

Effects of the global financial crisis on the food security of poor urban households; SYNTHESIS REPORT on five city case studies

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This report study summarizes the results of the five case studies which also have been published separately (see www.ruaf.org and www.idrc.org):

- Mattah, Agbeko P.D. and Jonas Kofi Akpakli, Effects of the global financial crisis on the food security of poor urban households: CASE STUDY ACCRA, GHANA; Humanity Focus Foundation, Accra and RUAF Foundation, Leusden, July 2010.
- Yavich, Natalia et al, Effects of the global financial crisis on the food security of poor urban households: CASE STUDY ROSARIO, ARGENTINA; Investiga Más, Estudios de Salud y Sociedad, Rosario and RUAF Foundation, Leusden, July 2010
- Sanchez, Claudia Marcela and Yibby Forero, Effects of the global financial crisis on the food security of poor urban households: CASE STUDY BOGOTA, COLOMBIA; IPES-Colombia, Bogota and RUAF Foundation, Leusden, July 2010.
- Atukorala, Sunethra, Pulani Lanerolle and Angela de Silva. Effects of the global financial crisis on the food security of poor urban households: CASE STUDY COLOMBO, SRI LANKA; Faculty of Medicine, University of Colombo, Colombo and RUAF Foundation, Leusden, July 2010
- Mwitwa Jacob and Phillimon Ng'andwe, Effects of the global financial crisis on the food security of poor urban households: CASE STUDY KITWE, ZAMBIA, School of Natural Resources, Copperbelt University, Kitwe and RUAF Foundation, Leusden, July 2010

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SUMMARY

This report synthesizes findings from five city case studies undertaken in Rosario (Argentina), Bogota (Colombia), Accra (Ghana), Kitwe (Zambia) and Colombo (Sri Lanka), during the second half of 2009 into the effects of the global financial crisis on the food security of low and middle income populations of those cities. Drawing on data generated through household surveys, 24 hour food recall, anthropometry of under-five year olds and women from 15 to 49, Focus Group Discussions and Expert opinions on policy issues, the studies assessed current socio-economic circumstances of households, food practices, coping strategies, the policy environment and current nutritional status of women and young children.

The nutritional status of household members is a complex outcome of many factors, including the specific circumstances of the households, their livelihood assets and the way assets are used in livelihood strategies. It also is influenced by the policy context prior to the financial crisis which favours or undermines direct and indirect access to different types of foods, and by the policy response to the crisis. The paper examines these different factors impinging on nutritional outcomes.

The assessment of policies on food security prior to the crisis and policy responses to the crisis supports the view that effective policies and social protection mechanisms are those which are in place before a crisis strikes, as in the case of Rosario, rather than those which are hurriedly implemented during a crisis, often with poor targeting and unfair distribution of benefits. Targeting of the extremely vulnerable emerged as an important constraint in urban areas where there is considerable fluidity of residence, high variability of socio-economic indicators within "types of neighbourhoods" and limited clustering of food insecurity indicators.

The studies show how the differential availability of household assets influences the capacity of households to ensure food security and cope with stresses and shocks. Households that have a high proportion of non-producing members (the young and/or the old), as in Kitwe, clearly reduces the opportunities for accessing multiple income opportunities and stretches the demands on single income streams. Nevertheless, many households in other cities had access to more than one income source, with nearly 20% of households in the better off areas of Colombo reporting three or more sources.

Despite the absolute concentration of educational resources in urban areas, access to education still appears to be a major constraint in all cities except Colombo, especially for low income households. For example, almost three quarters of household heads in the poorer area of Rosario had had either no education or had only completed primary. In terms of employment, most household members work as casual labourers or as domestic helps or in informal self-employment, especially in petty trading. Just over a quarter of employed household members in the better off areas of African and Asian cities were in salaried employment.

All households in this study were overwhelmingly dependent on purchased food as their main source of food security and in a majority of the city populations, both the poorer neighbourhoods and the better off areas, food accounted for half or more of all expenditures. Although own food production was underreported because of the way the survey was set up, it does not appear to play a major role in the sites selected, with the exception of Kitwe.

Consumption data based on 24 hour recall revealed that these urban diets have quite low levels of diversity, involve limited consumption of leafy vegetables, legumes or beta-carotene-rich vegetables and fruits, but surprisingly involve quite widespread consumption of animal source foods (ASFs), especially in the Latin American cities.

There was a common perception that food security had become more difficult over the past year before the survey, although in many cases expert evidence and/or secondary data showed that food prices had stabilized or fallen over that period. It was clear that most respondents were actually commenting on the significant rise in food prices over a longer period, since the food price crisis in 2006-7. In all cities, prices of key food commodities were higher and in many cases more than 100% higher than five years earlier.

Coping strategies identified by households clearly indicate that cutting down on the quantity or quality of food is the main strategy adopted, with relatively few citing use of own food production or other strategies. Yet there appeared to be limited knowledge about opportunities for reducing the costs of food, without reducing its nutritional content, for example through reducing

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consumption of relatively expensive ASFs and replacing them with legumes and leafy vegetables.

The nutritional status of under-five year olds, as derived from anthropometric assessments, show a disturbing picture of high levels of stunting and wasting in several cities, especially Kitwe, Colombo and Accra, in both the poorer and the better off populations. Despite the extent to which consumption of ASFs is reported, levels of malnutrition found in under-five year olds in some cities suggest that children must be receiving very small quantities of this type of food. These results also clearly demonstrate the “double burden of malnutrition” present among both under 5 year olds and fertile women. Together with underweight, there is also high incidence of overweight and obesity, especially among women, but also in some populations of children. These data show that the nutrition transition involved in moving from active, rural-based, agriculture-focused lifestyles with access to a varied diet, to sedentary urban lifestyles with widespread consumption of fats, sugars and processed foods is not well managed, and intensive nutrition education is needed.

Nutrition interventions are especially urgent in several of the populations surveyed in these case studies. Under the impact of the successive food price and financial crises and in the context of limited access to employment, high living costs and dependence on purchased food, the nutritional status is worsening, compared to data collected in earlier surveys.

However, nutrition interventions need to be part of broader policy prescriptions which anticipate, rather than respond to, global, regional and national crises. To enable households to access enough safe and nutritious food, cities need types of time-bound income transfers for the very poor as have been successfully used in Rosario, even if the risks of a dependency culture need to be addressed. But cities also need to have coherent policies on urban food systems which make nutritious foods available in low income settlements and facilitate access to natural resources and technical knowledge so increased numbers of people can use own food production to contribute to household food security.

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INTRODUCTION

The effects of the recent financial crisis are only beginning to be felt in many developing countries, but in many areas economic activity appears to be declining with potentially far reaching impacts. The financial crisis has the potential to affect developing countries and the urban poor through economic retrenchment, negative effects on the terms of trade with the rich world and consequent job losses, especially in cities which are more directly embedded in the global economy. Because of the stage-wise nature of much household migration (Natali 2009), whereby migrants move from rural areas to secondary towns and cities, from there to metropolitan areas and from there outside the country, the reduced remittances from family members working abroad can disproportionately affect urban households.

This crisis comes at a time when most countries are still struggling with the impacts of rising food and fuel prices. Despite the decline in international cereal export prices from their peaks in the first half of 2008, and improved 2008 cereal production and policy responses by governments, food prices have remained at high levels in many developing and low-income-food-deficit countries compared to five years ago. It is estimated by the World Bank that the high food and fuel prices alone have increased the number of extremely poor in the world by at least 100 million (Baker, 2008). In many cases, domestic prices are still higher than a year ago and where they have declined, price reductions have been relatively much less than those in the international markets. Among those at greatest risk are the urban poor that are dependent on the market to access food and since the share of food in their total expenditures is much higher than that of wealthier populations. Food represents about 10-20 percent of consumer spending in industrialized nations, but as much as 60-80 percent in developing countries. Among urban households, female-headed households suffer a larger proportional drop in welfare than male-headed households.

Although hunger is most often associated with low agricultural output, drought, and famine in rural areas, UN-HABITAT's previous studies have shown that hunger is not always related to food production or availability; rather, in urban areas, other factors, such as incomes, inadequate access to basic services and poor living conditions, play more significant roles (see for example UN-HABITAT 2003). In cities, hunger is usually a consequence of people's inability to purchase food that is both sufficient and nutritious. Thus, variations in income or food prices directly translate into rising rates of malnutrition in urban areas.

IDRC, UN-Habitat and the RUA Foundation agreed to cooperate in the implementation of a study to analyze the consequences for low and middle income populations in selected cities of rising food prices on malnutrition levels and to understand the national and local policy/institutional circumstances and responses which have exacerbated or mitigated the effects of these recent global crises.

The following cities were selected¹:

- Accra, Ghana: Lead researcher: Agbeko P.D. Mattah, Humanity Focus Foundation
- Bogota, Colombia: Lead researcher: Claudia Marcela Sanchez, IPES-Colombia
- Colombo, Sri Lanka: Lead researcher: Sunethra Atukorala, Faculty of Medicine, University of Colombo
- Kitwe, Zambia: Lead researcher: Jacob P. Mwitwa, School of Natural Resources, Copperbelt University
- Rosario, Argentina: Lead researcher: Natalia Yavich, Investiga Mas. Estudios de Salud y Sociedad

¹ Initially also a sixth city (Nairobi, Kenya) was selected but this area served mainly as a try out and the collected raw data were not processed and reported.

The **objectives** of the study were the following:

1. Generating data that can help understand the extent to which rising food prices and the financial crisis is impacting on malnutrition levels in cities and how the policy and institutional context has been mitigating or exacerbating problems of food insecurity
2. Providing local actors with valuable information for the design of adequate policies and programmes to counteract the effects of the financial and food crisis.

Four **types of data** were collected for this study:

- Information on the economic, policy and institutional context affecting food security, both pre-dating the crises and as positive or negative measures taken since the crises began.
- Data on the current livelihood assets and strategies of households in low and middle income areas of the case cities which reflect responses to external stresses, shocks and institutional circumstances and to the households' internal needs and constraints. These external and internal factors both pre-date and are directly related to the food price and the financial crises.
- Perceptions of survey respondents and Focus Group Discussion participants about how these recent crises have affected household livelihoods and what coping strategies they have explicitly adopted to secure their livelihoods, especially those related to food consumption.
- Anthropometric data measuring current nutritional "outcomes" among under six-year olds and fertile women between 15 and 49 years. Although the livelihood practices and coping strategies affecting food consumption which households have been pursuing contribute importantly to these nutrition "outcomes", there are other contributions, such as diseases and environmental circumstances which have not been included in the survey. In order to understand whether these nutritional outcomes have worsened since the crisis, in other words, whether the livelihood practices and coping strategies adopted by households since the food price and financial crises have had a more severe effect on nutrition the results of the anthropometric studies are compared as far as possible with earlier nutritional assessments.

This report is structured around these different datasets, which conveniently reflect the key components of the sustainable livelihoods framework².

Additional information on the study design is included in Annex 1

² The sustainable livelihoods framework recognizes that in complex city ecosystems, poor households depend on multiple income sources and a wide range of material and non-material assets to ensure their livelihoods. Inadequate assets can leave households vulnerable to stresses and shocks (the vulnerability context). Five types of capital assets are distinguished: natural capital (mainly land and water); physical capital (buildings, equipment, inputs); human capital (labor, knowledge and health status); financial capital (income and savings); social capital (social networks, groups, trust and support). The use of these assets in livelihood strategies is influenced positively and negatively by institutional arrangements and policies. The outcomes achieved are part of livelihood processes, which in turn exert positive and/or negative ecosystem feedback on the livelihood assets and on the vulnerability context. For more general information on the sustainable livelihoods framework, see <http://www.eldis.org/go/livelihoods/> . For its application in urban contexts see Rakodi with Lloyd-Jones 2002; Prain and Lee Smith 2010.

THE INSTITUTIONAL AND POLICY CONTEXT AND VULNERABILITY OF URBAN POPULATIONS IN THE FIVE CASE CITIES

The global food price rises and more recent financial crisis impact differently on local populations depending on their geographical, demographic and socio-economic characteristics and also the particular institutional and policy histories in the location. Direct policy interventions in response to the crisis are also strongly influenced by the existing context.

The case cities demonstrate special circumstances which have influenced the extent of vulnerability of households to these crises. In some cases earlier problems or crises have worsened the level of vulnerability, in some cases these previous negative experiences have led to institutional or household-based coping strategies which decrease the level of vulnerability to new crises.

Economic, demographic and institutional influences on vulnerability: pre-crisis

As a consequence of a range of factors, including large public debt, a recession and the loss of confidence of investors, Argentina passed through a severe multi-faceted crisis in 2001-2002. By late 2002, nearly a quarter of the economically active population in the country was unemployed and in the city of Rosario, 60% of the population was classified as below the poverty line and 30% in extreme poverty. As a result of the severity of this situation several national, provincial and local health and social safety net programs were launched, including a national commission for organizing an on-going health and nutrition monitoring survey to contribute information on health status and recommendations on nutrition policies and practices, a national program for recovering nutritionally at-risk children (Nutrir Más), a provincial “glass of milk” and child meal centre program and local support for networks of health centres offering free milk and vitamin supplements for children and pregnant women. Other programs, such as CRECER and Pro-Huerta, support nutritional support to vulnerable families and stimulate urban horticulture production to improve household nutrition. These programs, together with a recovering economy with year-on-year growth have provided a “buffer” against the effects of the recent food price and financial crises and are reflected in livelihood practices and coping strategies.

Colombo in Sri Lanka did not suffer a severe internal economic crisis, but it was hit by a major natural disaster in 2004 with the Asian tsunami. This, combined with the effects of a 30 year-old civil war, impeded economic development and weakened the capacity of the country to respond to the terms-of-trade shock which preceded the global financial crisis. Furthermore, in pursuit of export-driven growth, successive governments had neglected the domestic food production sector, focusing instead on trade and food importation. These policy choices could have led to even more serious consequences with the onset of the food price and financial crises had not the country had in place strong welfare-oriented public policies for over five decades, involving free education and health care and resulting in high levels of literacy and functioning community health care systems. The authors of the Colombo case study do caution however about how effective the targeting of these policies has been. Furthermore, they note that the levels of income support are very small and, as will be seen below, there is very little recognition among respondents in low-income or medium-income settlements that these social protection programs provided significant means of coping with the crisis.

Targeting in Rosario seems to be more successful and the income transfers much more significant than in Colombo, which probably is due to the fact that these social protection mechanisms were set up specifically to deal with the severe economic crisis of 2000 rather than being part of the long-running welfare state as is the case with Colombo. Also, unlike Colombo, the significance of these programs is clearly recognized in the survey results, as will be seen. Although there are other factors intervening, the notable difference between the nutritional outcomes in the two cities, discussed below, must in part reflect these differences.

