



THE STATUS OF POVERTY AND FOOD SECURITY IN EGYPT: ANALYSIS AND POLICY RECOMMENDATIONS

Preliminary Summary Report



MAY 2013

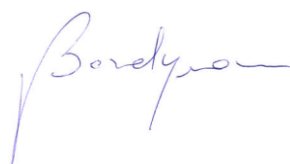
Introduction and Acknowledgements

The 2013 The Status of Poverty and Food Security in Egypt: Analysis and Policy Recommendations preliminary report follows on from a like prior report published in 2011. Drawing on household data collected through the 2011 national Household Income, Expenditure and Consumption Survey (HIECS) by Egypt's Central Agency for Public Mobilization and Statistics (CAPMAS), it aims to provide an overview of the poverty, food security and nutrition situation in Egypt; particularly subsequent to the 2011 revolution. This preliminary report is a precursor to the full report that will include a more in-depth analysis and maps at governorate and district level. It is also linked to a joint country policy note with the International Food Policy Research Institute (IFPRI) on Tackling Egypt's Rising Food Insecurity.

This report is part of a wider concerted effort to create an early warning system linking price inflation to food security that can serve as a management tool for preparedness and timely decision-making. This is even more important in a net food importing country of 84 million people where according to data from the 2011 HIECS, 25.2 percent of the population live below the poverty line and a further 23.7 are "near poor" and thus hovering just above it, where the average Egyptian spends 40.6 percent of their income on food, and thus where vulnerability to price fluctuations is high. Experience from the 2007-08 food and fuel prices crises and subsequent 2010 food price hike, when many were pushed below the poverty line, highlights the potentially sizeable impact of such shocks, particularly if occurring during challenging economic times.

The United Nations World Food Programme (WFP) Egypt Country Office and CAPMAS have worked in partnership to include questions on food security and nutrition to the 2011 HIECS. WFP would like to express its deep appreciation to its main partners in this study; CAPMAS, for sharing the invaluable data on which the study is based and for its cooperation at all stages of the study, and IFPRI for the joint collaboration on analysing aspects of the data. WFP would also like to thank the Ministry of Agriculture for providing the study with supplementary data that enriched the analysis, and to the Ministry of Health for their support on data collection and measurements for anaemia.

This report could not have been prepared without the support of the Embassy of the Kingdom of Netherlands in Cairo, the main funding contributor for the study. Our particular thanks to Dr. Heba El Laithy, Professor of Statistics at Cairo University's Faculty of Economics and Political Science, for her lead role in designing the study methodology, analyzing data and co-writing the report, as well as Dr. Dina Armanious, Associate Professor of Statistics at Cairo University's Faculty of Economics and Political Science for her efforts in statistical analysis and co-writing of the report. Finally, our thanks to the WFP Egypt Country Office's Vulnerability Analysis and Mapping (VAM) and Nutrition units for playing a crucial role in overseeing all technical details and ensuring coordination amongst the various partners.



GianPietro Bordignon

WFP Representative and Country Director, Egypt

Glossary

Chronic food insecurity – A long-term or persistent inability to meet minimum food requirements.

Chronic poverty – The chronically poor are those whose average consumption per capita over time is at or below the poverty line.

Coping strategies – Activities to which people resort to obtain food, income, and/or services when their normal means of livelihood have been disrupted.

Dietary Diversity – A measure of food consumption quality. It is based on number of food groups consumed by an individual or household over a reference period of seven days. Household Dietary Diversity (HDDS) reflects “the economic ability of a household to access a variety of foods” at any given point in time, and an increase in HDDS is associated with socio-economic status and household food security (energy availability).

Food access – A household’s ability to acquire food regularly through one or a combination of home production and stocks, purchases, barter, gifts, borrowing, and food aid.

Food availability – The food that is physically present in the area of concern, through all forms of domestic production, commercial imports, reserves and food aid. This might be aggregated at the regional, national, district, or community level.

Food consumption score (FCS) – A composite score based on the dietary diversity, food frequency, and relative nutritional importance of the various food groups consumed. The higher the FCS, the higher is the dietary diversity and frequency. High food consumption increases the possibility that a household achieves nutrient adequacy.

Food security – The state at which all people, at all times, have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life (World Food Summit, 1996).

Food utilization – (i) A household’s use of the food to which they have access; and (ii) individuals’ ability to absorb and metabolize nutrients (i.e., the efficiency of food conversion by the body).

Livelihoods – The capabilities, assets (both material and social), and activities required for a means of living linked to survival and future well-being.

Multi-dimensional poverty - Assesses the nature and intensity of poverty by identifying multiple deprivations (in health, education and standard of living) and the extent of these at the individual level. It uses micro data from household surveys and can be aggregated into the national measure of poverty assessed in line with the standard UNDP definition looking at indicators of health (nutrition and child mortality), education (child enrollment and years of schooling,) and living standards (measure of assets in a household, access to flooring, water, electricity, a toilet and cooking fuel).

Poverty gap - Highlights the average, over all people, of the gaps between poor people’s living standards and the poverty line

Proxy indicator – An indicator that is used to indirectly measure a variable that is difficult to measure or cannot be measured directly.

Resilience – The ability to recover after being affected by a shock.

Risk to food insecurity – The probability of food insecurity resulting from interactions between a natural or human-induced hazard and vulnerable conditions.

Shock – An event that has a negative impact on food and nutrition security. Shocks can be natural or caused by human action.

Transitory (or transient) food insecurity – A short-term or temporary inability to meet minimum food requirements, indicating a capacity to recover.

Transient poverty - The transient poor are those who are poor from time to time. With better smoothing of their consumption stream they could, in principle, avoid all spells of poverty

Vulnerability to food insecurity – Conditions that increase the susceptibility of a household to the impact on food security in case of a shock. Vulnerability is a function of how a household’s livelihood would be affected by a specific hazard and how it would manage to cope with this impact.

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EXECUTIVE SUMMARY

The joint report by CAPMAS and WFP entitled “The Status of Poverty and Food Security in Egypt: Analysis and Policy Recommendations” based on analysis of CAPMAS’s 2011 Household Income, Expenditure and Consumption Survey (HIECS), **highlights an increase in the prevalence of food insecurity to 17.2 percent (13.7 million people) in 2011 from 14 percent of the population in 2009.**

This increase in food insecurity has been driven largely by rising poverty rates and a succession of crises from 2005 (including the avian influenza epidemic in 2006, the food, fuel and financial crises of 2007–09, further global food prices increases from late 2010 and a challenging macroeconomic context in the wake of the 2011 revolution). **These shocks and rising poverty have adversely affected poorer households’ ability to cope and pushed twice as many people into food insecurity than those moving out of it in 2011.** Similarly, data shows that **between 2009 and 2011, 15.2 percent of the population moved into poverty, twice the number who moved out of poverty (7.7 percent of the population); 12.6 percent of the population remained in long term poverty (chronic poor).**

While the highest poverty rates remain in rural Upper Egypt (51.5 percent of the population against a national average of 25.2 percent), significant pockets of poverty and food insecurity are emerging in urban areas, where poverty increased by nearly 40 percent between 2009 and 2011. In population terms, **Greater Cairo (Cairo, Qualoubia and Giza) has an even larger number of poor people (approximately 3.8 million) than the poorest governorates in Upper Egypt.** This has significant implications for targeting of assistance programmes to include affected urban areas, where efforts should focus on stabilizing real incomes and reducing inequalities, while focus for rural areas should be on structural reform to raise the mean level of income.

Food insecurity in Egypt remains an issue of household access to food driven by purchasing power. Of households surveyed who faced shocks affecting their economic situation in the past two years, **74.7 percent noted rising food prices as the main shock. The consequences of this are negative household coping strategies, particularly a reduction in dietary diversity** (35 percent of Egyptians suffer from poor dietary diversity, rising to 58.3 percent for the poor). This continues to be the most compelling aspect of food insecurity as poorer households reduce consumption of more expensive food items (e.g. meat, poultry, dairy, vegetables and fruit) and demonstrate an overreliance on cheap and calorie-dense foods with limited nutrient content, including subsidized commodities, all of which have a correlation with obesity in adults. In rural areas poor sanitation (among 65 percent of households), lack of access to health services (for 23 percent) and living standards compound Multi-Dimensional Poverty, while in urban areas poor health services (for 27.4 percent) are the main contributor, highlighting a need for investment in basic services. Some 11.9 percent of Egypt’s population is in extreme Multi-Dimensional Poverty.

Nutrition trends are also of concern, the most pronounced being steady high stunting rates amongst children under five. According to the Demographic Health Survey the rate increased from 23 percent in 2005 and to 29 percent in 2008. Although using a different approach, the HIECS similarly estimates a high stunting rate for children aged 6-59 months of 31 percent in 2011 (where 30-39 percent is considered “high” by the WHO). In 9 governorates across all regions, HIECS data found anemia amongst children aged 6-59 months to be an estimated 50.2 percent in 2011. The economic cost of anemia alone in Egypt is associated with a substantive drop in future earnings according to a recent WFP study. **The coexistence of high stunting rates, anemia and obesity noted by the HIECS data highlights the presence of a ‘triple burden of malnutrition’.** Overweight and obesity rates among women aged 20-49 are high but have decreased slightly to 38.4 percent 2011 from 39.2 in

2009 for overweight, and from 38.9 to 34.3 percent for obesity. The 2011 HIECS findings thus highlight the need for more targeted health and nutrition interventions that prioritize malnutrition in the national public health agenda. This ideally includes mainstreaming nutrition-focused interventions within the primary health care system through mobilization of resources and capacity building to regularly detect, monitor and address malnutrition, with a particular focus on vulnerable children below five years of age as well as pregnant and lactating women.

Food subsidies have been one of the key government measures to protect households during crises. While cushioning households from rising food prices, **improved targeting of the existing programme is required to focus on the most vulnerable as 73 percent of non-poor households have access to ration cards for food subsidies while 19 percent of poor households do not.** Moreover, in the current economic climate where government resources are constrained, increasing the effectiveness and efficiency of the subsidy system can facilitate sizeable savings which can be invested in job creation and targeted food security and nutrition interventions. **Any reforms undertaken will necessarily need to balance popular preferences with economic necessities and nutrition requirements. As part of a broader development, food security and nutrition strategy, complementary livelihoods and nutrition interventions can occur alongside a gradual transition to social safety nets building on existing programmes.**

Finally, **while food availability** (namely domestic agricultural output, net food imports and national stocks), **is currently secure, recent macroeconomic challenges and low foreign currency reserves pose a risk to the regular supply of key food commodities, such as wheat.** This is compounded by Egypt's position as a net food-importer, including over half of its wheat requirements. The policy emphasis on increasing domestic wheat production and storage capacity will need to be complemented by other measures to reduce supply chain losses and efforts to secure foreign reserves.

