. Most of Accra's food markets are already overcrowded and poorly managed. Decentralizing markets to give neighborhoods more ownership over their food resources would provide communities with inexpensive and healthier options for food, while decreasing the costs of households that would otherwise have to travel greater lengths. It would also provide input to local micro-economies as many women in Accra are already involved in food-related livelihoods.

Another approach may be to combine education and food policy by promoting school gardens or school feeding programs, giving children the added nutrients they need for the day, and sparing strapped households from having to choose between food and education. These garden and feeding programs would also be managed locally. School gardens and feeding programs have succeeded world-wide in helping parents nourish their children, and helping children improve their learning skills after being properly fed. Better educated children grow into adults who are more likely to make greater economic contributions to their communities.

The city-wide variability in the data suggests that programs to help households access sufficient foods are needed across the municipality. If the goal of policy is to improve urban nutritional health, then policy makers need to make healthy foods available and affordable. The benefits of local food markets and school feeding programs have already been discussed. But at an even greater scale, policy makers should encourage local farmers to develop a thriving domestic agricultural economy that is not entirely based on commodities for export. Reducing food import dependency will strengthen the economic bonds between cities and rural areas and secure an affordable, healthy stream of culturally appropriate foods for the urban consumer.

Food was the largest expenditure for Cristina, and when I interviewed her she felt it would become an ever larger proportion of her budget over the coming months. Thousands of women like her exist in Accra, faced with food shortages at home when the city itself is ripe with supply. Urban food security is a function of *access* to food, with food prices, stagnant incomes, market locations, and other budgetary constraints acting as barriers to adequate food consumption. While the second round of the Women's Health Survey in Accra has shown improvements in women's food security situations, the issue merits clearly further in-depth research and analysis.

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