Table 1 Some key variables of case cities

	Rosario	Bogota	Accra	Kitwe	Colombo
Climate	Sub-tropical lowland floodplain	Tropical highlands	Tropical savannah	Semi-arid undulating woodland	Tropical rainforest
Night time population	1.11 million	7.88 million	2 million	0.36 million	0.64 million
Floating population	-	-	531,670	-	450,000
Annual population growth rate (%)	1.12	1.48	3.4%	0.8*	2.42
Area (km²)	117	1,587	170	777	37.4
% of national populat.	3	17	15.4	3.1	6.5
% of urban population	3.2	23.5	18.2	8.4	27
Poverty level %	12	28.4	29	64	25
Maternal mortality per 100,000 people	44 (national)	64	179	750	47
Under 5 mortality rate per 1000 live births	18 (national)	12	95 (national)	182	12
Some shocks pre-dating the food and financial crises	National financial crisis 2000/2001	40 yr armed conflict; internal displacement	Internal migration from northern territories	17% HIV prevalence; Dependence on int. copper market	Civil war; Tsunami
Food security related structures	Large scale social protection programs	Moderate level of social protection programs	Modest social protection programs; Strong econ. Growth	-	-
Economic drivers	Agro-industry; manufacture	Manufacture, tourism, financial services	Agro-processing, services; remittances	Commercial centre of copper-mining	Services sector; garment manufacture
% workforce in informal sector	44 (national)	50	80	90	33
Food staples	Wheat-based products; potato	Rice, roots and tubers	Maize, rice, roots/tubers millet/sorghum	Maize meal; cassava	Rice, wheat
HDI-life expectancy	76	71.6	57.9	40	72
HDI-literacy female(%)	97	91.8	67.3	74.8	95
HDI-literacy male (%)	97	91.8	74.9 (all adults)	80.7 (all adults)	97

* This surprisingly low population growth rate reported in the Kitwe case study can be contrasted with the UN's figure of 2.3% for urban population growth in Zambia, 2005-2010.

Rather different contextual circumstances influenced the impact of the crisis in Bogota and Accra. Despite both countries having enjoyed sustained growth during the period from 2000 up to 2007, both cities show increases in poverty and food insecurity. In Accra, poverty levels increased from 4 to 11% between 1998 and 2006. In both cases, a major contributing factor has been the in-migration of large numbers of the poor from other parts of the country. In Bogota, in-migration has been driven by the insurgency which has gripped the country for more than 40 years. Internally displaced persons have settled in marginal locations around Bogota with little or no infrastructure, vulnerable to the necessity of accessing food through purchase rather than via production and especially vulnerable to increases in food prices. The increase in poverty levels in Accra seems to be due to the "urbanization of poverty" from the north of the country, which suffers regular droughts and has lost as much as 50% of agricultural labour over recent years.

The city of Kitwe is known as the commercial hub of the Copperbelt province in Zambia and its economy has been dependent on the fortunes of the export-oriented copper mining industry.

Nevertheless, the privatization of the copper mining industry in the late 1990s resulted in large scale retrenchment of workers who ended up “self-employed” in the informal sector. The city is also dependent for food security on the highly volatile national production of maize, which can fluctuate as much as 40% from year to year. Before the financial crisis both maize and the secondary staple cassava experienced price increases, with maize rising from \$90/MT in 2000 to \$220/MT in 2005. This already created problems for the large numbers of people dependent on the informal economy at that time. This background exacerbated the vulnerability of large numbers of Kitwe’s population when the financial crisis took hold. Inflation rose from 5.7% to 20.5% between 2007 and 2009.

As Table 1 and these comments indicate, the case cities were in quite different positions to confront the crises. Some, like Rosario, had very wide-ranging social protection programs which appear to have provided significant nutritional support to low income households. Although, as will be shown, these programs appear to have created a culture of dependency and the expectation of short-term solutions to problems via external support, they did protect poor families from food insecurity. On the other hand, the targeting of social programs such as those implemented in Accra and Colombo were questioned by the authors of these reports, and the nutritional outcomes do raise questions about the efficacy of those interventions.

Institutional and policy influences on vulnerability, post-crisis

In some of the cities, the relatively weak impact of the financial crisis and/or the presence of existing food security related measures to mitigate the effects of earlier crises resulted in few new policy or institutional actions, post-crisis. This is the case in Rosario as already mentioned, where the less dramatic impact of the global crises combined with the measures put in place following the national economic crisis in 2000/2001 provided the basis for addressing what repercussions were felt. Bogota appears to be in a similar situation, with a national policy on food security and nutrition established in 2007 through a process of multi-stakeholder consultations at different levels during preceding years. This policy enabled an earlier National Plan for Food and Nutrition formulated for the period 1995-2006 (República de Colombia 1996) to be more strongly integrated into the national agenda. The report cites expert testimony about three elements of the policy which gives it its value: political will at the level of Bogota’s recent administrations regarding the issue of food and nutrition security; an intersectoral approach, achieved through the existence of different joint platforms, such as an intersectoral commission and a joint Technical Support Unit, though the experts also caution that there are still several challenges in achieving truly successful intersectoral collaboration in, for example, the extent of coverage of different programs and the way they complement each other; the third element cited is the empowerment of the community, especially the way that communal voices were demanding acceptance of the principle of the “right to food” and therefore, that programs related to food and nutrition are part of the essential rights of citizens, not part of charity.

Kitwe in Zambia has been much more vulnerable than either Bogota or Rosario to the rising price of food commodities through its dependence on “imported” maize from other parts of Zambia and also to the financial crisis through the impact of the crisis on the copper industry on which local employment and commerce depend. It is not easy to disentangle the extent to which the international crises and the local context (government policy, drought etc) have contributed to price shifts in maize or the collapse of the local copper industry. But the indicators in Table 1 show that there is high vulnerability among the city population regarding health status, employment and human development and they suggest that policy and institutional interventions are urgently needed. Yet the policy experts are unanimous in acknowledging that the city did not formulate any new policy or strategy to deal with the rising hunger levels. In fact, the report makes clear that policies implemented in the preceding decade and a half were successful in terms of reducing inflation – they were policies responding to structural adjustment requirements – but not in terms of reducing poverty. With the onset of the financial crisis and the death of the former head of state, inflation began to rise again, as did unemployment. The labour conflicts

that ensued in 2008 and 2009 in response to these negative economic developments also failed to be met with a policy response.

In the case of Accra and Colombo, the city governments were more proactive in terms of a policy response to the crisis. In Accra, in response to the food price crisis, import taxes were removed from some foods, especially rice, wheat and maize, as of May 2007. Although Ghana was a food surplus country at the time of the crisis, the removal of the tariffs made cheaper food available in the short term. However, the measure also adversely affected domestic producers, reducing their income and food security. Furthermore, corruption among importers led to the re-export of the cheaply imported cereals to neighbouring countries, making profit for them but undermining the objectives of the policy. Another measure was to subsidize the cost of petroleum fuel, which rose sharply in 2008. But the report considers that this policy largely benefited the wealthy owners of private cars or the wealthy owners of public transport businesses, whilst reducing the government resources to address poverty issues more directly. One such policy was the support provided to domestic producers to produce more food. With the funds available, the report considers that this was a successful policy initiative, reducing the incidence of hunger compared to some neighbouring countries which did not have such policies in place. No doubt with more resources from other less well targeted initiatives, this could have had even greater impact. The benefits of other policies, such as a school feeding program introduced in 2008, is less clear. This program was not mentioned in the coping strategies of respondents to the survey and the report comments on the way it has been taken over for political purposes.

It is not clear from the report on the city of Colombo that specific policy interventions were adopted as a result of either the food price increases or the financial crisis. On-going policies seem to have been strongly oriented to containing inflation. Attention to the effects of increased food prices and reduced employment caused by the crisis have been addressed via safety net programs and free health care which have been in place for some time as well as by a National Campaign to motivate domestic food production initiated in 2007. The report comments on the weak targeting of many of these programs and the fact that because many in the poor areas of Colombo live in temporary dwellings, they miss out altogether on these programs. Furthermore, the amounts provided by these programs are very small, often not enough to ensure adequate meals. These must be key factors explaining the fact that despite the long history of welfare programs in the city and country-wide, there are high levels of malnutrition among children and some women (see below).

THE SECURITY, STABILITY AND DEMOGRAPHIC BALANCE OF HOUSEHOLDS

Whilst shocks and stresses in the natural, institutional and economic environment can increase the vulnerability of poor households, so too can their physical and demographic circumstances of the family.

The broad demographic and socio-economic information presented in Table 1 shows the wide differences between these cities, especially in climate, size, whether a capital or secondary city, and the kinds of economic activity which contribute to the city's wealth. In each of the six cities of the study, two neighbourhoods were chosen, one predominantly low-income, the other predominantly better-off, sometimes described as middle-income, sometimes as middle-low income. The reports make clear that as one approaches closer to the study areas, there are also physical differences between these two types of neighbourhood, in terms of the roads, types of settlements, quality of housing etc. One of the first issues that a household recently arrived or recently formed through co-habitation must face is shelter (Table 2).

Whilst there are differences in tenancy trends across cities, for example that renting the house is unusual for both low and middle income households in Rosario and Colombo, but more common in Bogota, Accra and Kitwe, it also shows that low-income households frequently do have

access to their own houses, even if their construction is modest. The small but noticeable presence in all cities of families living in accommodation with permission but without paying rent may well reflect access to accommodation via relatives already based in the city, but that is not clearly stated in the reports. Understandably very few people are squatting in somebody else's house.

Table 2 Type of house tenancy in five cities (%)

	Owning house		Renting		No rent, with permission		Squatting		Total	
	LI	MI	LI	MI	LI	MI	LI	MI	LI	MI
Rosario	82	82	0	3	15	15	3	0.3	100	100
Bogota	61	42	32	49	6	10	0.1	0	100	100
Accra	25	45	68	49	6	5	1	0	100	100
Kitwe	44	51	45	33	6	14	5	2	100	100
Colombo	77	70	16	21	5	8	1	1	100	100

LI = predominantly low income settlement; MI = predominantly middle income settlement

The relatively high levels of house ownership are not matched by ownership of land, suggesting less stability and security than the house tenancy figures alone might indicate and also providing a disincentive to cultivate land around the house (cf Cohen and Garrett 2009). In the case of Rosario, just under half of the low income households own the land on which they have built. Thirty six percent are squatting and 16% occupy land with permission. In Kitwe, over half of those owning their house are renting the land on which it stands. In this city, the only one to disaggregate house and land ownership by gender, 46% of women compared to 31% of men owned both the house and the land on which it stood. There was almost twice the proportion of women owning their house (irrespective of status of the land) as there are among male-headed households. This surprising situation is not commented on by the case study authors, but it may be influenced by local socio-cultural practices of the ethnically dominant Bemba. In Bogota land ownership follows a similar pattern to house ownership, with slightly higher levels of ownership among those living in the more marginal settlement. There is no information on extent of squatting on land. Similarly in Colombo, there is a high level of ownership of the land on which houses are built.

The stability and security of households can also be gauged by looking at the origins of respondents and the length of time heads and members of households have been occupying their current accommodation. Many of these families are migrants, though sometimes migrants with many years in the city. In Colombia, for example, with a long term insurgency that has caused internal displacement, 25 of every 100 family members in the sample are from outside Bogota. Among heads of households 44 of every 100 is a migrant. Just over 70% of these migrants have been in Bogota more than 3 years, perhaps reflecting the reduced level of social upheaval in recent years. Accra on the other hand, shows a similar pattern to Bogota, but with an even larger migrant population (about 75% of both middle and low income respondents) that seems to be more recent and less stable. Among the majority of people renting accommodation, most (low-income 75%, middle income 90%) have lived there less than 2 years, and many (29% and 54%) less than one year. These are primarily economic migrants from the poor northern regions of the country. Despite the fact that Sri Lanka, like Colombia, has been afflicted with internal conflict over many years, the case study does not indicate internal displacement and large scale migration into Colombo. Over ninety percent of respondents are from Colombo and 84% have lived in their accommodation for more than 3 years. The study selected two "inner city" districts of Colombo for the study and it may well be that internal refugees and other recent arrivals are settled in peripheral areas of the city. Rosario also seems to be a city primarily of locals. Two thirds of respondents were born in the city and one third of them are migrants, mostly with many years living there.

Household composition and size affect the ability to respond to crises. There is considerable variation in the composition of household populations, both between low and medium income

populations and between cities; see Table 3). We can consider that 0-14 years and over 60 are mostly economically inactive and that those between 15 – 59 years are economically active, even if in many cases less so between 50 and 60. These differences affect the capacity of households to cope with stresses and shocks. Accra has a large working population relative to young and old, which may well be related to the apparent high level of on-going migration into the city of people looking for work. The opposite situation exists in Kitwe, with a relatively large younger population compared to those of working age. This must at least partly be related to the high levels of HIV-AIDS in this city which particularly affects the economically active population.

Table 3 Household composition by age-groups

Years	Rosario	Bogota		Accra		Kitwe		Colombo	
		LI	MI	LI	MI	LI	MI	LI	MI
0-14	47	32	20	30	31	49	39	42	38
15 – 49	49	53	53	59	58	45	54	50	49
50 – 60	3	7	14	6	8	6	7	5	8
Over 60		8	14	6	4			3	5

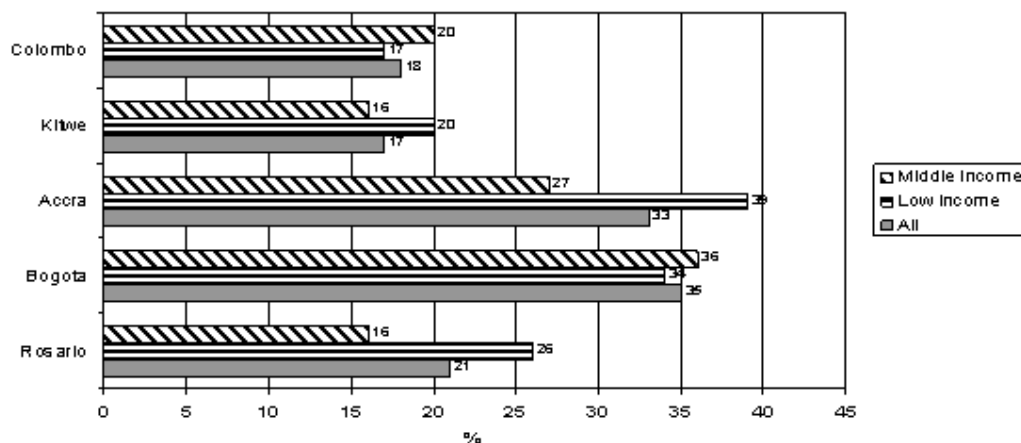
LI = predominantly low income settlement; MI = predominantly middle income settlement

It is also worth commenting on the notable difference in the distribution of different age groups among low-income and middle-income families in Bogota and Kitwe, where middle-income families seem better-placed to cope with economic downturns compared with the low-income populations. This pattern is not reflected in Accra, where the demographics are almost equal in the two populations.