1. PURPOSE OF THE STUDY AND FOOD SECURITY CONCEPTUAL FRAMEWORK

The 2013 *The Status of Poverty and Food Security in Egypt: Analysis and Policy Recommendations* report serves a follow-up to a previous report published in 2011.¹ It analyses data from the 2011 Household Income and Expenditure Survey (HIECS) by Egypt's Central Agency for Public Mobilization and Statistics (CAPMAS), with a view to providing an in-depth picture of the food security situation and the vulnerability of households in Egypt, particularly subsequent to the 2011 revolution. The HIECS included data from 24,000 households collected by means of a household questionnaire. It is supplemented by a panel sample of 8781 households who were visited in both 2008/09 and 2010/11. Panel data facilitates analysis of change that occurred in specific households between the previous HIECS survey (2008/09) and the 2011 survey. Both samples are representative at governorate level.

The specific objectives of this study are to: a) define food-insecure or vulnerable households in Egypt; b) identify how many are food-insecure; c) identify where they live; and d) identify the underlying correlations and repercussions of food insecurity; and e) put forward associated policy recommendations.

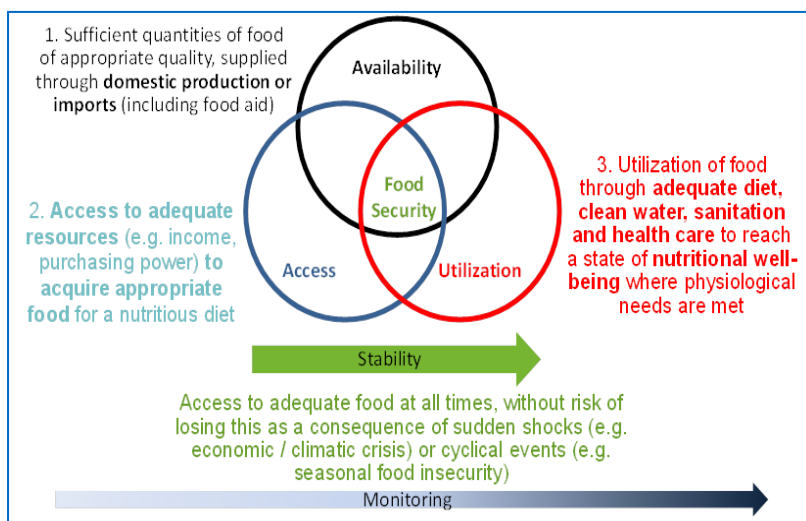
In seeking to address these objectives, the report aims to provide a breadth of information on the political, socio-economic and agro-ecological context. It also looks at food supply, livelihoods, coping strategies, nutrition, health and education to identify the root causes of food insecurity. This is with a view to providing an in-depth profile of food-insecure people, as well as analysis of potential risks they

¹ WFP, *Status of Food Security and Vulnerability in Egypt*, (Cairo, 2011)

may face and their impact. The two key risks considered by this report include that of price increases and changes to the subsidy system, as the two most likely areas that may impact food insecure and vulnerable households, where food security in Egypt remains an issue of economic access

In this study, food security is defined in line with the Food Security Framework agreed on by the Committee on World Food Security and exists “when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life”. It results from adequate food availability and access as well as proper food utilization (Figure 1).²

Figure 1: The pillars of food security



Source: Adapted from FAO, Committee on World Food Security (Rome, 2009)

2. A MACROECONOMIC OVERVIEW

The transition period that has followed the revolution has seen a more challenging macroeconomic environment for Egypt with lower economic growth, weaker revenues and higher unemployment. Economic growth fell from an average of 6.2% between 2005 and 2010, to 1.9% in the 2010/11 fiscal year and 2.2% in 2011/12.³ Revenues from foreign exchange sources have also been adversely affected by domestic turbulence, and while partly offset by a sizeable increase in remittances, the balance of payments' trade deficit widened by 7.6 percent between the first half the fiscal years 2011/12 and 2012/13 to reach US\$ 16.8 billion.⁴ This was partly due to a significant weakening of the Egyptian pound, which lost 10 percent of its value against the US dollar from December 2012, placing significant pressure on Egypt's import bill.

Egypt is a net food importer, including for over half of its wheat needs, and has seen its currency reserves fall to US\$14.4 billion by late April 2013⁵; some three months' worth of imports. Despite positive projections for domestic as well as international wheat production in 2013, and government efforts to prioritize use of reserves for strategic commodities such as wheat⁶, this nevertheless poses a supply risk.

²“Food security” is defined in line with the Food Security Framework agreed to by the Committee on World Food Security in which food security results from adequate food availability and access as well as proper food utilization; Food and Agriculture Organization of the United Nations (FAO), Rome Declaration on World Food Security and World Food Summit Plan of Action, 1996, <http://www.fao.org/DOCREP/003/W3613E/W3613E00.HTM>; FAO, Declaration of the World Summit on Food Security, 2009, <ftp://ftp.fao.org/docrep/fao/Meeting/018/k6050e.pdf>.

³ Ministry of Finance, *Financial Monthly* (Cairo, January 2013); Economist Intelligence Unit, *Country Report: Egypt* (London, January 2013)

⁴ Central Bank of Egypt (March 2013), <http://www.cbe.org.eg/NR/rdonlyres/FC987D68-4925-448E-A768-56338AC7A6D1/1800/firsthalf20122013pressrelease.pdf>

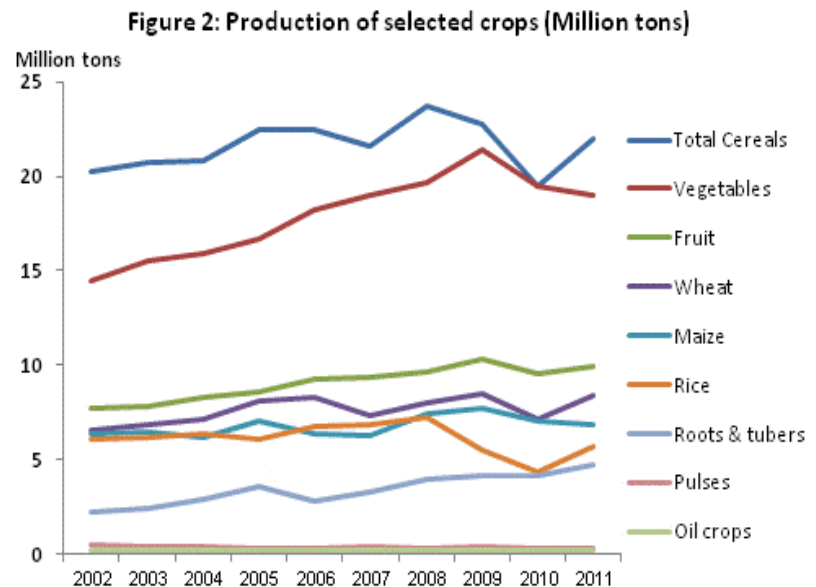
⁵ Central Bank of Egypt, *Statistical Bulletin* (Cairo, March 2013)

⁶ Egyptian Cabinet's Information and Decision Support Centre and WFP, *Egyptian Food Observatory*, no. 11 (Cairo, March 2013).

Inflationary pressures have seen the Consumer Price Index (CPI) increasing 8.8 percent between April 2012 and 2013, driven largely by high and increasing food prices which increased 9.7 percent in the same period.⁷ At a household level, these pressures are compounded by static incomes and unemployment that has risen from 8.9 percent in 2010, to 12.5 and 13 percent in the last quarters of 2011 and 2012 respectively.⁸

3. FOOD AVAILABILITY

As detailed in Section 1, one of the pillars of food security is food availability. This includes domestic agricultural output, net food imports and national stocks. **Production in Egypt has seen a general upward trend over the last ten years;** wheat for example saw an annual increase in production between 2002-11, higher than the average for all cereals, whereas rice saw a slight fall in the period. The 2009-10 harvest was affected by climatic shocks including a severe cold spell in winter and a summer heat wave. For wheat in particular, this was compounded by a fall in global prices that saw



Source: FAO Statistics:

<http://faostat.fao.org/site/567/DesktopDefault.aspx?PageID=567#ancor>

farmers switching to more lucrative clover production for that season. The Ministry of Agriculture and Land Reclamation (MALR) responded by announcing crop prices in advance of the following planning season, which helped boost domestic wheat production.

In the longer term, an increasing population⁹ and limited arable land (which makes up 5 percent of Egypt's land mass), small holder farming¹⁰ combined with land degradation, desertification and climate change¹¹ pose significant challenges for production and the desired policy achievement of self-sufficiency in production. CAPMAS data¹² suggests that while **in the ten years between 2011-11 the total area of land cultivated increased by 0.7 percent annually or 8 percent over the period, that trend changed after the revolution.** Between 2010 and 2011 the total area cultivated decreased by 1 percent, associated with encroachment on agricultural land due to construction particularly in Greater

⁷ CAPMAS, *Consumer Price Index* (Cairo, April 2013) http://capmas.gov.eg/pepo/396_e.pdf

⁸ CAPMAS, (2012), <http://www.capmas.gov.eg/pepo/202012%20الربع الرابع 20%العاملة 20%الغوى 20%بيان.pdf>
<http://capmas.gov.eg/pdf/labour.pdf>

⁹ Egypt's population increased by some 7 percent from an estimated 78.685 million in 2010 to 84.4 million in 2013.. CAPMAS, Egypt in Figures, 2013, (Cairo, 2013)

¹⁰ Khair-El-Din, H and El-Laithy, H., *Agricultural Productivity Growth, Employment and Poverty in Egypt*, Working Paper No. 129, (Egyptian Centre for Economic Studies, February 2008). Data from 2010 suggests the average farm size is 1.6 feddans and more than 50 percent of land holders have less than one feddan (0.42 hectares); CAPMAS, Statistical Yearbook, (Cairo, 2012).

¹¹ Climate Change scenarios for Egypt are negative, with warmer temperatures expected to result in lower production in certain crops (wheat is expected to be down by 15 percent by 2050) and resultant water stress and land loss due to rising sea level, as well as soil salination. UK Meteorological Office, *Climate: Observations, projections and impacts*, (London, 2011)

¹² CAPMAS, Statistical Yearbook. (Cairo, 2012).

Cairo and the wider Nile Delta.¹³ Moreover, in recent years Rural Upper Egypt experienced more severe and unpredictable weather and crop failures, leading farmers to over-utilize already stressed natural resources to compensate for low productivity. Lack of access to price information also means poorly informed farming decisions, often resulting in unexpected and low crop prices. This highlights the need to raise productivity through improved farming practices, reduce sizeable post-harvest losses that exceed 40 percent in the case of some vegetables¹⁴, and improve access to price information.