The size of a household is partly a reflection of its stage in the developmental cycle of the family and partly a reflection of cultural perspectives on fertility and health issues affecting infant mortality. Surveyed households ranged from single individuals to 17 persons. Bogota and Accra have each about 7% of surveyed households consisting of a single individual. The fact that both Colombia and Ghana have experienced quite high levels of internal displacement or migration resulting in the arrival of many migrants in these cities may help explain this phenomenon. Rosario and Kitwe have none or very few single member households.

There are some indications that women-headed households (WHHs) are more vulnerable than male-headed households. Although they were in the minority in all cities (Figure 1), numbers varied across cities with no easily discernable pattern, at least not without much more detailed sociological information.

Figure 1 Female headed households as % of all households



Overall, they are most common in Accra and Bogota, accounting for around a third of all households. There is little difference between low and middle income areas in Bogota, whereas in Accra WHHs are much more common in the low-income area. This area is characterized by a

much higher population of women migrants from the poorest parts of northern Ghana and other parts of West Africa, and this may well explain the higher incidence of WHHs. Furthermore, these women tend to be very poorly educated. Almost two thirds had either not gone to school or had studied only to primary grade. WHHs were also more common in the low income areas of Kitwe and in Rosario. In Colombo and Bogotá, both cities with high in-migration there are slightly higher numbers of female-headed households in middle income areas than in low income areas.

Where gender-disaggregated data are available, women-headed households are among the poorest. In Rosario for example, whereas there are 30% of all households earning less than 500 pesos – classified as “destitute”, among women-headed households the percentage rises to 54%³. In Colombo, women-headed households are somewhat less vulnerable in both the slum and the middle income areas (see discussion of financial capital below).

Finally, cultural behaviours are also part of the context, contributing to or reducing vulnerability. Meat-eating customs in Latin America, especially Argentina and to a lesser extent in Colombia help to ensure that young children access more than adequate levels of animal protein and micro-nutrients. On the other hand, even though families resort to cheaper cuts of meat in the face of price rises (see below), meat still accounts for a major part of food expenditure which could be reduced by increasing intake of vegetable sources of micro-nutrients and protein, such as leafy vegetables, sweet potato, squash and carrots. But in the same region, food customs mitigate against the consumption of these foods, especially among young children.

HOUSEHOLD FINANCIAL CAPITAL: INCOME AND EXPENDITURE

For people living in cities, income is crucial for food security. In all case cities, and no doubt in cities in general, purchase is the major source of access to food. In the whole sample population of the five cities, for more than 87% of the households purchase was the main source of food and in most cases, more than 95%. Even in Kitwe, where own food production is most widely practiced, purchase is the main source of food for 95% of people.

Although data on income is difficult to obtain and can often be unreliable, especially if income thresholds determine access to government benefits, nevertheless, the survey does indicate that large numbers of urban households are below both international and official government poverty lines. In Rosario for example, where the poverty level for a household is fixed at 1045 pesos per month (\$270), 50% of households are below that level, rising to 62% in the lower income neighbourhood. Extreme poverty or indigence is fixed at 463 pesos/month (\$120) and perhaps 40% of the households in the poorer neighbourhood fall below that line⁴. In Accra, 60% of households in the poorer neighbourhood earn less than 200 Cedi/month (\$136), which, even if we consider a small average household size of three people⁵ is below the poverty line. Even in the “better off” area 38% of households are poor by this definition. Income differences between these areas are more significant in upper income brackets, with 32% of middle income households earning above 500 Cedi/month (\$340), compared to just 10% in the poor neighbourhood. In Kitwe, almost two thirds (61%) of households in the poorer area have less than 500,000 Kwacha/month (\$110) and 35% have less than 300,000 (\$66) (Figure 2).

Considering that an average family was found to have six members in this population, these figures show high levels of extreme poverty. In the better-off neighbourhood, 22% of households were extremely poor. As in other cities, there are even big differences between neighbourhoods

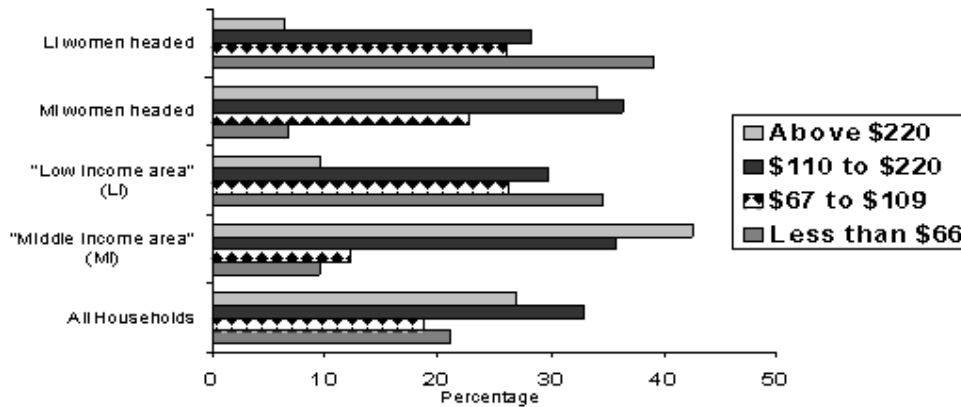
³ The authors of the Rosario study caution that income data are probably skewed since lower income households tend to underreport their income in order to get access to government assistance programmes which provide benefits only to those on minimum incomes

⁴ Data was collected using a minimum income level of 500 pesos.

⁵ Average household size is 3.92 persons per household but this includes small children

in higher income brackets. Whereas 43% of middle income households have more than a million Kwacha/month (\$220), while this is the case for just 10% of those in the poorer neighbourhood.

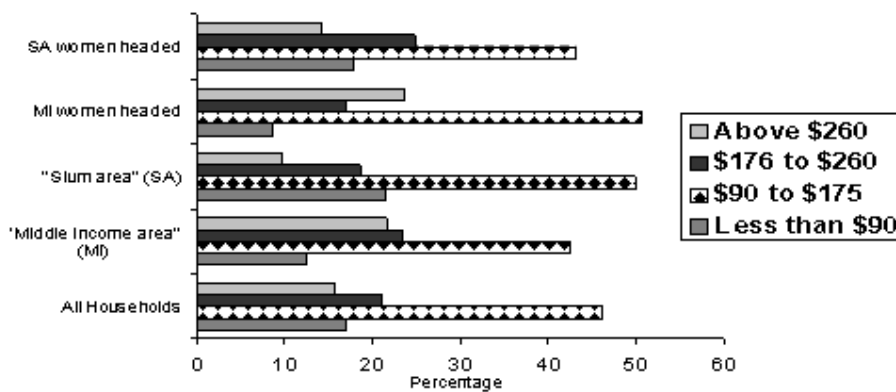
Figure 2 Household income in Kitwe



The results suggest that in most cases, poverty is geographically widely dispersed in urban areas of the developing world, with "middle income" areas having significant numbers of poor and extreme poor and "poor" neighbourhoods having some better off households. From these findings, there seems to be even greater differences between types of neighbourhood in the numbers with higher income than with low income. One of the consequences of this kind of poverty dispersion is the increased difficulty of targeting social protection programs in urban areas, which was commented on by several of the case study authors.

Colombo illustrates well these findings (Figure 3). Thirty five percent of all households earn less than \$90/month (35% from the low-income area and 22% from the middle income area). Only for households with income above \$260/month is there a significance difference between the two areas. Only 2% of low-income households compared to 6% middle income are in this bracket. The authors of the Colombo study explain the poorer nutritional status of households from the low income area, which are reported in a later section, as caused by social rather than income differences. Income is used differently in the slum area, especially more expenditure on alcohol, clothes and other material goods and less on food. As will be seen, they also have different employment profiles.

Figure 3 Household income in Colombo



Several of the studies examine the income levels of women-headed households to understand whether they are particularly vulnerable to low income. The data from Colombo (Figure 3) show that these kinds of households do rather better than households in general in levels of earning. It is not clear whether this is related to access to remittances from migrant male household

members (Sri Lanka has very high levels of overseas migrants) or to some other reasons, and this would require more in depth research than has been possible in this study. Findings from other cities show a different pattern, suggesting that women-headed households are more vulnerable to low income. In Rosario, these kinds of households were most frequently found in to be in extreme poverty. Fifty four percent of all women-headed households, in both the better-off and the poorer neighbourhoods, reported an income below 500 pesos per month. A contributing factor to this situation is that the majority of women-headed households are single-parents (83%). Women-headed households in Kitwe also show higher levels of poverty, even if not as marked as in Rosario. It is most noticeable in the better-off neighbourhood, where 30% of women-headed households are extremely poor, compared to 22% overall.

Some of the studies looked at the influence of other variables on income. Given the ethnicity-related conflict which has afflicted the country over several decades, the Colombo researchers looked at ethnic background in relation to income. No significant difference was found in income levels between ethnic groups. On the other hand, a significant relationship was found in Accra between income bracket and education. Whereas a third of household heads reporting household earnings of less than 200 Cedi had completed secondary or higher levels, three quarters of those reporting income of more than 500 Cedi had received at least secondary education. Fifty four percent of those in the intermediate income bracket had had this level of education.

Whilst the overall employment situation of a city is clearly critical in determining levels of income and thus food security, also important is the balance of productive to non-productive household members, discussed above, and equally, how far potentially productive members are actually bringing in income. Table 4 summarizes information on numbers of income sources per low-income and middle income household across the different cities. Although in almost all populations in all cities, the majority of households depend on one income, there are considerable differences in opportunities for multiple incomes.

Table 4 Proportion of households with different number of income sources

Incomes per household	Rosario		Bogota		Accra**		Kitwe		Colombo	
	LI*	MI*	LI	MI	LI	MI	LI	MI	LI	MI
One income	55	56	58	42	37	38	76	71	63	54
Two incomes	34	33	28	39	52	50	21	23	18	27
≥ 3 incomes	10	10	14	20	10	11	3	6	18	19

* LI Predominantly low income settlement; MI = predominantly middle income settlement

** Eight households reported no income source

The serious problems with decline in work related to the copper-mining industry during and prior to the recent economic crisis in Kitwe is probably one contributing factor to the low level of income diversification in that city. Rosario also shows a smaller number of households with three or more income sources. The authors of this study mention the cultural expectations about women being carers and responsible for the home which reduces the percentage of women working. There were 52% of women in this category, receiving no pay. This is not a Latin America-wide phenomenon. Many households in Bogota, especially in the middle income areas, reported three or more income sources.

THE CRISIS IN HUMAN CAPITAL: EDUCATION

A household's human capital, the strength, knowledge and skills to work and earn an income and the health status that contributes the physical and mental capacity to deploy those assets is a central concern of this study. In particular the study seeks to understand whether and to what extent the recent financial crisis and the earlier food price crisis have impacted on human capital and what households are doing to cope with their effects. Three aspects of human capital have been explored in this study: education, employment and food and nutrition.

With the exception of Colombo, all cities show a disturbingly high percentage of adolescents and adults who have either had no education or have only completed primary level. Surprisingly the highest percentage in this category was in Rosario in Argentina, where 72% of household heads in the low income area of Santa Lucia had had either no education or had only completed primary. For all family members this rises to 73%, though it is unclear whether this figure includes pre-school and young children. Among low-income populations in Bogota, Accra and Kitwe, from 40 to 60% of adolescents and adults have limited or no formal education.

The influence of poverty on access to education seems much more marked than gender in these findings. For example, in Bogota, more than twice the household heads in the better-off area went beyond primary in their education, compared to the poorer neighbourhood. In Kitwe, only 14% of over 14 year olds in the better off area had no or only primary education, compared to 43% in the low-income area. Accra and Rosario also showed differences, but less marked. In the better-off area of Rosario, there were still 59% of household heads with no or only primary education. The differences between low and middle income populations are less marked when we look at how many household heads and household members completed secondary level: 34% middle income versus 20% low income in Rosario and 44% versus 41% in Bogota. In Accra, there is also only a few percentage points difference, but what is most striking there is the generally low numbers attaining secondary level, 18% among better-off household members and 12% of the low-income population. This is related to the fact that high numbers of the population in Accra studied only up to Middle School. These differences are even higher in relation to vocational and tertiary education. In Bogota for example, whereas 30% of the middle income sample attained this level, only 3% did so in the low income area.

Colombo presents quite a different picture to the other cities, probably because of its long history of a strongly supported public education system. Even in the low income population, only 26% of 15-49 year olds have no or only primary education. Among better off households it is 11%. Forty percent of low income and 48% of middle income household members finished secondary school, whilst 13% took some kind of vocational training or tertiary education beyond high school.

Gender-disaggregated data exist for all cities except Bogota and generally suggest that women are similarly constrained as men in their access to education. For example, in middle income households in Colombo 9% of women between 15 and 49 had no or only primary education compared to 11% among all 15-49 year olds. The same pattern exists in the slum population. Almost the same percentages of women finished secondary school as the general sample population and in the middle income bracket, 15% of women compared to 13% of the general sample completed vocational or tertiary education. In the slum area, 5% of women and 4% of the whole sample completed vocational or tertiary education. A very similar pattern held across the other cities.

What are the lessons from this evidence of formation of human capital through schooling? Without access to any formal education, or with only the minimum exposure to the basic skills, households are severely constrained in the kinds of urban employment and services they are able to access. If the economically productive population is constrained in its access to jobs because of the lack of basic skills, this adds to the stresses experienced by households and is likely to further constrain their capacity to manage the diets and nutritional well-being of both adults and young children. Although the causality of this relationship was not directly explored in this study the correlation has been found in other research (cf Maxwell 2000; Yeudall 2007).

CRISIS IN HUMAN CAPITAL: EMPLOYMENT

Availability of work is very variable across the case cities, reflecting the importance of the institutional and historical context discussed earlier. In Rosario, for example, which experienced such high levels of unemployment as a consequence of the national crisis at the beginning of the decade, around 83% of household heads are currently working in some kind of paid job, SYNTHESIS REPORT. Effects of the global financial crisis on the food security of poor urban households

80% in the low-income area, 85% in the middle income location. Most of the household heads not in paid employment are women who work as unpaid carers in the home, as discussed in the earlier section on income. Looking at the overall productive population in Rosario, the employment figures are less positive, and are strongly linked to the age group. Thus among 15 – 19 year olds, there is 75% unemployment, and the socially disruptive consequences of high levels of youth unemployment is a well-known urban problem. In subsequent age groups, levels of employment increase to a maximum of 75% in the 45-49 age group. However, because of the age distribution of the population, there is an overall unemployment level of 46%.

In Bogota, levels of unemployment are much higher among household heads, especially in the low-income area. Fifty one per cent were working at the time of the survey and this was quite similar to their situation over the previous months. In the low-income area, only 33% of household heads were working. There is similar picture for other household members, with 33% of low-income persons working, and 47% employed in the middle-income group. Unlike Rosario, women's employment closely mirrored the consolidated picture, with 47% of middle income and 33% of low income currently working. There was an indication that these households were currently worse off, since employment was rather higher in previous months (43% and 53% respectively). This grim situation is confirmed by focus group discussions where the issue of employment instability was a major theme. Those in the low-income group in particular emphasized that work and income are daily challenges and food provisioning thought about on a daily basis.