While policy of promoting self-sufficiency has been pursued, particularly in key cereals such as wheat and maize, Egypt faces sizeable gaps between food production and consumption levels for some commodities. The self-sufficiency ratio¹⁵ of wheat was 42 percent, namely production stood at 42 percent of total supply, while this was 51 percent for maize, 43 percent for pulses and 36 percent for vegetable oils. Surpluses in production were noted for sugar crops, vegetables and fruit, while production of meat, milk and eggs were sufficient for local utilization. Table 1, below shows that with growing per capita consumption rates, **dependency on food imports and food needs increased between 2009 and 2011; particularly for cereal and wheat, where in self-sufficiency declined by 15 and 11 percentage respectively.**¹⁶

Table 1: Self Sufficiency of selected crops and per capita consumption

Crops	Self Sufficiency, %			Per Capita Consumption (kg/year)		
	2009	2010	2011	2009	2010	2011
Cereals	69.06	63.90	53.96	266.8	253.0	244.6
Vegetables	104.70	106.46	106.11	164.3	122.5	135.9
Wheat	53.15	47.86	42.60	135.4	133.9	135.0
Fruit	111.14	111.11	116.70	93.1	89.7	83.8
Maize	62.24	60.70	51.04	66.3	71.7	67.3
Rice	112.49	116.21	98.25	65.2	39.6	35.4
Meat	88.78	84.76	85.96	10.9	9.8	30.0
Vegetable Oils	42.64	43.18	36.67	9.4	8.5	15.7
Pulses	41.72	36.00	43.24	9.8	9.1	7.2
Sugar	100.03	100.01	100.01	9.1	7.7	7.2

Source: calculated from "Study of Food balance sheet", various issues, Ministry of Agriculture and Land Reclamation, Economic Affairs Sector, Central Administration of Agricultural Planning

With Egypt a net food importer, including for over half of its wheat requirements, it is particularly vulnerable to global food price and exchange rate fluctuations. The value of food imports to total merchandise, was moderate in Egypt between 1990 and 2010 and has seen a declining trend, reaching its lowest level in 2005, followed by a subsequent upwards trajectory (Figure 3 below). This highlights that **Egypt's ability to finance its food imports weakened during the global food price crisis** (between 2008 and 2010).

¹³ Attia, K. and Raslan, Y. Cause and Combat of Agriculture Land Desertification in Egypt Related to River Processes, International Journal of Water Resources and Arid Environments 1(5): 342-352, (PSIPW, 2011).

¹⁴ Egypt Agricultural Research Centre, Food losses tables, (2006)

¹⁵ The self-sufficiency ratio expresses the magnitude of production in relation to domestic utilization. It is defined as:

$$SSR = \frac{\text{Production}}{\text{Production} + \text{imports} - \text{exports}} \times 100$$

Food Balance Sheets: A Handbook, FAO, Rome 2001, <http://www.fao.org/docrep/003/x9892e/x9892e00.htm>

¹⁶ Ministry of Agriculture and Land Reclamation, *Food Balance Sheets*, (Cairo, 2013).

As a key staple of the Egyptian diet, wheat is one of the key strategic crops for the country. **Wheat consumption has averaged about 18 million tons (MT) annually over the last 5 years, of which 9-10 MT imported annually.**¹⁷ This makes Egypt the world's largest wheat importer. While, food availability has not in recent years been a food security concern in Egypt, **current macroeconomic challenges (a fall in the value of the Egyptian pound and low foreign currency reserves) pose a risk to the regular supply of key**

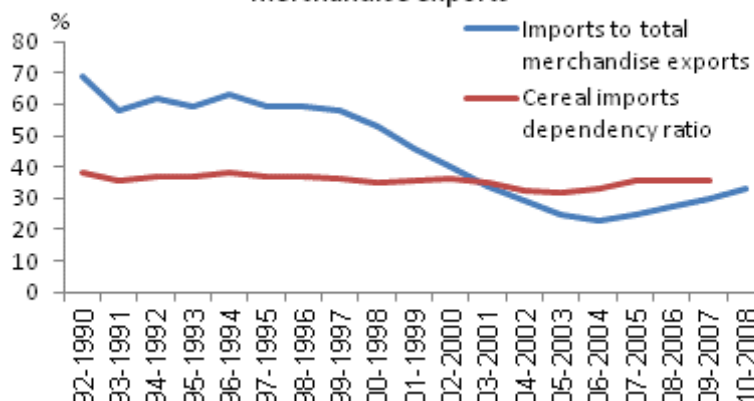
food commodities, such as wheat. While policy emphasis has been on increasing local wheat production, the 9.5 MT required to reduce imports to 8 MT from 11.7 MT in 2012¹⁸ appear difficult to obtain given land availability and production yield. These will need to be complemented by a reduction in wheat flour supply chain losses, particularly for subsidized Baladi bread, to continue to invest in research and inputs for high-yield and climate-resistant wheat varieties, and efforts to secure foreign reserves for imports.

Finally, while the focus of local production has been on cereals and wheat in particular as Egypt's main staple, self-sufficiency rates also highlight the need to also focus on production of pulses. These likewise form a key part of the Egyptian diet and given challenges in dietary diversity (see Section 7), are an important source of protein and key micronutrients.

4. A SERIES OF SHOCKS HAVE TRIGGERED AN INCREASE IN FOOD INSECURITY AT HOUSEHOLD LEVEL AND RESULTED IN NEGATIVE COPING STRATEGIES

A series of shocks from 2006 triggered a decline in food security and contributed to a deteriorating nutrition situation, adversely affecting the most vulnerable households in particular. The response to the avian influenza epidemic in 2006 saw a mass culling of poultry, damaging the livelihoods of the most vulnerable and adversely affecting their dietary diversity. The ensuing high food and fuel price crisis of 2007-08, saw prices remain high rather than return to previous norms and pushed even more Egyptians into poverty (see Section 5). A further rise in food prices in late 2010 has been compounded by static incomes in the wake of the January 2011 revolution that was accompanied by political instability and a subsequent decline in macroeconomic performance, with growth falling from a five year average of 6.2 percent in the period 2005-10 to 2.2 percent in 2011/12.¹⁹ With a sizeable proportion of Egypt's population hovering around the poverty line (see section 6), this highlights low resilience to shocks.

Figure 3: Value of food imports over total merchandise exports



Source: FAO Statistics:

<http://faostat.fao.org/site/567/DesktopDefault.aspx?PageID=567#ancor>

¹⁷ US Department of Agriculture, *Grain: World Markets and Trade*, (Washington D.C., April 2013); FAO, *Crop Prospects and Food Situation*, (Rome, March 2013).

¹⁸ FAO, GIEWS Country Brief: Egypt, (Rome, April 2013)

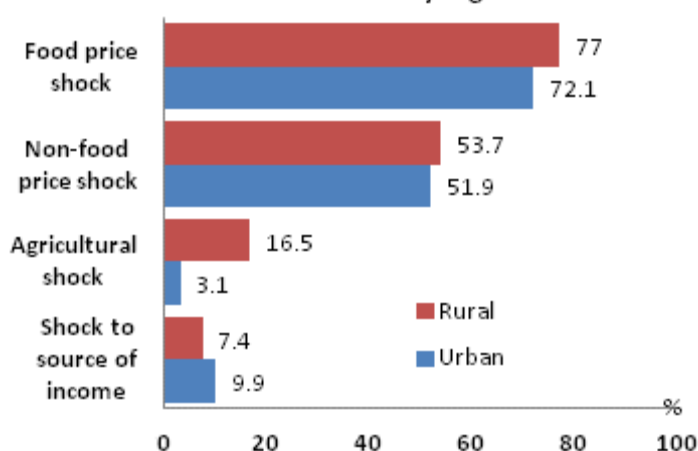
¹⁹ Ministry of Finance (January 2013), Financial Monthly,

<http://www.mof.gov.eg/MOFGallerySource/English/Reports/monthly/2013/Jan2013/a-b.pdf>; Economist Intelligence Unit (January 2013), Country Report: Egypt

Data from the 2011 HIECS showed that **the most significant shock noted by 74.7 percent of households, was a rise in food prices (Figure 4),** rising to 77 percent for households in rural areas against 72 percent in urban areas. This was followed by rising prices in non-food commodities, noted by 53 percent of households, and household events (such as weddings, funerals and births leading to a required increase in expenditure).

With food expenditure accounting for 40.6 percent of average household expenditure, rising to 51 percent for the poorest decile, this indicates significant household vulnerability to food price shocks. Food and non-alcoholic beverage prices in Egypt rose at a faster rate than the overall Consumer Price Index (CPI), which from a base of 100 in January 2010 rose to 105.4 in that year, 116.4 in 2011 and 125 in 2012, against 109.9, 126.5 and 138.1 respectively for food and non-alcoholic beverages.²⁰ The impact of food price increases, particularly during the 2007-08 food price crisis, was partly cushioned by the expansion of the food subsidy scheme with the number of ration card holders increased from 41 million to 63 million people in January 2009.²¹ However, the **combination of static incomes and price increases in the period eroded household purchasing power, and led poorer households in particular to adopt negative coping strategies.**

Figure 4: Percentage of households citing shocks affecting their financial status after the revolution - by region



Source: Authors' calculations based on 2010/2011 Household Income, Expenditure, and Consumption Survey (HIECS)