The employment figures for Accra are better, with an overall employment rate of 63% which is similar between the two sampled locations. Of the 37% unemployed, 8% were people normally with jobs who were temporarily out of work.

With the decline over several years of the copper mining industry in Kitwe and other locations in Zambia, employment is very unstable, with 49% of the economy estimated to be in the informal sector. In Kitwe, 36% of the economically active population (>15yrs) were employed at the time of the study, with little variation between low income and middle income (32% and 31% respectively). However there were notable differences between male and female employment. Fifty one percent of low-income males were employed at the time of the survey, compared to 19% of women. In the middle income area, 46% of men were working, but only 20% of women. When asked about employment over the past 12 months, the picture is little different, rising from 36 to 38% employed at some point during that period. Women's employment is slightly higher at 23% and 24% for poorer areas and better-off areas respectively. However, this was lower than employment in the previous year (2007), suggesting an overall decline in employment opportunities.

Despite the political context in Colombo employment levels are high and according to the authors, most urban poor have remained employed during the crisis. Among household heads there is slightly higher employment in the low income (82%) compared to the middle-income area (77%), and these figure hardly vary when respondents were asked about employment over the past 12 months.

In term of types of employment, Table 5 shows the main categories⁶. Although there is overlap between categories at least they give a sense of the employment trends.

Unsurprisingly a majority of employment is in the informal or casual spheres of labouring, domestic service and petty trading/small scale informal business. Accra is unusual in having a significant percentage of people in both the low and medium income areas working as professional or technical staff. This is a highly diverse category in Accra and suggests that there is much less coincidence between employment profile and residency than in other cities.

⁶ There were several different ways in which different cities divided up the employment categories. In particular, in some cities "petty trading" included office workers. The category "professional and technical" includes judges and nurses, bosses and priests among others.

Table 5 Main occupations as percent of all employed, by area and city

Types of occupation	Rosario		Bogota		Accra		Kitwe		Colombo	
	LI*	MI*	LI	MI	LI	MI	LI	MI	LI	MI
Labourer / worker in small enterprises; domestic help	50	66	53	36	13	15	30	26	83	62
Self-employed business (incl. petty trading)	35	24	22	44	70	52	43	39	8	10
Professional, technical	-	-	1	4	17	26	13	28	5	27
Agriculture / Forestry	-	-	-	-	-	-	13	5	-	-
Other	15	10	25	16		7	2	2	4	1

* LI Predominantly low income settlement; MI = predominantly middle income settlement

“Other” categories of employment are very diverse, but it is important to note that in Rosario and Bogota most of this category involves the role of carer, primarily the unpaid work of women in the household. This exists in all cities, but was not recorded there under employment. In terms of women’s versus men’s employment, only Kitwe provided disaggregation of this information in the survey. It shows that whereas women are primarily employed in the petty trading sector, most men are employed in labouring, followed by petty trading. Agriculture and forestry is much more important for both women and men as a form of employment in Kitwe than in any of the other cities.

THE CRISIS IN HUMAN CAPITAL: FOOD AND NUTRITION

Main sources of food and role of own food production.

Unsurprisingly, purchasing was the main food source for over 90% of three city samples. Rosario is a slight exception, in that several social protection programs introduced during the national crisis in 2000-2001 continue to provide food aid to 13% of sample households as their main source of food, rising to 16% in the low income area. Food aid is also present in Bogota, where just over 10% of low-income households consider it the major food source. In Kitwe, which is the only city where farming and forestry are recorded as the main occupation in some households, especially men and women above 49 years old (see Table 6), purchasing is nevertheless the main food source for 95% of households.

Unfortunately, information on secondary food sources was only collected in Accra and Rosario (as a follow up activity to the main survey), so limited information is available on the role of food transfers between households or own production towards complementing household food security. In relation to the high consumption of leafy vegetables in Kitwe (see below), the authors observe that “green leafy vegetables were commonly seen at the backyard garden of most households, indicating that it was readily available as part of food” (Kitwe report, page 53). Perhaps the focus of the survey on primary jobs has tended to underestimate the proportion of people doing agriculture as a complementary activity. This tends to be borne out by the numbers citing own food production as a coping strategy for dealing with the economic and food price crisis (see below).

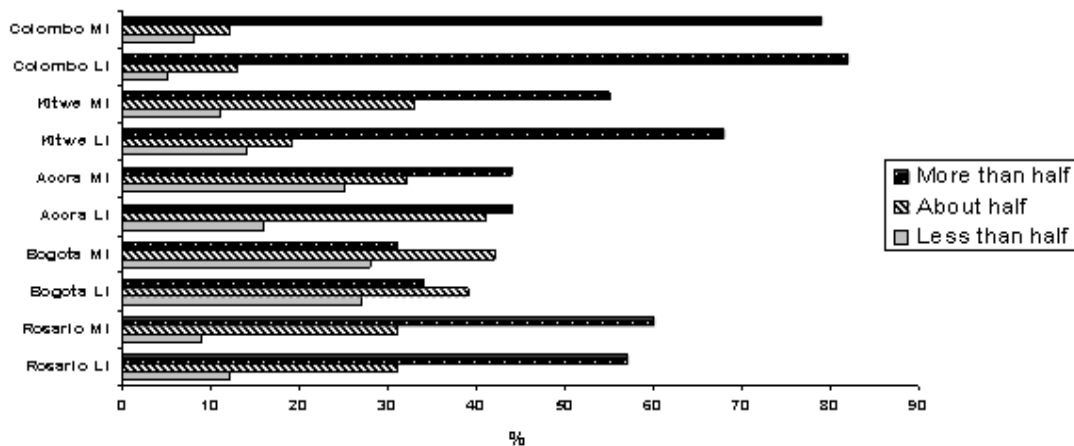
Some supplementary data collection was undertaken in Accra and Rosario to look more closely at the situation of own food production. In Accra, initial survey results showed that for 98% of households in the both low and middle income areas purchase was the main source of food. When follow up studies were made of the role of own production towards household food needs, it was found that because these were highly built up areas, only 15 households in the low income site and 6 in the middle income site were growing crops, and these primarily in their home village rather than in the city itself. On the other hand, 28% of households in the low income area were raising livestock, both for consumption and for sale, whilst in the middle income area, 11% of households were raising livestock mainly for own consumption. In Rosario,

just over 20% of households had some kind of agriculture – mostly livestock raising, but this was not considered important as a food source (see section on coping strategies for more details).

Expenditures on food

Low incomes and quite high levels of unemployment mean that food budgets are high relative to other expenditure items in most cities. In six out of ten of the populations sampled, food takes up half or more of all household expenditures (Figure 4). In Bogota, where the proportion is less, many households are accessing highly subsidized or free food via social protection programs. At the same time, Focus group participants commented on the high cost of other expenditures such as rent. In Rosario, where households are also accessing food via social protection programs, expenditures on food are still very high. For some cities like Colombo and Kitwe, the vast majority are spending more than half their income on food. Among households in the low-income areas, 30% and 20% respectively report spending almost all available income on food.

Figure 4 Proportion of income spent on food



Food consumption: 24 hour recall

What kinds of mostly purchased food are people eating in these cities and have these eating habits changed as a result of the crisis? To document the food diversity consumed by target populations, each of the city studies conducted a 24 hour recall⁷. Regarding the consumption of liquids, it is noteworthy that in Accra and Kitwe water is almost the only liquid taken. Nearly 90% of low-income households never drink milk for example. In contrast, a majority of children and women in both low and middle-income areas of Bogota and Rosario consume a range of liquids, including fruit juices and milk. Milk consumption in Rosario is strongly related to the presence of “glass of milk” social protection programs. The authors of the study of Bogota note the low levels of water consumed by both low and middle income women and children compared to recommended levels. This could be linked to the Andean cultural practice of taking liquids via soups and herb teas (there is a relatively high level of consumption of “other liquids” among both women and children (between 50 and 70% of women consuming once or twice, between 40 and 55% of children)).

Grains are a major source of carbohydrate in the diets of the five locations, though roots and tubers are also staples in both Bogota and Accra. In Accra, just over 80% of those in the slum area consume grains twice or three times, compared to 60% in the middle income area which has a higher consumption of roots and tubers. In Kitwe 63% of low-income households consume grains twice a day and 25% of middle-income households consume them three times a day.

⁷ The Colombo study only considered 24 hour recall data for children under six, where as in the other cities these were also collected for women 15-49 years.

Given the overall low level of diversity of Kitwe diets, including negligible consumption of other energy foods such as roots and tubers, it is disturbing that 22% of low income households consume grains only once a day, suggesting that these households have only one meal a day. In Colombo, there has been a shift from wheat to rice as the price of wheat has risen. Although rice is the traditional starchy staple in Sri Lanka, wheat products are also preferred food items. The increased consumption of rice favours a staple with a somewhat higher nutrient content and one that is commonly eaten with a greater diversity of other foods.

Beta-carotene rich foods such as carrot, squash or yellow/orange fleshed sweet potato, are barely consumed in any of the sampled cities. Availability at the time of the survey was an issue in some locations, for example Kitwe, but there seems to be also a lack of recognition that this is an excellent plant source for pro-vitamin A, which can help combat vitamin A deficiency (VAD). This issue of lack of knowledge is somewhat supported by findings in Accra, which was one of the few sites to explore consumption data in relation to variables other than the poorer or better-off locations. Even though overall consumption levels were low, the authors found statistically significant differences in the amounts of this type of food consumed by those with tertiary education compared with those with no education.

Likewise protein-rich legumes are also consumed in a very limited way, even in Colombo where different types of legumes are a common part of the food culture (Table 6). Just over two thirds of children under six in both the slum and the middle income area had not eaten pulses during the preceding 24 hours. The same picture exists in Accra, where different kinds of legumes have also been part of food culture. Yet 20% or less of women and children had consumed this foodstuff, with little difference between areas. The picture is repeated in Bogota, a city in the heart of the Andes where legumes have been traditionally a key source of protein.

A food which also can contribute a wide range of micro-nutrients as well as vegetable protein at low cost is leafy vegetable. Nevertheless, as Table 6 clearly shows, only in Kitwe did leafy vegetables appear to be an important source of micro-nutrients. Leafy vegetables were consumed once or twice in the preceding 24 hours by over 90% of women in poorer and better off areas, by 58% two or more times in the poorer area and by more than three quarters in the better off area. As reported earlier, a large proportion of these vegetables were home-grown.

Table 6 Non-consumption (%) of legumes and leafy vegetables by children under six years and by women between 15 and 49 (24 hour recall)

Food items	Rosario	Bogota		Accra		Kitwe		Colombo	
		LI*	MI*	LI	MI	LI	MI	LI	MI
Legumes – women	96	71	62	82	81	73	69	-	-
Legumes – children	94	73	68	80	86	75	66	69	69
Leafy vegetables - women	76	63	59	40	57	7	6	-	-
Leafy vegetables - children	82	69	58	49	68	20	12	39	50

* LI Predominantly low income settlement; MI = predominantly middle income settlement

But in Accra around half of children from the poor neighbourhood and two thirds of those in the middle income area did not eat any vegetables. Women had a similar low level of consumption with less vegetables eaten in the better off area than in the low-income neighbourhood. Most of those who did eat leafy vegetables did so only once. This suggests that the low levels of consumption are part of household eating habits rather than just ideas about the consumption needs of young children. Still higher levels of non-consumption were reported in other cities, especially in Rosario, where just 18% of children under 6 and 24% of fertile women included leafy vegetables in their previous day's food.

The conclusion from this very common pattern of generally low consumption of legumes and leafy vegetables is that a type of sustainable food culture found in many parts of the world, which has combined a starchy staple with one or more legumes and leafy vegetables has broken down in urban settings, with probable negative nutritional consequences.

A somewhat surprising finding was the generally high level of animal-source foods (ASFs) consumed in most locations. This was not a surprise either in Rosario, Argentina, where the national consumption of meat is the highest in the world, or in Bogota, where meat-eating is also culturally equivalent more or less to eating. In Rosario 82% of under-six-year-olds had eaten meat or other ASF at least once in the preceding 24 hours. For women it was 92%. In Bogota around three quarters of children and almost 90% of women had eaten ASFs at least once. Just over 30% had eaten this food two or more times. In other case cities the question of what kind of ASF becomes more relevant, as well as the portions eaten. The ASF category in the survey includes not only meat but also fish and egg. In Accra, high percentages of households in both low-and middle-income area reported eating ASFs at least once (97% and 96% respectively) and it seems that a significant amount of this consumption is of fish. Because the data for Accra was not disaggregated for women and children, it is not clear whether they were also consuming this ASF. A second caveat is that this methodology does not provide information on the quantity consumed. West African food practice often involves the preparation of a large quantity of the starchy staple presented in a large container and topped with a small amount of fish or meat in a sauce. For some family members gathered around this bowl, the consumption of ASFs can be very small or non-existent.

Reported ASF consumption in Kitwe is much lower than in Accra or the Latin American cities, with 58% of low-income and 77% of middle-income households reporting consumption at least once over the previous 24 hours, meaning that almost half did not eat meat. Since this information was also not disaggregated for women and children, the same caveats mentioned for Accra also apply to Kitwe.

The authors of the Colombo study, based on 24 hour recall and focus group information, conclude that there is a preference for high cost ASFs rather than cheaper, plant-based sources of protein and micro-nutrients. The study also considered whether these preferences impacted on dietary diversity, which is a measure of nutritional adequacy based on consumption of foods from different food groups. Although around two thirds of children in both areas had adequate dietary diversity (at least four types of foods consumed), when these scores were disaggregated by income bracket, it was found that only 38% of children in the lowest income bracket had adequate diversity.

Where information is presented on the group of sugar-based foodstuffs and drinks, there is also cause for concern. In Rosario, 86% of children and 92% of women had consumed sweets or soda drinks, in the case of sweets, between 1 and 9 times. In Sri Lanka more than half of children and women had consumed sweet snacks.

COPING STRATEGIES IN RESPONSE TO THE CRISIS

In terms of the sustainable urban livelihoods framework, “coping” is really the deployment of household assets (natural, physical, financial, human and social) through different types of strategies, given the existence of stresses and shocks in the external environment (the vulnerability context) and the presence of different kinds of policies, such as food price subsidies, institutional arrangements and opportunities, such as school and/or community meals programs and cultural needs and expectations, such as the consumption of meat in Argentina for example.