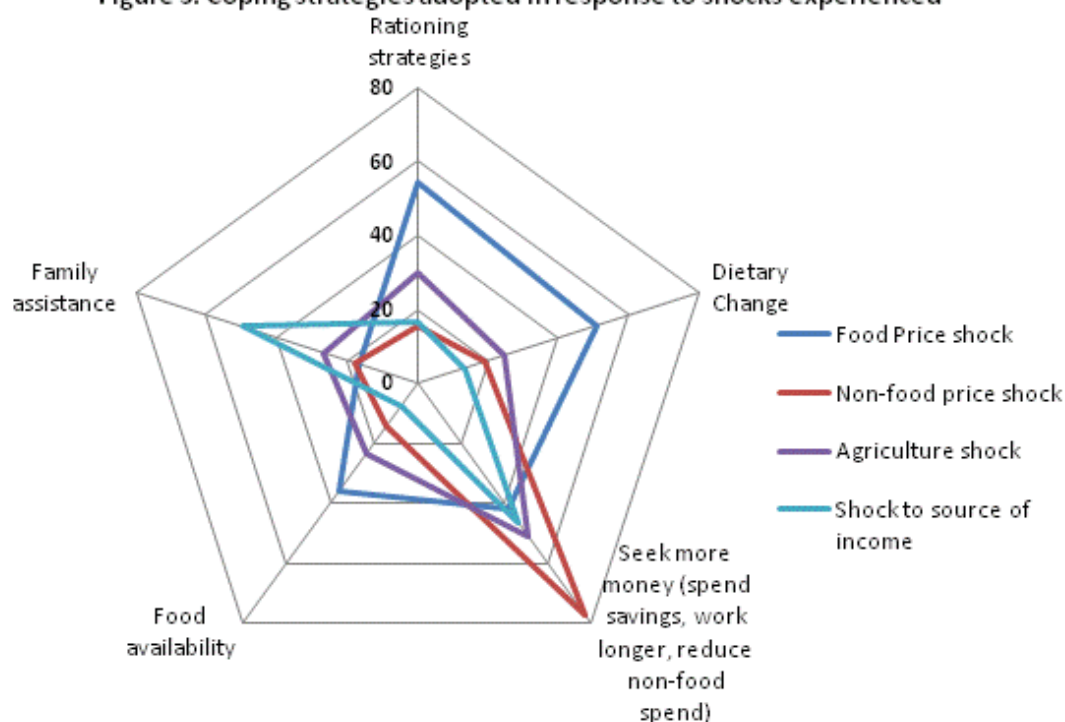
In response to food price increases, households have tended to adopt rationing strategies and dietary change (Figure 6); namely, buying cheaper food commodities and reducing the consumption of different food types, with adverse implications for dietary diversity (see section 7 below), as reliance on cheap calorie-dense foods is heightened. For other shocks, such as increased prices in non-food items, households have tended to focus on short-term means of securing extra funds, such as spending savings, working longer hours or reducing expenditures on non-food items. For poorer households, coping strategies adopted to secure sufficient food (see Figure 5 below) have overwhelmingly focused on relying on less expensive food (by 88 percent of poor households) and reducing daily intake of meat, poultry and fish (72 percent). To a lesser degree they have also included purchasing food on credit (44 percent) and reducing meal portions (41 percent). As food prices remain high and with the focus of coping mechanisms by poorer households on consuming cheaper largely calorie-dense and less nutritious food items, this is linked to rising obesity rates, including amongst poorer households.²²

²⁰ CAPMAS, Egypt in Figures 2013: Price indices, <http://website.informer.com/visit?domain=capmas.gov.eg> (Cairo, 2013)

²¹ Unpublished information received from the Ministry of Supply

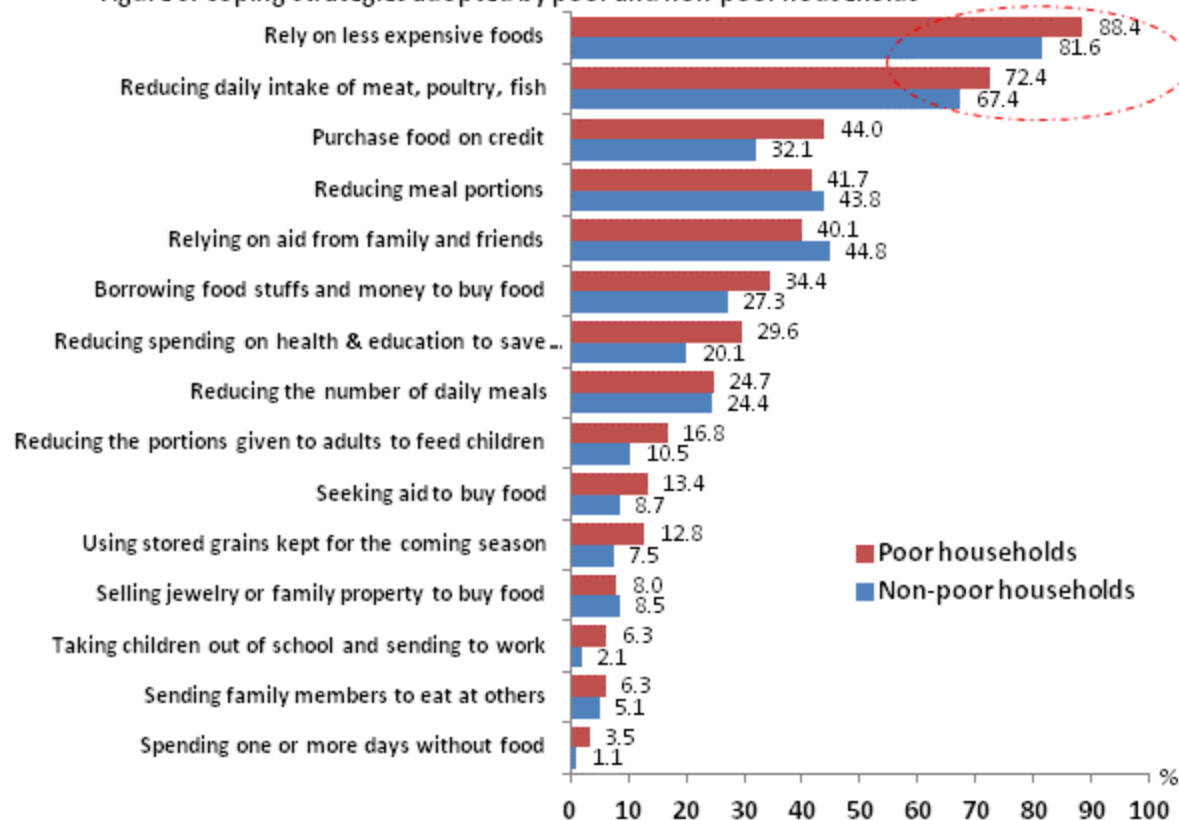
²² World Bank, *Food Price Watch*, Issue 13 (Washington, March 2013)

Figure 5: Coping strategies adopted in response to shocks experienced



Source: Authors' calculations based on 2010/2011 Household Income, Expenditure, and Consumption Survey (HIECS)

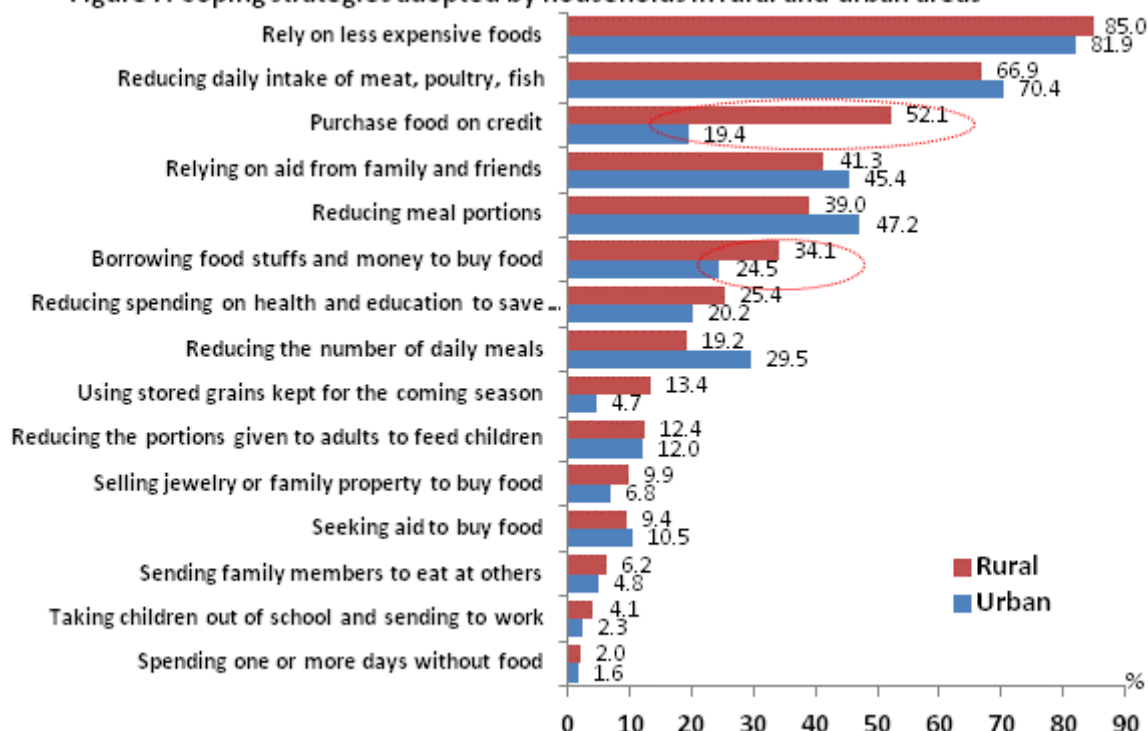
Figure 6: Coping strategies adopted by poor and non-poor households



Source: Authors' calculations based on 2010/2011 HIECS

Differences in coping mechanisms adopted by geography also highlight a greater tendency in rural areas for borrowing money or food than in urban areas, along-side reliance on cheaper food and reduction of animal protein consumption. Conversely in urban areas, the tendency is towards reductionist strategies.

Figure 7: Coping strategies adopted by households in rural and urban areas



Source: Authors' calculations based on 2010/2011 HIECS

5. EGYPT HAS SEEN AN INCREASE IN FOOD INSECURITY BETWEEN 2009 AND 2011, DENOTED BY HOUSEHOLD ACCESS TO FOOD, INCREASINGLY IN URBAN AREAS

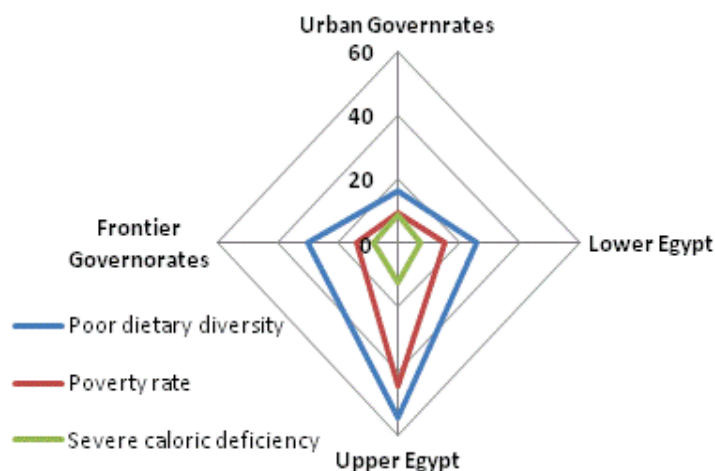
Findings from the 2011 HIECS highlight an increase in the prevalence of combined food insecurity and income poverty in Egypt to 17.2 percent (an estimated 13.7 million people) in 2011, up from 14 percent of the population in 2009. Food insecurity is calculated using indicators for dietary quantity and quality. Average caloric intake and caloric deficiency are used as quantity indicators, while the dietary diversity score, food consumption score, consumption pattern and sources of energy are used as quality indicators.²³ Food insecurity is noted through the coexistence of income poverty and poor food consumption²⁴ and is used as a proxy indicator of access to food. Findings show that food insecurity remains an issue of household access to food driven by purchasing power, with poor household dietary diversity²⁵ as the key aspect of poor access across all regions. Findings also show that Upper Egypt continues to be the most food insecure region, deprived region in all aspects of access to food.