What has been presented so far in preceding sections is a snapshot of livelihoods one year into the financial crisis and under the particular vulnerability contexts of individual cities. The snapshot shows a combination of livelihood assets and strategies shaped by preceding exogenous and endogenous factors affecting households and strategies directly responding to the crisis. Clearly the capacity to respond to the additional stresses and shocks provoked by the crisis is conditioned by preceding assets and strategies. This section reports respondents’ perceptions of the impact of the crisis, especially on food prices and the coping strategies being adopted. It needs to be underlined however that perceptions are grounded in locally

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experienced stresses and shocks occurring over time. Coping strategies are responding to the more generalized challenges facing poor people seeking to ensure their livelihoods as well as to specific recent shocks.

Perceptions of the crisis

When asked whether prices had changed between 2008 and 2009, there was almost universal agreement among respondents in all cities that indeed food prices had gone up. However, in some cases national statistics cited in the reports showed that food prices between 2008 and 2009 had stabilized, as in Bogota, or slightly declined, as in Colombo. It is clear that most people were responding to changes in prices over recent years, not specifically in the past year. For example, whereas rice and wheat both had small price declines between 2008 and 2009 in Colombo, compared to 2005 the price of rice doubled and the price of wheat flour increased 133%. The Accra study records respondent perceptions about large price changes between 2008 and 2009, mentioned during focus group discussions, though these were not corroborated either by the expert testimony or by official statistics. Again, the important point for both low- and middle-income households was the indisputable increase in the costs of securing their livelihoods. Perhaps the most telling piece of evidence cited by focus group discussion participants was the fact that one Ghanaian cedi bought enough food (cooked rice with stew) to satisfy an adult in 2008, whereas it required 2 Cedis in 2009.

Coping strategies

Evidence from all cities shows that coping strategies are of two broad types: reduction of expenditures and increasing income. As Table 7 indicates, efforts to reduce expenditure were more common than efforts to raise income and overall, adjustment in food consumption was the most common strategy. This will be taken up shortly. In the three cities where coping strategy data were disaggregated by “income area”, there are few significant differences in the strategies of low-income area households and those in middle income areas.

Two striking differences exist in Kitwe. Households living in the better off area were the only sample population not identifying food adjustments as a way of coping. On the contrary, these households almost exclusively focused on increasing their income, primarily through accessing additional employment, but also through increasing their own food production. This was also a relatively common strategy among households in the low-income area of Kitwe, but not in other locations, which deserves further comment.

Table 7 Coping strategies mentioned by respondents (%)*

	Coping strategies	Rosario	Bogota **	Accra		Kitwe		Colombo	
				LI***	MI***	LI	MI	LI	MI
E R X P E N D I T U R E S	Buy cheaper or less food	44	++	67	66	46		61	61
	Reduce “other” expenses	49	++					21	22
	Eat less	17							
	Take children from school / send to rural areas		++	1	1		5	3	1
I N C R E A S E	Government support programs	14	++						
	Relative/neighbour support			10	6	12	1	14	7
	Produce own food		N/A	N/A	N/A	28	23	1	
	Take other work		++	10	4	11	71	9	10
	Other	12		12	23	3			

* Multiple responses in some cities mean that the percentages do not always total 100%

** Information gathered through focus group discussions without percentages

*** LI Predominantly low income settlement; MI = predominantly middle income settlement

In Rosario for example, about 20% of households in the middle-income area reported having some kind of agriculture, with fruit trees the most common (just over half of households), livestock – mostly poultry – raised by 37% of these households, sometimes together with crop production, which was reported in 30% of families. The figures are quite similar in the low-income area, with 23% overall involved, with almost 90% having animals and 83% with animals as the only “agricultural” activity. In fact, it is reported that in some households the animals are kept as pets rather than for agricultural use, which reduces the agricultural numbers further.

The report describes very small-scale production mostly for home consumption of both plants and animal products which respondents regarded as “insignificant as a food source” (p36). This accounts for the absence of own food production as a coping strategy in this location. Most likely in response to the earlier domestic crisis that gripped Argentina in 2001, a culture of “right here right now” (*cultura de la inmediatez*) has grown up in these parts of Rosario. Urban agriculture, with its relatively slow returns on investment of time and resources, is not well adapted to this new culture. Seeking out government support programs, however, or benefitting from political favouritism is seen as a “less arduous and less risky option than running a vegetable garden or rearing animals” (p37). This shows up in the coping strategies recorded for Rosario in Table 7 and once again underlines the importance of pre-existing structures and policies which derive from earlier stresses and shocks in providing the means to deal with new challenges.

In relation to the “right here, right now” culture in Rosario, it is worth commenting on one of the strategies included in the “Other” category. In an interesting way this strategy reprises the advantages for rapid satisfaction of food needs of “food gathering” compared to cultivation in the evolution of hunter-gatherer and agrarian societies. In Rosario, the gathering of discarded food from different kinds of food outlets also emerges as a significant coping strategy.

As discussed in the section on food sources above, the heavily built up character of the two locations in Accra meant that only about 3% of households were growing crops during the survey, on very tiny spaces. On the other hand 17% were found to be raising livestock, more commonly in the low-income area, where 28% had animals. The vast majority of households were raising poultry and/or small ruminants, and for both types of livestock a little over 50% of households had 11 or more animals. For low-income area households, animals were seen both as a source of food and a source of income, whereas for those in the better-off neighbourhood, animals were for own consumption in three quarters of cases. Almost all families started raising livestock or growing crops within the last two years (91%) and over 50% mention their reason for practicing agriculture as to get additional food or income, which strongly links this activity with recent coping strategies to deal with the price increases described above. About a third say they are cultivating because it is a traditional activity of the household, but in view of the fact that many of these same households have only recently taken it up, this tells us that these households must be deploying “traditional” skills to obtain food and income in new ways in the city. This all points to own food production being a significant coping strategy in Accra, yet it is not reflected in Table 7 possibly because the way this question was framed, it seemed to be asking for more immediate, “crisis responses” than own food production.

As in Accra, agriculture in Bogota is not reported as a coping strategy, despite the fact that many of the household heads are migrant agricultural workers and the city does have a number of programs on urban agriculture (Alcaldía Mayor de Bogotá et al 2008). On the other hand, there are similarities with Rosario in the perceived importance of government assistance programs as coping strategies, which could undermine the relevance of and reliance on longer-term solutions such as agriculture.

Although in the formal responses such strategies as taking children out of school or sending them to rural areas do not appear as significant, these kinds of extreme solutions were mentioned in focus group discussions. In Kitwe for example, where opportunities for young adults to supplement household income through employment were limited, the number of household dependents was reduced through early marriage. These meetings also mentioned

what must be an understated form of income generation for many families and individuals facing extreme conditions, the recourse to prostitution and theft.

Reducing the quality and quantity of food as a coping strategy

Food certainly accounts for a major proportion of household budget, as was seen above. However unlike some other types of expenditure, food is fungible, it can be obtained in infinitely divisible parts and types. So even though it is the most essential of needs, it is also the most susceptible to being cut when prices increase or income declines. In Bogota for example, where about 40% of households are renting their accommodation, paying the monthly rent is the number one priority for the household budget. The second priority is to cover the costs of municipal services. Once these are covered, the household looks at what is available for food. If there is less left over for food during times of crisis and reduced income, or if food costs have increased, in what ways do households in the different cities reduce their food budget?

In all of the cities studied, around 50% or more of households in both low and middle income areas adjusted their diets in various ways to accommodate in most cases a reduced food budget (Table 8). A common practice reported in Accra and Colombo was to eliminate complementary food items, which were used to diversify diets, in favour of the main staple. In Accra, the population can be divided between different “staple food” groups depending on which part of the country they are originally from: the “banku” food population mostly eat maize-based diets; the “fufu” food population from central and southern Ghana mostly eat root and tuber-based diets; the “Tuo zaafi” food population from northern Ghana eat sorghum and millet based diets; the “Omo tuo” food population also from the north and north-west eat rice-based diets etc. Those mainly eating maize or root and tuber diets reportedly gave up rice as a complementary staple to keep a reduced food budget for their main staple.

In Colombo, where rice is the dominant staple, many families also eat wheat-based products, especially in the form of bread or *roti*. This item is reported to be dropped from the diet of households in the survey, which the authors suggest may also be something positive, in that rice has higher nutritive value compared to wheat.

Table 8 Reported changes in food consumption as coping strategies (%)

	Rosario		Bogota		Accra		Kitwe		Colombo	
	LI	MI	LI	MI	LI	MI	LI	MI	LI	MI
Change in diet / number of foods changed*	48		47	41	75	56	70	64	47	47
Change in food types**	N/A		28	23	13	19	48	50	55	53
Number of meals reduced	17		25	19	48	53	73	57	17	12
Two or less meals per day now	11	6	25	20	21	33	71	40	32	34

* Refers to a reduction in the diversity of the diet, for example, shifting from eating both wheat and rice to only eating rice, or reducing number of vegetables eaten

** Refers to changes in the food categories (e.g. dropping sugary treats or meat dishes)

In Rosario, where meat is both a culturally non-negotiable component of meals as well as a relatively expensive part of the food budget, households choose cheaper cuts of meat, which will probably have health implications, because of the likely higher fat content.

In Bogota, focus group discussions elicited a number of strategies involving changes in food diversity and diet to reduce costs. These include:

- Not buying prepared food
- Buying only seasonal foods
- Shopping in cheaper markets
- Buying non-brand foods
- Retaining the number of meals, but reducing the types of foods: in breakfast for example, eliminating the typical soup and egg, leaving only bread with hot chocolate as the breakfast
- As in Rosario, substituting a cheaper version of the same food type, such as chicken ofal instead of beef or pork, maize cake (*arepa*) instead of bread

Changing the category or type of food is another, rather less common response. This includes limiting or eliminating meats and dairy products cited as a coping strategy by participants in focus group discussions in Bogota, though the survey responses did not really indicate widespread use of this strategy. In other cities such as Accra, respondents mentioned the elimination of snack foods and sweets. Unfortunately few cities reported on consumption of these items in the 24 hour recall, but as reported above, those that do (Rosario and Colombo) shown continued high consumption of these items, as high as 92% of middle income area respondents in Rosario.

Perhaps the most drastic coping strategy based on adjusting the food budget involves reduction of meals. A surprisingly high percentage of households indicated that they had reduced meals (an average of 36% overall, rising to 41% among low income households across all cities). Some of these numbers relate to reduction of traditional in-between meal snacks and which was specifically mentioned in Accra, where the relatively high numbers reporting reduction in meals is not matched by the numbers consuming 2 meals or less a day. But some reductions undoubtedly reflect reductions in main meals and the generally close correlation between reduction in meals and consumption of 2 or less meals a day supports this. Again, it is not always easy to determine how many times staple foods are consumed, which is a better definition of a “meal”. In Colombo, 22% middle income and 23% slum children were reported to have only two cereal based meals per day and 12% middle income and 9% slum children ate cereal based meals only once a day, younger children tend to be given smaller more frequent meals which may not be cereal based.

The situation in Kitwe is especially serious, with almost three quarters of families from the low income area consuming two or less meals a day.

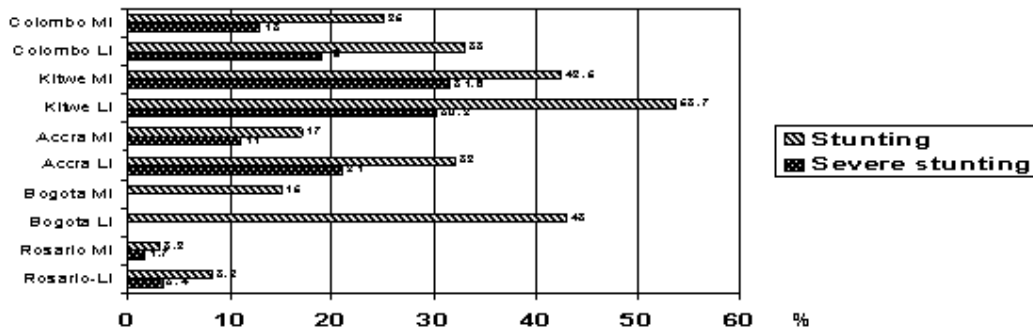
HEALTH OUTCOMES: NUTRITIONAL STATUS OF YOUNG CHILDREN (> 6 YEARS) AND FERTILE WOMEN (15 – 49 YEARS)

What are the health outcomes of food practices and coping strategies being applied by the households in these five cities? Of course, nutritional status assessed through anthropometric measurement only provides evidence of one type of health outcome, and food consumption is only one contributing factor (Baig-Ansari et al 2006). Household size, caring practices, sanitation and disease load all impact both on nutritional status and overall health status. But clearly food intake is a key causal factor.

As has been underlined in this report, the pre-existing conditions in particular cities have the potential both to offer opportunities as well as to present additional challenges for households. Stunting in children under six years old (measured by comparing height for age – HAZ) is an indicator of chronic malnutrition. Children who are stunted are known to suffer problems with cognition and school achievement from early childhood to late adolescence. There may also be negative emotional and behavioural outcomes (Walker et al 2007). Figure 5 compares levels of stunting and severe stunting in the five cities⁸.

⁸ Moderate and severe stunting is diagnosed when the z-score is greater than -2SD. When it is greater than -3SD, severe stunting is diagnosed. In the case of the Bogota study, a category of “at risk” was included, between -1 and -2 SD, a category of “stunting” for those above -2SD, but no category of “severe stunting” was identified.

Figure 5 Height-for-age (HAZ) measures for children < 6 years (chronic malnutrition – stunting)

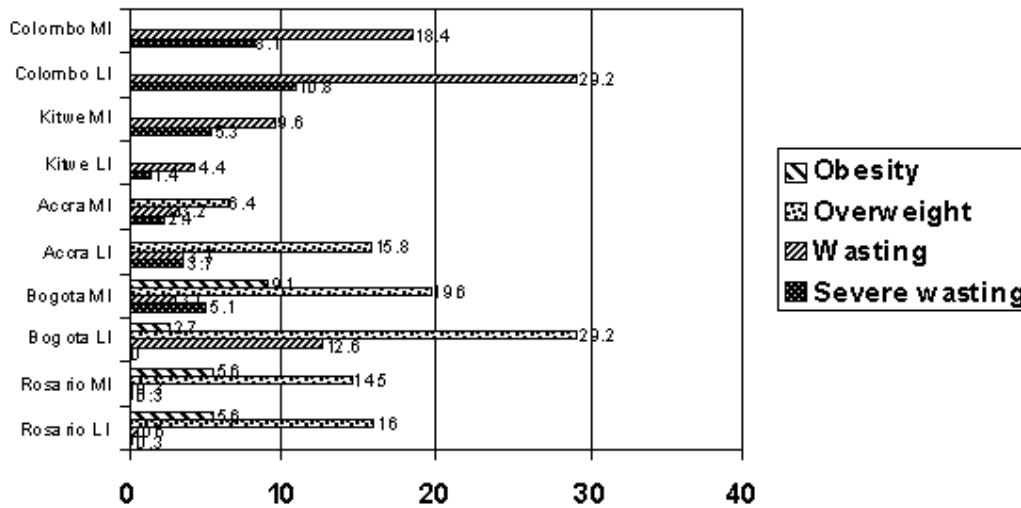


Average developing world stunting in under-5s is about 37% (van de Poel et al 2008), so the findings in Kitwe in particular, but also in Bogota, Colombo and Accra are disturbing and suggest that many children in these four cities will experience challenges in their cognitive development and possibly in future employment opportunities. Even though the Accra and Colombo figures are below the developing world average, a high proportion of stunted children are severely stunted. The results also show systematic differences between children from poorer neighbourhoods and those from better off areas, ranging from three times the incidence in Bogota to a third greater in Colombo and a quarter greater in Kitwe.

The high levels of stunting in Kitwe can be related to the diet of children discussed earlier, especially the relatively low consumption of ASFs and legumes and for some households, limited consumption of carbohydrates. The results show the continuation of a slightly oscillating trend in levels of stunting in the Copperbelt region of Zambia where Kitwe is located, over the past 17 years. The five earlier studies, conducted between 1992 and 2007, show stunting levels ranging from 39% to 56% (in 1999), with the overall trend showing growing levels of stunting up to 1999, followed by slight decline. These figures for the Copperbelt are similar to the national level figure of 42% reported in 2000 by UNICEF (<http://www.unicef.org/pon00/leaguetos1.htm>). The earlier Copperbelt studies also documented levels of severe stunting ranging from 14 to 32%, with a similar trend to the stunting. These latest results seem to show once again an upward trend in levels of stunting.

The very low levels of stunting in Rosario must be attributed, at least in part, to the social protection programs put in place during the domestic economic crisis in 2000/2001. More directly related to current and recent consumption practices and coping strategies are the anthropometric findings on wasting, which are indicators of acute malnutrition (Z-scores of $SD > -2$ indicating both moderate and severe wasting, and $SD > -3$ indicating levels of severe wasting). These results also indicate overweight and obesity (Z-scores of $SD > +2$) and those with obesity ($+3$ respectively). Wasting and overweight are measured by comparing weight for height – WHZ (Figure 6).

Figure 6 Weight-for-height (WHZ) measures for children < 6 years (acute malnutrition – wasting)

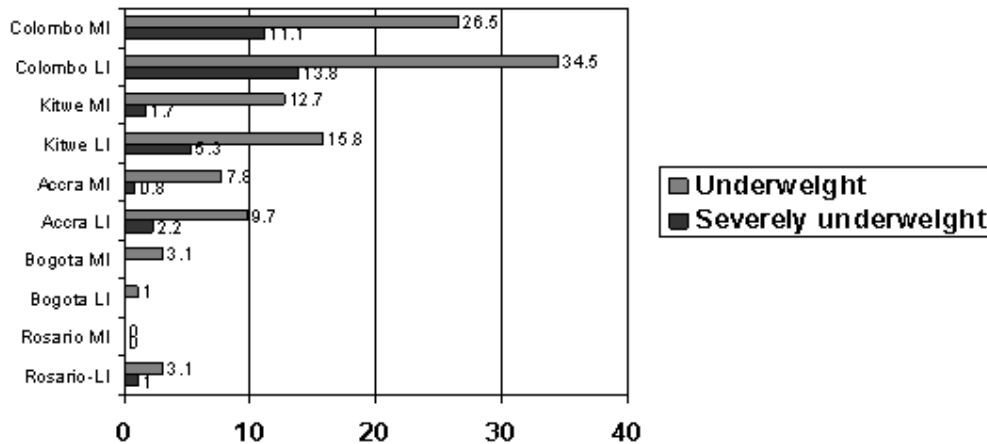


Wasting and severe wasting were most notable in Colombo where the authors of this report express concern about the inadequate intake of even staple foods. The situation is worse for other food types. Between two thirds and three quarters of children had not consumed pulses in the 24 hour recall, which have for millennia been a crucial source of protein in South Asian diets. Although dairy consumption was also found to be low in Colombo, meat chicken and fish were consumed by larger numbers of children, but perhaps in too small quantities to off-set other food deficits.

Wasting was also found to be a problem among children in Bogota and to be much higher among low-income area children than the middle income group. The Bogota study showed a strong focus on adjusting the food budget to address high unemployment and perceived price increases. Unexpectedly there are 5.1% of children in the middle income area of Bogota found to be severely wasted, with none severely wasted in the low-income area. This underlines the point that child malnutrition indicators do not always cluster, but sometimes respond to very particular household or even individual circumstances (cf. Fenn et al 2004).

Levels of wasting in Kitwe are also high, higher indeed than earlier reported by other nutrition studies in the urban and rural population around the city. Surprisingly, wasting is more prevalent in the better off area than in the poorer neighbourhood, suggesting that households in this area have been obliged to more drastically change diets than in the poorer neighbourhood (even though this is not evident in the reported coping strategies discussed above). This may be related to the loss of salaried employment in the mining sector in recent years, which may have disproportionately affected families in the better off area. There was no evidence from this data that girls have been more severely penalized in terms of food intake than boys. In fact, the highest levels of wasting (12.6%) were found in boys in the better off area.

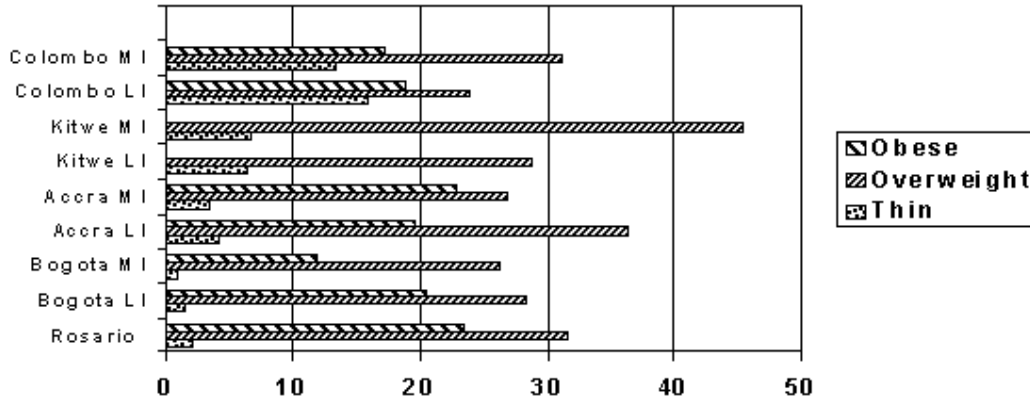
Figure 7 Weight-for-age (WAZ) measures for children < 6 years (underweight)



The results of anthropometric assessments of underweight confirm the earlier patterns, with Colombo and Kitwe exhibiting serious levels of both chronic and acute malnutrition, with Accra less severely affected but still with unacceptable levels of underweight children in both low and middle income areas (Figure 7).

Another important message contained in Figure 6 concerns the “double burden of malnutrition”, the persistence of undernutrition along with a rapid rise in overweight and obesity (and with them diet-related chronic diseases) brought about by what is often termed “the nutrition transition” occurring among low-income urban populations in the developing world (Popkin 1999). Within the same populations – and sometimes within the same families, though this information is not available in the case studies – there is both a problem of wasting and undernutrition as well as of overweight and obesity. The group of children from the poorer neighbourhood in Bogota is a prime example. Overweight and obesity are not just about food intake, but also are consequences of lifestyle changes, especially reduction or disappearance of physical exercise. Yet clearly consumption patterns are hugely influential. As was reported earlier, many children’s diets have low levels of vegetables and fruits and high levels of snacks, sweets and fats.

The problem of the double burden of malnutrition is very clearly evident in the results of the body-mass index (BMI) assessment of women between 15 and 49 (Figure 8). Although thinness is a significant problem in Colombo with about 15% of fertile women in this condition, it is below 10% of the fertile female population in the other cities. Overweight and obesity are pervasive on the other hand in all cities. In Rosario, almost a third of women are overweight and almost a quarter are obese. Once again, food consumption plays an important part in this situation, and in Rosario for example, 55% of women consumed four or more portions of sugar in the preceding 24 hours and 23% consumed 3 or more portions of fat, at the same time as consuming very limited amounts of green leafy vegetables or carotene-rich vegetables and fruits. Yet when these consumption data are disaggregated by BMI, there appears to be no major differences between the levels of consumption of women of normal BMI and those of overweight or obese women taken as a group. Fifty five percent of the latter group had consumed four or more portions of sugar compared to 54% of those of normal weight. Of course, these 24 hour recall data do not provide information on the size of portions, which could differentiate these groups.

Figure 8 BMI of women, 15-49 years (% of sample)

In regard to the double burden of malnutrition evident in these findings, there seems to be an urgent need for nutrition education, both to advise on healthy eating patterns, but also to help caregivers make the healthiest choices about economies in the food budget. The authors of the Colombo study for example note how food budgets in this urban population continue to include high cost dishes made of animal foods, whilst ignoring nutritious and much lower-priced legumes and vegetables and even limiting consumption of cereals. These patterns are evident also in the other cities.

HAVE RECENT GLOBAL FOOD PRICE AND FINANCIAL CRISES WORSENERD THE NUTRITIONAL STATUS OF THE TARGET POPULATIONS?

Mention has already been made of earlier anthropometric studies of children in the Copperbelt area of Zambia, where Kitwe is located, showing in general a deteriorating nutritional situation for under fives compared with earlier surveys. The two most recent earlier nutritional assessments found stunting among rural and urban under 5 year olds going from 46 to 44.2% between 2001 and 2007. The 2009 urban survey shows a rise in stunting to 53.7% (Table 9). Wasting declined from 7.5% to 2.5% over the same period, but then rose to 6.6% of the under-five urban population in 2009. Severe wasting declined from 2.7 to 0.6%, but then rose to 3% in 2009.

In Bogota, Colombo and Accra, the findings have also tended to show a worsening of the nutritional status of young children, though the evidence is not always clear cut (Table 9). It is important to note that other data may have limited comparability because it does not disaggregate in similar ways as in this study. In Bogota for example, whereas a nutritional survey carried out in 2005 found 17.2% of the sample were stunted, that figure more than doubles to 42.7% in the current survey. Since stunting is an indicator of chronic malnutrition, this suggests a worsening of diets for young children since before these crises. On the other hand, wasting, a sign of acute lack of adequate nutrition was found in 2005 in 1.3% of children, but in none in 2009. This suggests that the recent financial crisis has not been the source of major food security challenges in Bogota.

Colombo is even clearer on the greater numbers of children suffering both stunting and acute wasting. The figures presented in Table 9 relate to the slum population, but a similar if smaller increase took place in the middle income group, as Figures 3 and 4 show. The earlier survey included residential settlements of the better off members of the population as well as the non-urban populations of Colombo district, which may have biased the sample.

In Accra, the results in 2009 show larger numbers with malnutrition compared to studies in both 2008 and 2006 for stunting, but there are mixed results for wasting, with worsening of numbers with severe wasting, but smaller numbers with moderate wasting.

Table 9 Current versus previous anthropometric assessments of under-five year olds

City	Location	Year	Measure	Result
Bogota	Urban low income	2005	HAZ	> -2 SD = 17.2
	Urban low income	2009	HAZ	> -2 SD = 42.7
	Urban low income	2005	WHZ	> -2 SD = 1.3
	Urban low income	2009	WHZ	> -2 SD = 0
Colombo	Colombo District*	2006/7	HAZ	> -2 SD = 8.4
	Urban low income	2009	HAZ	> -2 SD = 32
	Colombo District	2006/7	WHZ	> -2 SD = 13.2
	Urban low income	2009	WHZ	> -2 SD = 29.2
Accra	Greater Accra	2006	HAZ	> -2 SD = 10
	National	2008	HAZ	> -2 SD = 23
	Urban low income	2009	HAZ	> -2 SD = 32
	National	2006	WHZ	> -2 SD = 5
	National	2008	WHZ	> -2 SD = 8
	Urban low income	2009	WHZ	> -2 SD = 3.7
Kitwe	Copperbelt (urban+rural)	2001-02	HAZ	> -2 SD = 46
	Copperbelt (urban+rural)	2007	HAZ	> -2 SD = 44.2
	Urban low income	2009	HAZ	> -2 SD = 53.7
	Copperbelt (urban+rural)	2001-02	WHZ	> -2 SD = 2.7
	Copperbelt (urban+rural)	2007	WHZ	> -2 SD = 0.6
	Urban low income	2009	WHZ	> -2 SD = 4.4
	Urban middle income	2009	WHZ	> -2 SD = 9.6

* Includes non-urban parts of the District of Colombo

HAZ = Height for age (stunting or chronic malnutrition);

WHZ = Weight for height (wasting or acute malnutrition)

CONCLUSIONS

The findings reported here on urban food (in)security in relation to the recent financial and earlier food price crisis contribute to a growing literature which seeks to highlight the challenges facing poor and even middle income households in developing world cities, which have often been under-recognized by policy-makers and the international development community.

Firstly, urban food security is about livelihoods, because most food in cities is purchased (Cohan and Garrett 2009). We saw in this study that purchase was the main source of food for between 87% and 100% of the different city populations surveyed. This means that urban food security is more about access than availability, and this point is emphasized by many writers (e.g. Maxwell et al 2000; Garrett and Ruel 2000; WFP 2004; Cudjoe et al 2008) as a recent literature review undertaken by IDRC has revealed (Abraham 2009). Although part of the access issue is to do with urban food distribution and markets which are often inefficient or chaotic and can certainly exacerbate problems of food access (Argenti, 2000), it is especially about employment and income and more broadly, about human capital (Baker 2008; Cohan and Garrett 2009). As Cudjo et al (2008) and others point out, food price increases hit the ultra-poor and particularly the urban poor the hardest, because so much of their income has to be used for food purchase.

In this study, in all the populations surveyed, a third or more of households spent over half their income on food. In the low income areas of Colombo and Kitwe this rises to two thirds with as much as a third reporting spending almost all their income in this way.

Yet employment was reported to be very problematic in the cities of this study. Whilst formal, salaried employment is important, especially in the better off areas of Accra, Kitwe and Colombo, a point also made by Cohan and Garrett (2009), the dominant employment was found to be unstable, insecure casual labouring and different kinds of self-employment, most often in the informal sector. Baker (2008) and Cohan and Garrett (2009) among many authors emphasize the importance of education as a way out of low paid, unstable employment. But the evidence of this study is that many households are not able to invest in education and this was clearly seen in the Accra case study. This situation is not specific to the recent crisis, but is rather a longer term barrier to development. Although taking children out of school does not emerge as a widely practiced way of coping with food price increases and/or lack of employment, we must assume that the perceived increases in food costs and unstable employment are going to make it less likely that existing patterns of limited participation in formal education are going to change.