²³ The 2011 HIECS provides data on both expenditure and food security modules, making it possible to assess the link between poverty, food insecurity and malnutrition. Moreover, it highlights the most prominent factors that have been found to be significantly correlated with households' food insecurity. However, this analysis does not provide evidence of causal relationships among these factors, but rather it demonstrates household characteristics that is associated with food insecurity and hence can be used as targeting criteria for interventions.

²⁴ Poor dietary diversity and/or caloric deficiency

²⁵ Dietary diversity takes into account the number of food groups consumed by households and individual over a reference period of seven days (for details see Section 7. FAO, *Guidelines for measuring household and individual dietary diversity*, (Rome, 2007)

Figure 8: Dimensions (%) of poor access to food by governorate



Source: Authors' calculations based on 2010/2011 HIECS

concentrated in Upper Egypt, where 88 percent of the chronically food insecure live, with some 74.3 percent of all households in chronic food insecurity in rural Upper Egypt and additional 13.7 percent in urban Upper Egypt.

However, of note is a rise in transient food insecurity (a short-term or temporary inability to meet minimum food requirements), in pockets of Urban governorates and Lower Egypt, where the majority of households with poor access to food were not food insecure in 2009 (according to the 2009 HIECS) but became food insecure in 2011". **In terms of absolute population numbers, Greater Cairo (Cairo, Qualoubia and Giza) has the largest population with poor access to food; about 3.5 million people,** against 2.4 million in Assuit and 2.1 million in Sohag, which have the next highest food insecurity rates in population terms. Hence, **food insecurity which was previously perceived as a rural issue in Egypt, is becoming a rising concern for urban areas as well.**

Figure 9: Size of Population with Poor Access to Food, 2011

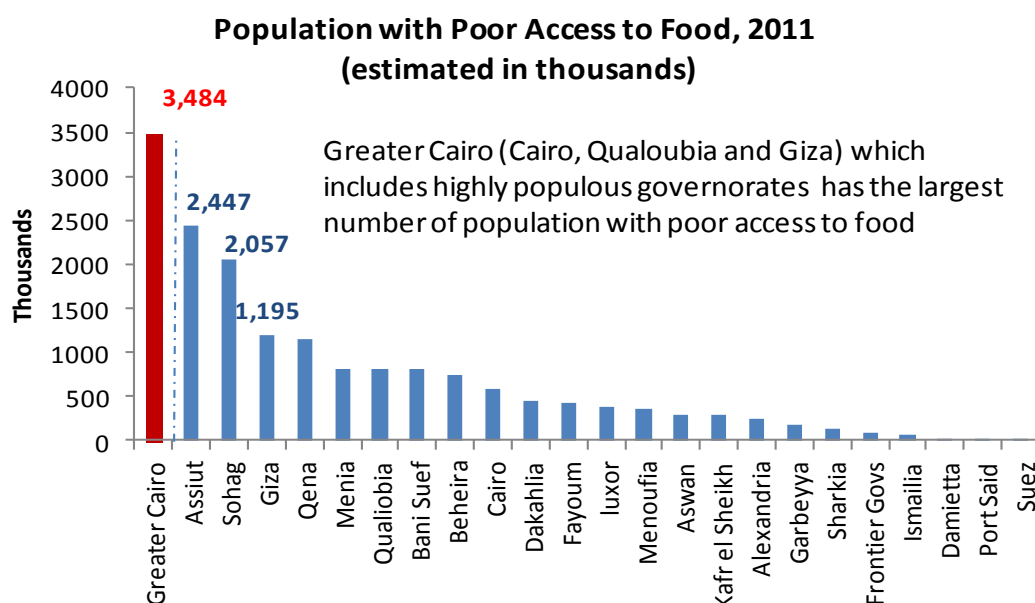
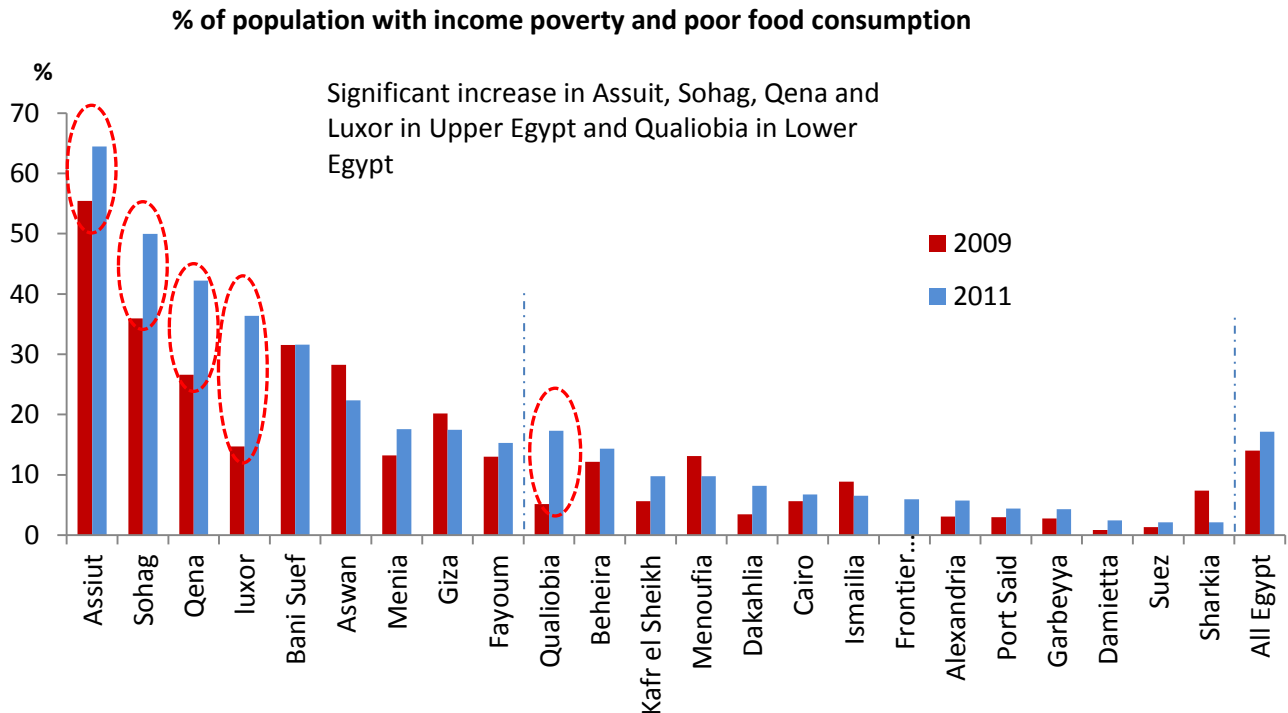


Figure 10: Prevalence of Poor Access to Food



Of note, when analyzing panel data²⁶ which support the HIECS on mobility into and out of food security between 2009-11, is that in overall terms **11.7 percent of the population became both food insecure and income poor in 2011 (transient food insecurity)**. A further 6.5 percent of the population faced chronic food insecurity.

Moreover, a district level analysis of food insecurity confirms that food insecurity is deepest and most prevalent in districts of Upper Egypt (see Annex 1: Maps).

Figure 11: Mobility in poor access to food (% of the population with income poverty and poor food consumption)

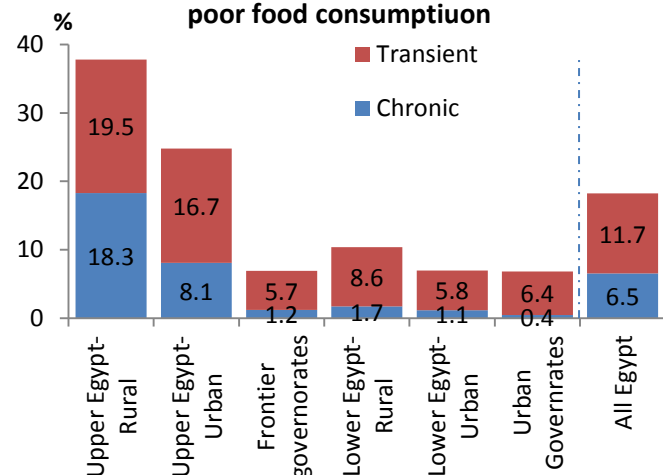
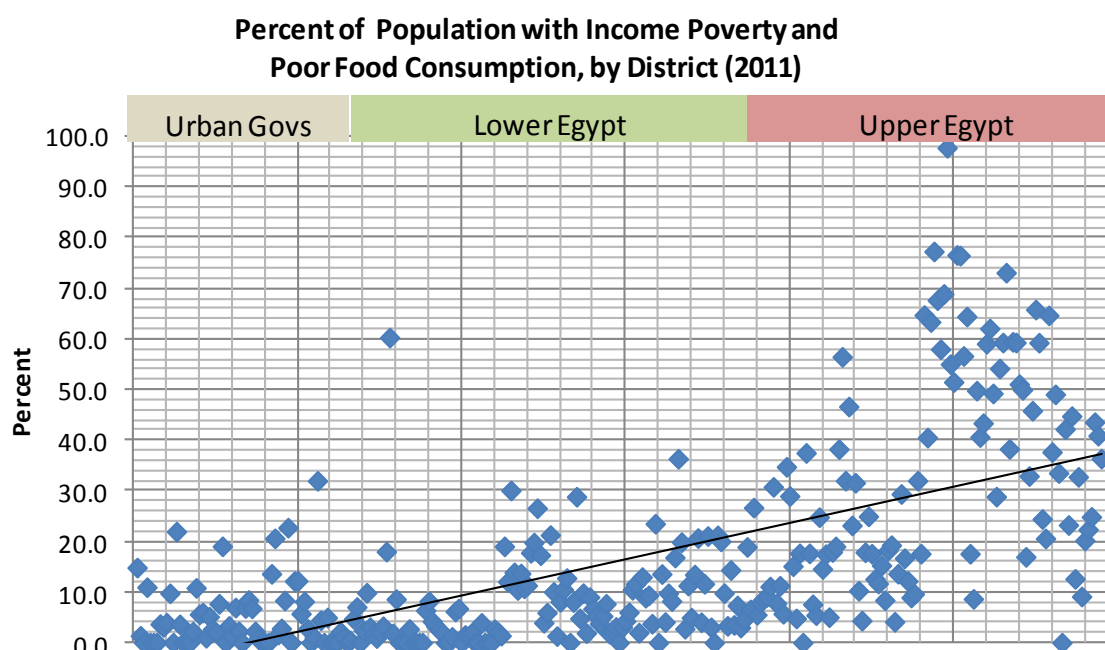


Figure 12 shows that **prevalence rates of food insecurity by district cluster at much higher levels for Upper Egypt**, especially in Assuit and Sohag, relative to lower levels for the majority of districts found in Lower Egypt and to an even lesser degree in Urban governorates.