The concern of this study with the way the recent crises are impacting on mother and child health is shared by many researchers. Garrett and Ruel (2000) and Ruel and Garrett (2004) mention the problems that can occur with care-giving when mothers are part of the urban workforce, however unstable their employment. Many authors (Hardoy et al 2001; The World Food Program 2004; Baker 2008, among many) mention the problem of low-income living conditions in cities where the lack of sanitation and exposure to environmental burdens contribute to health risks, especially of children. The IDRC literature review (Abraham 2009) identifies studies concerned with the impact of the crisis on mother and child food intake and nutritional health. FAO published two studies (2004; 2008) of which the former is looking specifically at urban food and nutrition security and the second, a report on "State of Food Insecurity in the World", looks at hunger and malnutrition in both rural and urban areas. The earlier, pre-crisis publication highlighted not only the economic drivers of change in food systems and diets in urban areas, but also social changes, especially increased consumption of grains, meats, dairy, oil and processed products, more sedentary lifestyles, greater numbers of women in the workforce, increased informality of employment and growing unemployment. The 2008 report warns about growing hunger as a consequence of higher food prices, leading to reduced and changed diets and the particular vulnerability of the landless and the urban poor because of their need to purchase food.

The case studies summarized in this report corroborate many of these identified trends. They show that in the current economic circumstances facing urban populations in the case cities, many households try to cope with the situation by adopting food consumption habits which contribute to malnutrition among the under-five age group. Although as we have seen, food is one of the main items of expenditure for almost all households in the survey, this is not the main reason why it is the principle instrument for coping with reduced income and increased prices. In the urban context, households also have other high priority expenditures, especially rent for the very large numbers living in rented accommodation and services, primarily power and water. Whereas with these payments there is little or no flexibility, the food budget is infinitely divisible and adjustable.

Yet the 24 hour recall data suggests that often the choices that are made about what to eat with a reduced food budget are not informed by adequate nutritional knowledge. Consumption of green leafy vegetables, of beta-carotene rich vegetables and fruits, and of protein-rich legumes is very restricted. Even in a city like Colombo, where the tradition of a nutritionally balanced combination of rice and pulses has existed for thousands of years, there is now very little consumption of pulses, but continued purchasing of expensive animal source foods. Given the high levels of malnutrition among under-fives in Colombo, one has to suspect that children are eating very small quantities of these foods. Indeed, in South Asian practice men do often eat first and best, with women and children eating later and nutritionally less well.

The alarming levels of overweight and obesity in most cities also strengthens the view that people lack knowledge of how and what to eat under the new circumstances of a sedentary urban lifestyle. The “double burden of malnutrition” weighing down on the families in this study is very clear. The stunting resulting from a chronically inadequate diet which typically characterizes poor rural communities in many developing countries is still very much part of the urban setting, as is the wasting resulting from shorter term crises and the need to significantly adjust food intake. On the other hand, continued consumption of large amounts of calories which in the rural context would be expended in physical work, plus the increased consumption of high fat and high sugar products which are widely available and aggressively marketed in urban areas results in overweight and obesity in women, but also in children. A radical rethink is needed of how to do nutrition education on a large scale and with the same level of outreach and zealotry as demonstrated by fast-food chains and makers of snack products. This is also strongly advocated by FAO in its 2004 publication. Of course, this is not only an educational issue. Nutritional education needs to be part of a broader set of policies addressing food systems in cities, so that fresh and nutritious food is available in low income settlements and employment and income entitlement policies so that people can access these foods.

Has the recent financial crisis impacted further on these trends? Certainly in all of the case cities, those interviewed indicated that they had made adjustments in both the quantity and quality of food consumed because of perceived increases in food prices and reduction of income. Interviewees were asked about changes over the period 2008-2009, when prices of some food items either stabilized or actually went down. But respondents appear to have been comparing over a longer time period. Compared to five years earlier, for example, most prices are considerably higher, so that with other direct effects of the financial crisis, such as reduced remittances or reduced access to employment, households have been forced to adopt different kinds of coping strategies. Those designed to reduce expenditures were more common than those designed to increase income and among those reducing expenditures, adjusting both the quantity and the quality of food consumed, including as we have seen, reducing the number of meals per day, was by far the commonest.

The anthropometric data show that in some populations the combined effect of food price rises and reduced income has had an effect on child nutrition, though there is a need to be cautious in making comparisons with earlier published assessments, since the populations sampled are different, sometimes, as in Colombo. In Kitwe, Colombo and Bogota there seems to be a worsening of some nutritional indicators.

To what extent has policy and institutional interventions or actions helped to mitigate the effects of the financial crisis? One is tempted to cite Rosario as a case where very active local or central government sponsored social protection networks – albeit in response to an earlier domestic economic crisis rather than the global crises of 2007-2009 – has probably contributed to the low current levels of malnutrition, even if other factors, such as the food culture, must also have had a contribution.

In general, expert panels consulted about measures taken to address the crisis have been critical of their governments' actions. In some cases, such as Kitwe, there has been commentary about the absence of specific public sector responses, with the authorities appearing to hope instead that earlier policy initiatives would be sufficient. In other cases, such as Accra and Colombo where several policy actions have been taken, these have sometimes been seen as counterproductive – removal of food tariff barriers leading to increased poverty among domestic producers – or unfair, as in the case of subsidies and tax reductions on transport fuel, which have disproportionately benefited the wealthy whilst reducing government income for use in other types of mitigation projects.

The issue of targeting of social protection programs in urban areas is highlighted as a concern in several publications identified in the literature review (IFPRI 2002; Ruel and Garrett 2004), because of the socio-economic heterogeneity of settlements and the instability of residence among low income urban households. These problems were also cited by the case study authors in Colombo and in Rosario, weakening the effectiveness of the interventions.

Several writers emphasize the importance of having social protection programs in place before crises hit (Baker 2008). Rosario is a clear example where this was the case and where these programs do seem to have cushioned the effect of the crises. In Bogota, a national policy on food security and nutrition was introduced in the early stages of the food price crisis in 2007 and helped to integrate the already existing ten year Food and Nutrition Plan into the local political agenda, leading to actions and programs.

Most writers on urban food security in the context of the food price crisis emphasize the importance of direct income transfers rather than market interventions or controls as the most effective means to improve the circumstances of low-income urban households. This would include Conditional Cash Transfers (CCTs), workfare programs, fee waivers, and targeted cash or in-kind transfer schemes (Baker 2008; Cohan and Garrett 2009). Some such schemes were introduced or existed in Rosario, Bogota and Colombo. In Colombo it was criticised as too small to really make a difference, and the anthropometry results seem to confirm this.

Direct food transfers can also be considered as part of this type of intervention, and these were present in the Latin American cities. In their study of food security in Accra in the 1990s, Maxwell et al (2000) emphasize the importance of food transfers between households. In the current study, only 10% of households mentioned this as a secondary source of food. Because the survey in other cities did not collect data on secondary sources of food, it is not possible to gauge the importance of these types of transfers. They were not identified as of major importance as a coping strategy.

Another contribution to urban food security, which was only slightly captured in this survey, are the transfers between rural and urban areas, which are part of what is often referred to as rural-urban linkages (Satterthwaite and Tacoli 2002; Frayne 2005; Crush et al 2006). Frayne's work in Namibia underlines the vital role played by food transfers between rural and urban areas for urban food security. Examples also exist in Latin America where civil society programs (in Quito, Ecuador) or local government initiatives (in Belo Horizonte, Brazil) facilitate low cost food transfers between rural food producers and urban consumers (Rocha 2001; Kirwan 2008). The supplementary study in Accra in the context of the current study revealed that those households in the densely populated areas of the city who did benefit from own produced food, brought it from plots they cultivated in the peri-urban or rural hinterland of Accra.

This raises a final point. Despite its potential contribution to household food and income needs (Yeudall et al 2007; Baker 2008; Cohen and Garrett 2009), urban food production did not

emerge as an important source of food or a coping strategy in these case studies. Partly this was due to over simplified questioning on food and income sources, focusing only on primary sources. When supplementary data collection was undertaken, significant numbers of households in Rosario and Accra were found to be involved. Because of problems of space, livestock raising was more common than crop production in both these locations. Own food production was most important in Kitwe, where local production of leafy vegetable was a key source of micro-nutrients for families. In cities such as Rosario, it was not considered as potent a coping strategy as the different kinds of government social protection programs, which provided immediate results rather than after waiting a whole season. However, the limited evidence of the role of own food production as a coping strategy also seems to reflect a missing opportunity. In Bogota and other locations, though local centres of technical expertise exist, they are not succeeding so far in disseminating knowledge about novel ways of food growing in constrained spaces, such as through use of containers and through exploitation of vertical farming concepts. There is clearly a need for a much more aggressive capacity building campaign to bring information about simple technologies that can be used under these conditions.

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ANNEX 1 STUDY OBJECTIVE AND DESIGN

Objective of the study

The purpose of the study is to generate data that can be used to analyze the consequences of rising food prices on malnutrition levels in cities and the policy/institutional responses that have been put in place by cities or national governments, meanwhile providing local actors valuable information for local use in the design of adequate policies and programmes to counteract the effects of the financial and food crisis.

Design of the study

1.The survey

The effects of the food crisis on malnourishment levels of urban poor household children will be assessed by taking anthropometric measurements of weight and/height of children in the age group of 0-5 years and women of 15-49 years of age in a sample of 600 households (300 households in a slum / low income neighbourhood and 300 households in a middle income neighbourhood).

The survey will be realized by a team consisting of the senior researcher (responsible for the assignment) and 4-6 advanced students or other persons with ample experience in nutrition data collection in low and middle income areas.

Systematic sampling

The senior researcher will select the two city areas in consultation with RUAF Foundation and realise the sampling of the clusters and households to be included in the study sample. In this process the senior researcher will consult the local Population Office or Statistics Office amongst others to get to know their definition of “low income” and “middle income” areas and to jointly work out the most adequate procedure to draw the sample of 300 households in each of the selected city areas⁹.

Within each of the two selected city areas (one slum/poor and the other middle income) one will first randomly select a number of “clusters” from a list of all clusters in the selected city area (e.g. the Census Enumeration Areas in that area) taking into account the population in each cluster (probability of selection proportional to size of each cluster). This will preferably be done in coordination with the local Statistical/Population Office. Subsequently, within each cluster one will randomly select the households that will be included in the sample (to a total of 300 households in each of the two selected areas). The Statistical/Population Office might advice you regarding the most appropriate way of selecting the households with the selected clusters. Mapping, with help of local key informants, of the location of all households in the selected clusters might create a good starting point. Survey teams can then randomly select the 10 households to visit in each cluster.

Within the selected households one will select:

- a. The mother / primary care giver (for interview -see section 3 of the survey design- and to take weight/height measurements if between 15-49 years of age: see section 2 of the survey design)
- b. All children 0 – 6 years old (measurements)

Pre-implementation phase

⁹ This office might eventually also make available the weighing equipment
SYNTHESIS REPORT. Effects of the global financial crisis on the food security of poor urban households

It is important to visit the selected sample areas before data collection begins. The senior researcher accompanied by one or more members of the survey team should meet with community leaders in each selected cluster inform him/her about the survey and its backgrounds, get to know their concerns and recommendations and to get their support for the survey. Security issues might also be a topic in the discussion. Ask the community leaders to encourage the participation of the selected households in the survey.

The senior researcher will train the students/data collectors and guide them during the data gathering in the weeks thereafter. Each interviewing team will carry a scale and measuring board. The scales will be lightweight, bathroom-type scales with a digital screen designed and manufactured under the authority of the United Nations Children's Fund (UNICEF) for use in survey settings. The measuring boards are usually produced by Shorr Productions for use in survey settings. Children younger than 24 months will be measured lying down on the board (recumbent length) and standing height will be measured for older children. It is important that the survey teams practice with the equipment and survey formats in the pre-implementation phase.

Local pretesting of the survey format is strongly recommended and rewording or rephrasing of certain questions may be needed in order to enhance local understanding.

Design of the survey

The survey includes 3 sections (see attached draft format) corresponding with three stages in the visits to each household:

- Section 1: Household composition

Name, gender and age of the members of each household in the sample will be noted down.

- Section 2: Anthropometric measurements (weight and height) of women and children

Weight and height of women of 15-49 years and the precise date of birth, weight and height of children between 0 and 6 years old will be collected. Please note that children that in section 1 were said to be 6 years old will be included in section 2, where the precise date of birth will be requested and weight/height measurements will be taken. However, in the analysis stage you will work only with the data for children 0- 5 years of age (and exclude all children above 5 years).

- Section 3: Information on the households and their strategies to cope with the crisis

Questions are included regarding employment, household assets, food sources, recent changes in diet, skipping meals, daily food intake, reactions to rising food prices. The questions in this section may need adaptation to the local situation especially regarding questions 9 and 10 where food examples in each category may have to be adapted to the local commonly consumed products in each category (grains, tubers, green leafy vegetables, fruits, meat, legumes, and dairy products etcetera.

Additional questions of strong local importance might be added.

Data processing and analysis

The senior researcher will check and clean the collected data which will be subsequently be uploaded in SPSS. The senior researcher will analyze the data, prepare the tables, compare with the baseline data (see below) and write the draft and final report.

Evaluation of nutritional status is based on the rationale that in a well-nourished population, there is a statistically predictable distribution of children of a given age with respect to height and weight. In any large population, there is variation in height and weight; this variation approximates a normal distribution. Use of a standard reference population as a point of comparison facilitates the examination of differences in the anthropometric status of subgroups in a population and of changes in nutritional status over time. One of the most commonly used reference populations, and is recommended for use in this analysis, is the U.S. National Centre for Health Statistics (NCHS) standard, which is recommended for use by the World Health SYNTHESIS REPORT. Effects of the global financial crisis on the food security of poor urban households

Organisation (WHO). The use of this reference population is based on the finding that young children of all population groups have similar genetic potential for growth. For each of three standard indices of physical growth that describe the nutritional status of children -Height-for-age (stunting); Weight-for-height (wasting) and Weight-for-age (underweight)- standard deviations (Z-scores) from the mean of the reference population will be calculated. Deviations of the indicators below -2 standard deviations (SD) indicate that the children are moderately and severely affected, while deviations below -3 SD indicate that the children are severely affected.

The senior researcher will compare with malnutrition levels in the same cities in the years before the crisis, extrapolated from conventional sources like Census data, Demographic and Health surveys (DHS) or Multiple Key Indicators Cluster Surveys (MICS) as have been implemented in most countries since the nineties¹⁰. In Kenya comparison was made with available data from 2003, 1998 and 1993.

2. Expert opinion/qualitative analysis of policy responses adopted by city and national government to counteract rising hunger levels.

A second part of the study includes the collection of expert opinions and making a qualitative analysis of the policy responses adopted by the city and national governments to counteract rising hunger levels.

This part of the study will be done by realizing a number of individual and focus group interviews with top analysts and decision makers at city level and with social workers, teachers, nurses and doctors, preferably working in the selected neighbourhoods.