²⁶ The panel sample included 8781 households who were visited in both 2008/09 and 2010/11. The sample was drawn to be representative at the governorate level.

Figure 12: Prevalence of food insecurity (poor access to food) by district for Upper and Lower Egypt and Urban Governorates



Source: Authors' calculations based on 2010/2011 HIECS

Finally, the profiling of households suffering both from income poverty and food insecurity is of larger household sizes, with uneducated heads of the household who are either unemployed or engaged in the informal sector in casual or seasonal work, and often in agriculture activities. Moreover these households are likely to be multi-dimensional poor (see below).

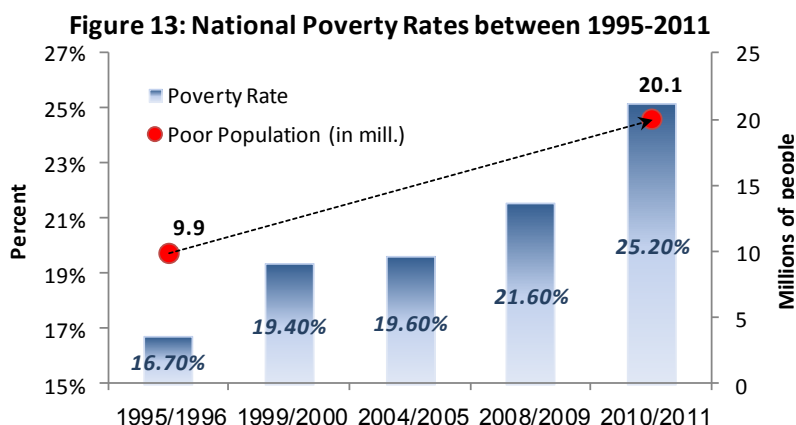
6. HOUSEHOLD ACCESS TO FOOD HAS BEEN ADVERSELY AFFECTED BY RISING POVERTY RATES TRIGGERED BY A SUCCESSION OF CRISES

The national poverty rate (or ratio of people who fall below the poverty line to the total population) **has increased by nearly 50 percent in the last 15 years, from a low of 16.7 percent (or 9.9 million people) in 1996 to 21.6 percent in 2009 and 25.2 percent (21 million) in 2011.** Moreover, in Egypt the depth or severity of poverty (the poverty gap, which highlights the average, over all people, of the gaps between poor people's living standards and the poverty line)²⁷ also increased between 2009 and 2011 (Figure 13), however a **large percentage of the poor are clustered just below the poverty line and a large percentage of the non-poor are clustered just above the poverty line** (the "near poor")²⁸. **The percent of near poor is estimated to have increased from 19.2 percent in 2009 to 23.7 percent in 2011, indicating that 18.9 million people are vulnerable to poverty with the even a slight shock in real incomes,** which can partly explain the rapid rate of increase of people moving into poverty in recent years.

²⁷ Haughton, J. and Khandker, S. R., *Handbook on Poverty and Inequality*, (World Bank, Washington D.C., 2009)

²⁸ Households are classified as near poor if based on their consumption levels, cluster just above the poverty line, sitting between the upper and lower poverty lines.

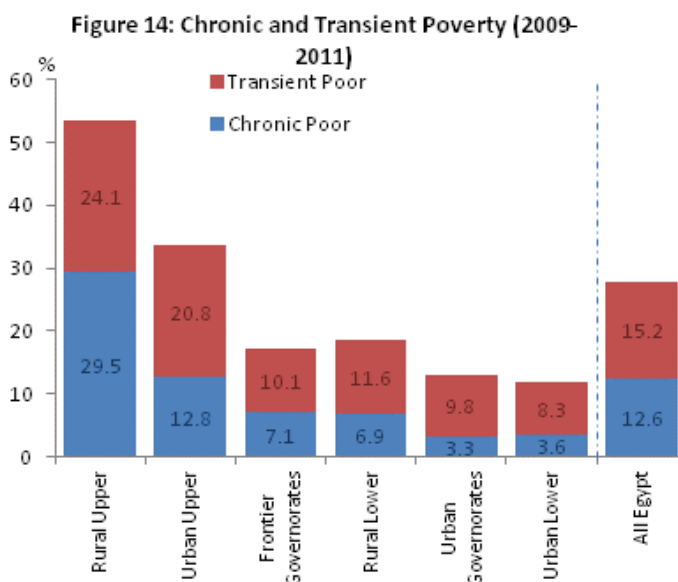
As in other similar country contexts, Egypt adopts basic needs approach to measure monetary poverty. Accordingly, **poverty is defined as insufficient consumption to satisfy food and non-food basic needs, where the cost of basic food and non-food basic needs averaged LE 3088 per person per year in Egypt in 2011** according to the 2011 HIECS. Households are thus classified into poor and non-poor depending on their consumption levels in comparison with the poverty line. If per capita consumption is less than poverty line, a household is classified as poor. Poverty is multifaceted and cannot be measured and resolved only through monetary means.



Source: Authors' calculations based on 2010/2011 HIECS

While the highest poverty rates remained in rural areas, the period 2009-11 saw the fastest rate of increase in poverty in urban areas, where the poverty rate grew by nearly 40 percent affecting 15.3 percent of urban population. Though poverty increased at a slower rate in rural areas (by 11.7 percent), it affected 32.3 percent of the rural population. The severity and depth of poverty thus remains highest in rural areas, more than twice that in urban areas, however, the poverty gap increased at a much higher rate in urban areas (45 percent).

Panel data from the 2011 HIECS²⁹ was used to study the dynamics of income poverty in Egypt and to estimate the mobility in poverty headcount between 2009 and 2011. The results show that **more than half of the poor population is newly poor (or "transient poor") and only fell below the poverty line in 2011; representing 15.2 percent of the total population in Egypt.** That is double those who moved out of poverty in the same period (7.7 percent of the population), and also exceeds those who stayed in long term (chronic) poverty (12.6 percent of the population).³⁰



Source: Authors' calculations based on 2010/2011 HIECS

²⁹ The panel sample includes 8781 households who were visited in both 2008/09 and 2010/11. The sample was drawn to be representative at the governorate level.

³⁰ The definition of poverty based on household consumption in Egypt has allowed the identification of chronic poverty, and due to "smoothing" of consumption by households in the face of income fluctuations, is the most stable measure of household welfare. It is justifiable therefore to assume that if a household is observed to be in poverty at both observation points – 2008/09 and 2010/11 – this household was also likely to have stayed in poverty between these points, and will remain poor for some time.

Chronic poverty is predominant in rural Upper Egypt with 30 percent of its population chronically poor and representing 62.2 percent of all chronic poor in Egypt in 2011. All other regions in 2011 had higher levels of transient than chronic poverty, demonstrating a more sizeable shift of people moving into poverty.

Rural Upper Egypt continues to have the highest poverty rates, and poverty in is mostly structural, low educational attainment levels, low public investment in services such as education and hence low capacity of income generation. As a consequence a large proportion of its population has a permanent income that falls below the poverty line. **Macro-economic growth alone is insufficient to pull this region out of poverty and this explains why in times of high economic growth poverty continued growing in rural upper Egypt, raising the national poverty rate along with it.**

Poverty is now also rising in other regions of the country, especially urban areas where 32.7 percent of the transient poor are located. The findings are consistent with results from earlier studies³¹ that point to the wider prevalence of chronic poverty in rural areas of Egypt while transient poverty is much higher in urban areas. This has direct implications on policies for intervention; while income “smoothing” (i.e. means of protecting or stabilizing income and savings for consumption and standard of living) may be required in urban areas, in rural areas it is essential to raise the mean level of income as well³².

Overall poverty masks differences in welfare among regions and among governorates within the respective regions³³. In 2011, the incidence, depth and severity of poverty varied considerably within each region. The poverty rate is highest in Upper Egypt and specifically rural Upper Egypt (51.5 percent), followed by urban Upper Egypt (29.4 percent) and it’s the least prevalent in Urban Governorates (9.6 percent); the same applies to the poverty gap and the squared poverty gap. Differences in poverty measures across regions are statistically significant and show that in addition to the high prevalence of poverty in rural Upper Egypt –where 52.5 percent of the total poor live- the expenditure patterns of the poor population in this region is far below the poverty line, i.e. it has the highest poverty rate (p0) and the largest poverty gap (p1 and p2) (Figure 14).

Although the prevalence of poverty (poverty rate) is higher in rural areas and highest in rural Upper Egypt, poverty grew the most in urban areas during 2009-2011 (by 39.1 percent in urban governorates, by 41.1 percent in urban Lower Egypt and by 38 percent in urban Upper Egypt) where considerable pockets of poverty exist. In addition, **in terms of absolute number of poor, the highest number is located in Greater Cairo (about 3.8 million), followed by the poorest two governorates in Upper Egypt; Assuit and Sohag where 2.6 million and 2.4 million of the poor are located respectively. Hence, poverty which was previously perceived as a strictly rural phenomenon is currently seen as an urban threat as well,** this is also supported by findings from other studies that point to poverty in urban areas as an underestimated phenomenon in Egypt.³⁴

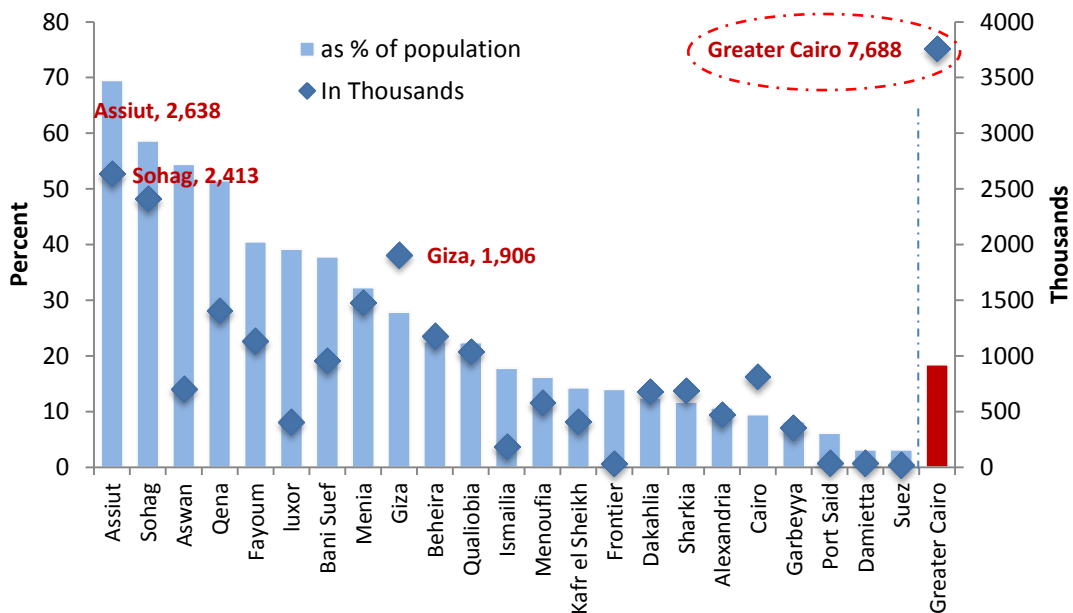
³¹Haddad, L. and Ahmed, A., Avoiding Chronic and Transitory Poverty: Evidence from Egypt, 1997-99 (IFPRI, Washington D.C, 2002)

³² Abena D.Oduro, “Poverty Dynamics”, Centre for Policy Analysis, Ghana, 2002.

³³ Geographically, Egypt is divided into seven regions: Metropolitan; including Cairo, Alexandria, Port Said and Suez governorates , Lower Urban and Lower Rural; which include urban and rural areas of Damietta, Dakahlia, Sharkia, Qualiobia, Kafr el Sheikh, Garbeyya, Menoufia, Beheira, Ismailia governorates, Upper Urban and Upper Rural ; which include urban and rural areas of Giza, Bani Suef, Fayoum, Menia, ,Assiut, Sohag, Qena, Aswan and luxor governorates, and Border Urban and Border Rural ; which include urban and rural areas of Red Sea, New Valley, Matrouh, North Sinai and South Sinai governorates.

³⁴ Sabry, S., Poverty lines in Greater Cairo Underestimating and misrepresenting poverty (International Institute for Environment and Development - IIED, London, 2009)

Figure 15: Income Poverty by Governorate, 2011



The incidence of poverty is also widely variable across governorates (see Annex 1: Maps); the prevalence of income poverty is critically high in Assuit (69.5 percent), Sohag (58.6 percent) and Aswan (54.4 percent) in Upper Egypt, moderate in most governorates of Lower Egypt and negligible in Suez and Damietta (3.2 percent).

The increasing prevalence of income poverty is compounded by the prevalence of poor living conditions and inadequate access to education and health services resulting in extreme multi-dimensional poverty³⁵ amongst 11.9 percent of the population in 2011. Multi-dimensional poverty assesses the nature and intensity of poverty by identifying multiple deprivations and the extent of these at the individual level in health, education and standard of living. It uses micro data from household surveys, and—unlike the Inequality-adjusted Human Development Index—all the indicators needed to construct the measure must come from the same survey. Each person in a given household is classified as poor or non-poor depending on the number of deprivations his or her household experiences. This data are then aggregated into the national measure of poverty assessed in line with the standard UNDP definition looking at indicators of health (nutrition and child mortality), education (child enrollment and years of schooling,) and living standards (measure of assets in a household, access to flooring, water, electricity, a toilet and cooking fuel).³⁶ Upper Egypt also shows the highest prevalence rate (18 percent) compared to all other regions, much higher than Lower Egypt and Urban Governorates (8.7 percent and 6.8 percent respectively).

The estimated multi-dimensional poverty for 2011 indicates that poor “living standards” and inadequate access to health services³⁷ are the key deprivation areas in Egypt, rather than having inadequate access to education. At the national level, deprivation in access to information is the most prevalent gap; affecting 94.3 percent of the population, followed by deprivation of sanitation (44.3

³⁵ MPI in this report cannot be compared with MPI of 2008/09, as some of MPI indicators were not available in HIECS 2008/09 and it utilized proxies of them.

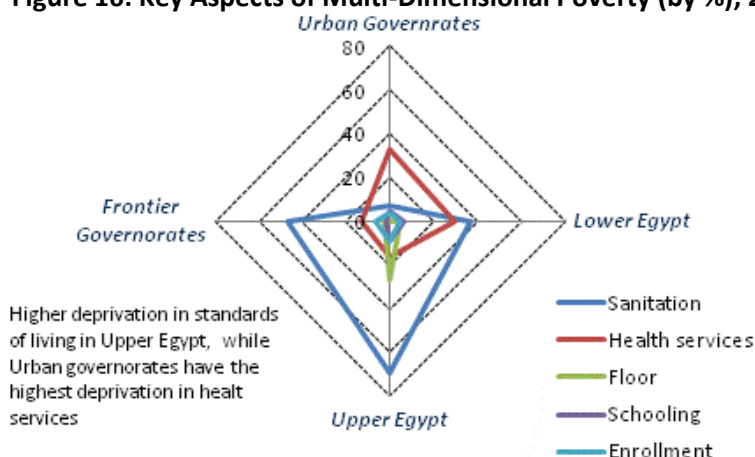
³⁶ Alkire, S. and Santos, M.E., Multidimensional Poverty Index, (Oxford Poverty & Human Development Initiative, Oxford, July 2010)

³⁷ Measured by percentage of people who were sick but not seeking health service facilities

percent), health services (24.9 percent), nutrition (15.6 percent) and hard floors (12.3 percent) while deprivation in schooling of children is 7 percent.

The prevalence of poor living standards is generally higher in rural areas; deprivation of sanitation is as high as 87.1 percent in rural Upper Egypt and 47 percent in rural Lower Egypt, with lack of hard floors (i.e. households without proper flooring) is also highest in rural Upper Egypt (35.8 percent). On the other hand poor access to health services is higher in urban areas, reaching 32.7 percent in Urban Governorates and 30.7 percent in urban areas of Lower Egypt. This has adverse implications for food utilization in particular.

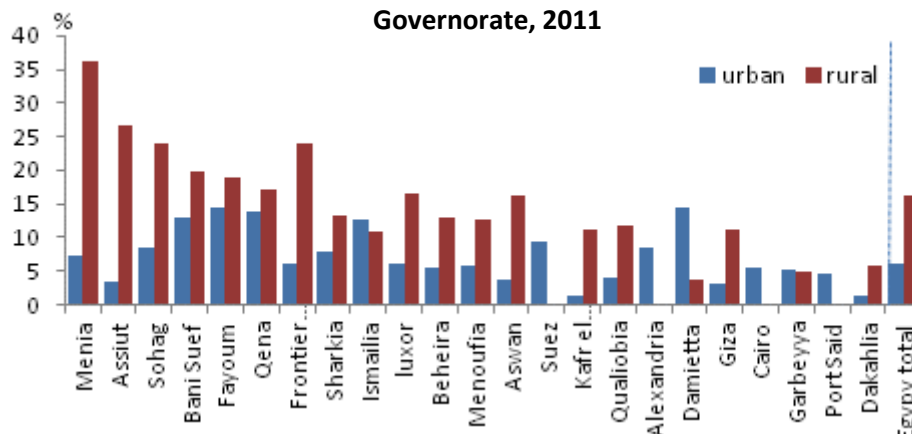
Figure 16: Key Aspects of Multi-Dimensional Poverty (by %), 2011



Source: Authors' calculations based on 2010/2011 HIECS

Governorates that demonstrate the highest income poverty rates are also those with the highest rates of extreme multi-dimensional poverty; mostly Menia, Assuit, Sohag, Bani Suef, Fayoum and Qena in Upper Egypt. This is because poverty in Upper Egypt is mainly structural/chronic poverty that is driven by lack of adequate public infrastructure, private capital accumulation, low investment in human capital and the absence of pro-poor programme based fiscal policy, which collectively lead to a deterioration in living standards³⁸ in Upper Egypt, compared to other regions (see Figure 17).

Figure 17: Prevalence (%) of Multi-Dimensional Poverty by Governorate, 2011



Source: Authors' calculations based on 2010/2011 HIECS

Multi-dimensional poverty likewise threatens households' ability to cope with risks to food security, in terms of income poverty that challenges food access and poor education and poor sanitation that can adversely affect food utilization. The relation between household vulnerability to food insecurity and other socio-economic indicators was tested using principal factor analysis and logistic regression modelling and the results confirm that household access to food in Egypt is mainly driven by income poverty.

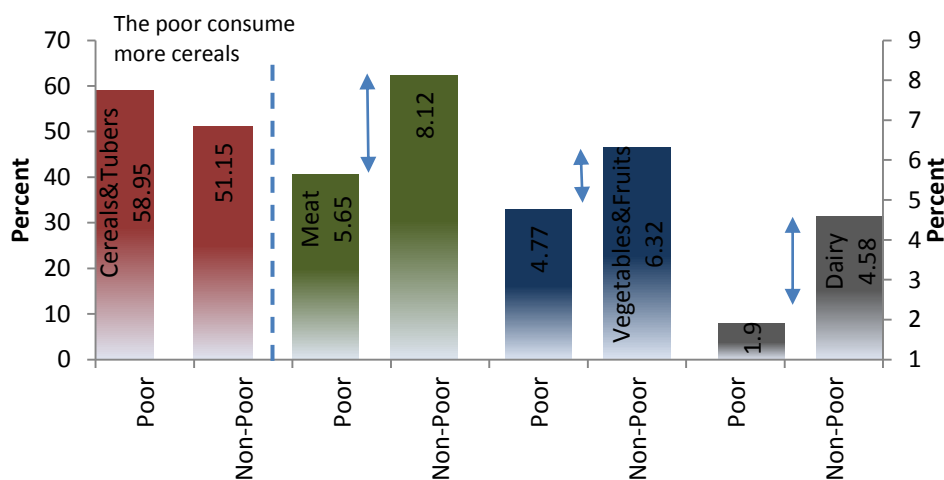
³⁸ Including factors such as work, empowerment, education, food security and consumption

7. DIETARY DIVERSITY AND THE FOOD CONSUMPTION SCORE

The key measurement of access to food in this study is dietary diversity³⁹; 35.1 percent of the total population were found to have poor dietary diversity. Poor dietary diversity⁴⁰ is a key indicator illustrating poor access to food in 2011. The prevalence of poor dietary diversity increased from 33.3 percent in 2009 to 35.1 percent in 2011, driven by increases in poverty rates and the adoption of negative coping mechanisms by vulnerable households, as outlined in section 4. With households in the lowest decile spending 51 percent of their expenditure on food, alone consumption of cheaper food and reduction of certain food items were the main coping strategies adopted that have resulted in a poorer dietary diversity, reflecting an over-reliance on cheaper calorie-dense food with lower nutrient content. Alongside poor nutritional awareness, local dietary habits have meant a poor dietary diversity particularly among poor households in Egypt; 58.3 percent of the income poor have poor dietary diversity, compare to 36 percent of the near-poor and 22.9 percent of the non-poor.

In line with section 9 below, Figure 18 highlights that poor households are more dependent on cheap and subsidized sources of calories (cereals, tubers, fats and sugars) as measured through the main food group sources of energy. These households have a lower share of energy from meat, poultry, vegetables, fruit and dairy products which are rich in essential micro-nutrients, but tend to be more expensive food items. The high share of energy from cereals and tubers correlates with poor dietary diversity.