The following questions will orient the analysis of the policy responses in each city/country:

1. Are there in place policies designed to mitigate adverse consequences of rising hunger levels? Since when? Are these national and/ or city policies?
2. Which kind of policy responses are in place and what have been their impact, effectiveness and sustainability?
3. Have there been conflicts (labour, violent) that have motivated a policy response with regard to food in your city?
4. What have been the fluctuations in the prices of essential food items in the last two years in this city and what are the political events, market reasons, policies in place that have influenced the fluctuations? What should/could be done to reduce the fluctuation and rising food prices

It is up to the senior researcher to work out more detailed questions and include locally relevant additional questions.

3. Reporting

The senior researcher will prepare a draft and (after having received observations of RUAF Foundation) the final report on the survey and the expert response/qualitative analysis.

Draft contents table of the report:

a. Organisation and methodology of the survey

- Composition of the survey team
- Brief overview on the implementation activities (adaptation and translation of the survey format, sampling, pretesting, training team members, data gathering, data processing, interviews and focus group meetings realized, etcetera) and factors that influenced the (quality of) the results of the study

¹⁰ Contrary to earlier information such data will not be supplied by Habitat to the local researchers but have to be obtained by the senior researcher from local sources. If problems are encountered RUAF will provide assistance.

- Brief characterization of the selected two city areas (location in the city, population, income levels, unemployment, coverage by essential services, etcetera)

b. Presentation of the main results of the survey

- Main outcomes of the 2009 survey
- Comparison with city survey data on earlier years

c. Presentation of the results of the expert response and qualitative analysis

d. Annexes

- Full survey data sets
- References/sources used
- Other

ANNEX 2 SURVEY QUESTIONNAIRE (example of survey used in Colombo)

2009 NUTRITION SURVEY QUESTIONNAIRE

Good morning, afternoon or evening!!, My name is and I am working for the Faculty of Medicine, University of Colombo. We are currently working with RUAF Foundation and IDRC for UN –Habitat to conduct a research into the effects of the global financial crisis on food security of urban households. Your household was selected for this project and we will be grateful if you could kindly allow us a few minutes to ask you some questions concerning members of your household, your food among other things. We will also measure the height of and weight of children (under 6) and women between ages 15-49. Thank you

IDENTIFICATION			
PHM Area and No.. _____		□	
PHM's NAME		□ □	
Municipal District _____		□ □ □	
HOUSEHOLD NUMBER _____		□ □ □	
ADDRESS _____ & _____		□ □	
.....		□ □	
.....		□ □	
NAME OF HOUSEHOLD HEAD _____			
INTERVIEWER VISITS			
DATE (DD/MM/YY)		(FIRST VISIT) _____ (SECOND VISIT) _____	
INTERVIEWER'S NAME		_____	
			TOTAL ELIGIBLE CHILDREN □ □
SUPERVISOR			OFFICE EDITOR
NAME _____		□ □	□ □
DATE _____			□ □
			KEYED BY
			□ □

SECTION 1 HOUSEHOLD SCHEDULE

Now we would like some information about the people who usually live in your household or who are staying with you now.

LINE NO.	USUAL RESIDENTS AND VISITORS	RELATIONSHIP TO HEAD OF HOUSEHOLD	SEX	RESIDENCE		AGE	ELIGIBILITY
				Does (NAME) usually live here?	Did (NAME) stay here last night?		
	Please give names of the persons who usually live in your household, who stayed here last night, starting with the head of the household	What is the relationship of (NAME) to the head of the household?*	Is (NAME) male or female?	YES	NO	How old is (NAME)?	CIRCLE LINE NUMBER OF ALL CHILDREN UNDER AGE 6
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
			M F	YES NO	YES NO	IN YEARS	
01		<input type="text"/>	1 2	1 2	1 2	<input type="text"/>	01
02		<input type="text"/>	1 2	1 2	1 2	<input type="text"/>	02
03		<input type="text"/>	1 2	1 2	1 2	<input type="text"/>	03
04		<input type="text"/>	1 2	1 2	1 2	<input type="text"/>	04
05		<input type="text"/>	1 2	1 2	1 2	<input type="text"/>	05
06		<input type="text"/>	1 2	1 2	1 2	<input type="text"/>	06
07		<input type="text"/>	1 2	1 2	1 2	<input type="text"/>	07
08		<input type="text"/>	1 2	1 2	1 2	<input type="text"/>	08
09		<input type="text"/>	1 2	1 2	1 2	<input type="text"/>	09
10		<input type="text"/>	1 2	1 2	1 2	<input type="text"/>	10

* CODES FOR Q.3
RELATIONSHIP TO HEAD OF
HOUSEHOLD:

01 = HEAD	07 = PARENT-IN-LAW
02 = WIFE/HUSBAND/PARTNER	08 = BROTHER OR SISTER/ IN LAW
03 = SON OR DAUGHTER	09 = CO-WIFE
04 = SON-IN-LAW OR DAUGHTER-IN-LAW	10 = OTHER RELATIVE
05 = GRANDCHILD	11 = ADOPTED/FOSTER/ STEPCHILD
06 = PARENT	12 = NOT RELATED
	98 = DOES NOT KNOW

LINE NO.	EDUCATION	MARITAL STATUS	PLACE OF ORIGIN	ETHNICITY	RELIGION
	What is the highest educational level of (NAME)?	What is (NAME's) current Marital Status?	What town/village does (NAME) come from? 01= Colombo District 02= out of Colombo	Which Ethnic group does (NAME) belong?	What is (NAME's) religious affiliation?
(9)	(10)	(11)	(12)	(13)	(14)
01	<input type="text"/>	<input type="text"/>	----- <input type="text"/>	<input type="text"/>	<input type="text"/>
02	<input type="text"/>	<input type="text"/>	----- <input type="text"/>	<input type="text"/>	<input type="text"/>
03	<input type="text"/>	<input type="text"/>	----- <input type="text"/>	<input type="text"/>	<input type="text"/>
04	<input type="text"/>	<input type="text"/>	----- <input type="text"/>	<input type="text"/>	<input type="text"/>
05	<input type="text"/>	<input type="text"/>	----- <input type="text"/>	<input type="text"/>	<input type="text"/>
06	<input type="text"/>	<input type="text"/>	----- <input type="text"/>	<input type="text"/>	<input type="text"/>
07	<input type="text"/>	<input type="text"/>	----- <input type="text"/>	<input type="text"/>	<input type="text"/>
08	<input type="text"/>	<input type="text"/>	----- <input type="text"/>	<input type="text"/>	<input type="text"/>
09	<input type="text"/>	<input type="text"/>	----- <input type="text"/>	<input type="text"/>	<input type="text"/>

CODE for Q10

1= No Education
 2 = Primary
 3= Middle school
 4= Secondary (O levels)
 5= Vocational/Technical
 6=Post Secondary
 (Agric/Nursing/Teacher)
 7=Tertiary(
 University/Polytechnic)

CODE for Q11

1= Never Married
 (Single)
 2= Married
 4= Separated
 5= Divorced
 6= Widowed

CODE for Q13

01= Sinhala
 02= Tamil
 03= Muslim/Moor/Malay
 04= Burgher

CODE for Q14

1= Catholic
 2= Protestant
 5= Islam
 7= No Religion
 8= Buddhist
 9 = Hindu

SECTION 2 WEIGHTS AND HEIGHT MEASUREMENT OF WOMEN

CHECK COLUMNS (8) (2) AND (7): RECORD LINE NUMBER, NAME AND AGE OF WOMEN 15-49 years

WOMEN 15-49				WEIGHT & HEIGHT MEASUREMENT - WOMEN 15-49			
LINE NO.	NAME	AGE		WEIGHT (kg)	HEIGHT (Cm)		RESULT
FROM COL.(8)	FROM COL.(2)	FROM COL.(7)					1 MEASURED 2 NOT PRESENT 3 REFUSED 6 OTHER
(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
		YEARS					
<input type="text"/>		<input type="text"/>		<input type="text"/>	<input type="text"/>		<input type="text"/>
<input type="text"/>		<input type="text"/>		<input type="text"/>	<input type="text"/>		<input type="text"/>
<input type="text"/>		<input type="text"/>		<input type="text"/>	<input type="text"/>		<input type="text"/>
<input type="text"/>		<input type="text"/>		<input type="text"/>	<input type="text"/>		<input type="text"/>
<input type="text"/>		<input type="text"/>		<input type="text"/>	<input type="text"/>		<input type="text"/>

WEIGHT AND HEIGHT MEASUREMENT OF CHILDREN

Check columns (8) (2) and (7): record line number, name, age of children under age 6

CHILDREN UNDER AGE 6				WGT & HT OF CHILDREN BORN IN 2003 OR LATER			
LINE NO.	NAME	AGE	What is (NAME)=s date of birth? (Check Health card/ birth cert)	WEIGHT (kg)	HEIGHT (cm)	MEASURE LYING DOWN OR STAND.	RESULT
FROM COL (8)	FROM COL.(2)	FROM COL.(7)					1 MEASURED 2 NOT PRESENT 3 REFUSED 6 OTHER
			DAY MONTH YEAR			LY STAND	
<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	1 2	<input type="text"/>
<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	1 2	<input type="text"/>
<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	1 2	<input type="text"/>
<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	1 2	<input type="text"/>

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	1 2	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	1 2	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	1 2	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	1 2	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	1 2	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	1 2	<input type="text"/>

TICK HERE IF CONTINUATION SHEET USE

SECTION 3 HOUSEHOLDS COPING STRATEGY TO THE CRISIS

LINE NO.	EMPLOYMENT/ OCCUPATION		
	Is (NAME) currently working?	HAS (NAME) done any work in the last 12 months?	What is (NAME's) occupation (kind of work he/she mainly does? (describe job)
(23)	(24)	(25)	(26)
01	YES NO 1 2	YES NO 1 2	----- - <input type="text"/>
02	YES NO 1 2	YES NO 1 2	----- - <input type="text"/>
03	YES NO 1 2	YES NO 1 2	----- - <input type="text"/>
04	YES NO 1 2	YES NO 1 2	----- - <input type="text"/>
05	YES NO 1 2	1 2	----- - <input type="text"/>
06	YES NO	YES NO	----- - <input type="text"/>

	1	2	1	2	
07	YES	NO	YES	NO	----- - <input type="checkbox"/> <input type="checkbox"/>
	1	2	1	2	
08	YES	NO	YES	NO	----- <input type="checkbox"/> <input type="checkbox"/>
	1	2	1	2	

LINE NO. (child's name can be added for clarity)	In total how many times yesterday during the day/night did CHILD (NAME) drink (ITEM) (No of times)					
	Plain water	Commercial Produced Infant Formula	Any other milk such as tinned, powdered, or fresh animal milk?	other (30 a) breast milk	Fruit juice	Any other liquids? Tea, coffee, fizzy drinks
(27)	(28)	(29)	(30)	(30 a) breast milk	(31)	(32)
01						
02						
03						
04						
05						
06						
07						
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09						
10						

Now I would like to ask you about the types of foods child (NAME) ate over the last 24 hours.

LINE NO. (child's name can be added for clarity)	In total, how many <u>TIMES</u> yesterday during the day or at night did (NAME) eat (ITEM)?					
	Food made from grains; rice/ rice flour products, wheat/ wheat flour products, local grains? Gram, kadala etc (34)		Pumpkin, carrots, or yellow sweet potatoes?	Any other food made from roots or tubers, e.g. potatoes, yams, mannioc, or other local roots or tubers (innala ect) ?	Any green leafy vegetables ?	Mango , papaya ?
(33)	Cereals	Pulses	(35)	(36)	(37)	(38)
01						
02						
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04						
05						
06						
07						
08						

LINE NO.	In total, how many <u>TIMES</u> yesterday during the day or at night did (NAME) eat (ITEM)?				
	other fruits & vegetables; bananas, apples, green beans, guava, avocados, tomatoes, oranges, pineapples, passion fruit?	Meat, chicken, fish (small, large, dried), liver, or eggs?	Any food made from legumes, e.g. lentils, beans, dambala, soybeans, pulses, or peanuts?	Curd, cheese, ice cream or yoghurt?	Snacks (solid/semi solid) e.g. biscuits ?
(40)	(41)	(42)	(43)	(44)	(45)
01					
02					
03					
04					
05					

06					
07					
08					

HOUSEHOLD INFORMATION (MULTIPLE RESPONSES ALLOWED)

46	How long has your household been living continuously here	Below one year.....1 Between one and two years..... 2 Three years or more..... 3
47	Does your household own this structure (house, flat, shack), do you rent it, or do you live here without paying?	Owns..... 1 Pays rent/lease..... 2 No rent,with consent of Owner.....3 No rent,, squatting.....4
48	Does your household own the land on which the structure (house, flat, shack) sits?	Owns.....1 Pays rent/lease..... 2 No rent,with consent of Owner.....3 No rent,, squatting.....4
49	What is the main source of food you consume?	Purchases..... 1 Own produces.....2 Own stock..... 3 Gifts or Aid.....4 Other (specify).....5
50	Which of the following food types does your household usually eat (staple food) ?	Rice and rice flour based food... .. 1 Wheat and Wheat flour Based food.....2 Other Grains and pulses3 Roots and tubers4
51	Has your diet and food bracket changed in the past year?	Yes..... 1 No.....2 <i>if no, Skip to Q</i> 53
52	If yes what type of change did you notice?	Change in quantity.....1 Change in quality..... 2 Change in quantity and quality.....3 Introduce new food items..... 4
53	Compared to one year ago, are you eating the same number of meals per day?	Same.....1 Less..... 2 More..... 3
54	On average, how many meals do you eat per day?	Once.....1 Twice.....2 Three times..... 3 Four or more.....4
55	Compared to one year ago, are you eating the same type of food?	Yes..... 1 No.....2

56	Did you notice any change in the prices of products in the past one year?	Yes.....1 No.....2 <i>skip to 58</i>
57	(If yes) With increase in food prices, how do you take care of yourself?	Got a second job.....1 Growing own food.....2 Sending children to rural areas.....3 Taking children out of school.....4 Relying on relatives.....5 Have reduced consumption of other goods.....6 Other (specify).....7
58	How many income earners do you have in your household? (Cross check from Q 24)
59	Taking into consideration the number of income earners in your household, what is the total income of your household (Rs/month)?
60	On average, how much of your household income is spent on food?	Almost none.....1 Less than half.....2 About half.....3 More than half.....4 All.....5 None, His income is all saved.....6
61	Do you share food with your neighbours ?	Yes No 1 2
62	If yes, since 2007, has sharing increased?	1 2
63	Has food intake of the women of the household decreased in the past year	1 2
64	Have food items got omitted from the diet or reduced in the past year	1 2
65	The proportion of money spent on transport, health, education	Increased Reduced 1 2
66	The proportion of money spent on food	Increased Reduced 1 2
67	Has any member of this household lost a job in the past year ?	Yes No 1 2
68	Loss of a middle eastern job in the last year	Yes No 1 2

69	Is excessive intake of alcohol a problem in this household?	Yes 1	No 2
70	If yes, does it affect the money available for food	Yes 1	No 2
71	Is money spent on excessive smoking a problem in this household?	Yes 1	No 2
72	If yes, does it affect the money available for food	Yes 1	No 2