Figure 18: Sources of Energy, Poor Vs. Non-Poor

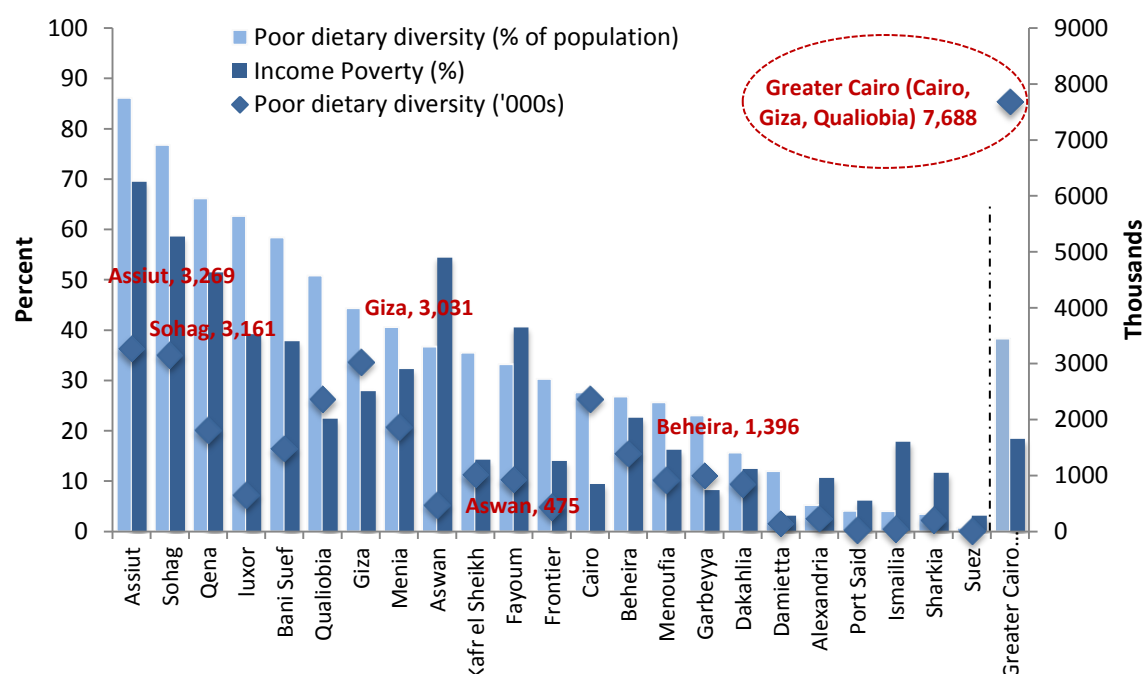


Source: Authors' calculations based on 2010/2011 HIECS

The HIECS data in Figure 19 below also highlights a **strong link between poor dietary diversity and income poverty**, where the pattern of poor dietary diversity prevalence is akin to that of income by geography poverty as was depicted in Figure 8 of section 5 above. Upper Egypt shows the highest rates of poor dietary diversity, the highest being in Assuit (80 percent of the population) and Sohag (77 percent).

³⁹ Based on number of food groups consumed by a household over a reference period of seven days. Household Dietary Diversity (HDDS) reflects "the economic ability of a household to access a variety of foods" at any given point in time, and an increase in HDDS is associated with socio-economic status and household food security (energy availability). Individual dietary diversity scores reflect nutrient adequacy. ; FAO, *Guidelines for measuring household and individual dietary diversity* (Rome, 2011)

⁴⁰ Both quantity and quality of a diet are important dimensions of food security, with dietary diversity reflecting quality in the form of a well-nourished and balanced diet. This study follows the same methodology used by its fore-runner (WFP, *Status of Food Security and Vulnerability in Egypt*, (Cairo, 2011)). It uses the number of food items belonging to different food groups and consumed over the 7 day recall period as a proxy for diet diversification and to arrive at a dietary diversity score (DDS) of poor, moderate, or high. Full methodology details included in the full report accompanying this preliminary report..

Figure 19: Poor dietary diversity against income poverty by governorate

Source: Authors' calculations based on 2010/2011 HIECS

Deficiency in calorie consumption is less prevalent at the national level compared to other indicators of poor access to food. Results from the 2011 HIECS estimate that **about 9.4 percent of the population does not receive the minimum daily calorie requirements of calories**⁴¹. However, of note, is that the estimated deficiency in **calorie consumption is rather shallow, with most of the population with poor calorie consumption clustered just below the threshold of minimum required intake**⁴².

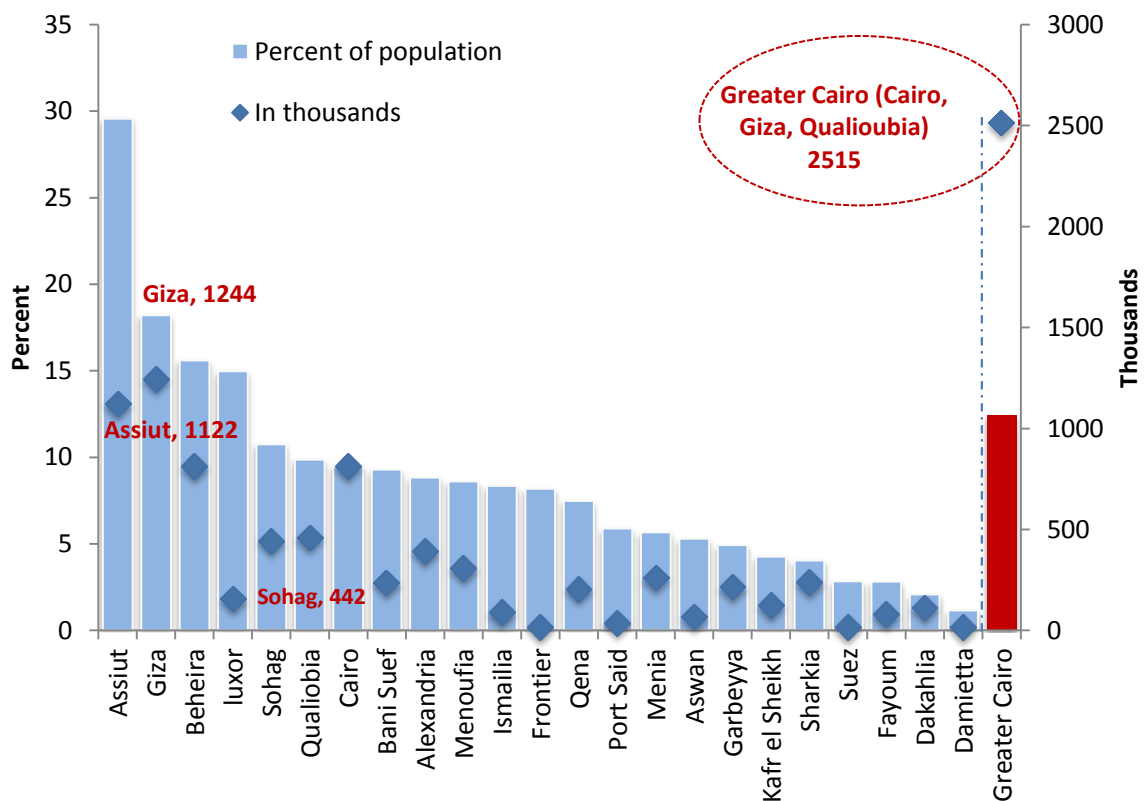
⁴¹ No significant changes can be observed in average per capita daily caloric intake, where it reached 2750 calories in 2010/11 compared to 2783 calories in 2008/09. Table 4.22 demonstrates that Assiut has the lowest average in both years and Suez has the highest average. Similar to 2008, daily per capita caloric intakes in eight governorates exceed 3000 calories, while residences in 5 governorates consume 2500 calories per person per day

⁴² The prevalence of food deprivation (caloric deficiency) based on the FAO methodology depends on two components: 1) the amount of dietary energy contained in the food consumed and, 2) the minimum energy requirement for performing a minimum acceptable level of light physical activity for different groups of age and sex. In this report, two thresholds were used to reflect severe and moderate caloric deficiency: assuming low activity levels in both urban and rural areas for severe deficiency and low activity in urban areas and medium activity level in rural areas for moderate deficiency. Age and gender specific thresholds for Egypt were calculated by O. Ecker, IFPRI. The prevalence of caloric deprivation is the proportion of the population consuming less energy than the calculated levels. Analysis of this report is based on severe caloric deficiency only, but tables report both estimates; FAO/WHO/UNU, *Human energy requirement. Report of a joint FAO/WHO/UNU expert consultation*, (Rome, 2001). Assumed anthropometrics: BMI of 18.5 and PAL of 1.45 (low activity) for minimum requirement. Calories generated for each food item were calculated using Egypt's National Nutrition, *Food Consumption Tables* (2006) that list calories generated from the edible part of 100 grams of purchased food and also calories for food as purchased. The HIECS contains food data as purchased weight or volume. The dietary energy value is multiplied by the quantity of acquired food on the purchased weight basis. Average household kilocalorie unit price is used for estimating the dietary energy values of food items when household food data are only available in terms of monetary value (such as for food eaten outside of the home). The dietary energy values are obtained by dividing the monetary value by the kilocalorie unit price at the household level. In other words, HH DEC from food eaten away from home = HH monetary value of food eaten away from home / HH kilocalorie unit price. The total household dietary energy consumption is obtained by

A more detailed analysis through HIECS panel data indicates that **deficiency in calorie consumption is mainly transient** (8.9 percent of the panel sample), including in Upper Egypt. Chronic deficiency in calorie-consumption did not exceed 1.7 percent of the sample and is mainly concentrated in rural areas where 66.9 percent of households with chronic deficiency are found. It is important to note that about 23.5 percent of the income- poor suffer deficiency in calorie consumption.

Although deficiency in calorie-consumption is the least critical aspect of poor access to food at the national level, in some governorates the deficiency rates rise to significant levels; reaching about 30 percent in Assuit, 18.2 percent in Giza and 15.6 percent in Beheira. Moreover, **prevalence rates are masked by the national food subsidy system which provides about 22.5 percent of total energy intake of the whole population and 28.2 percent of total energy intake in Upper Egypt**. Figure 21 shows that poor households mainly depend on the food subsidy system for their consumption of bread, rice, oil and sugar. Lifting off the food subsidy is likely to drive up the rates of deficiency in calorie consumption and drive the national poverty rates to 34 percent (assuming nil substitution effect).

Figure 20: Deficiency in Calorie Consumption by Governorate, 2011



adding up calories generated from all commodities, either eaten at home or outside. The total household DEC and per person per day caloric intake is calculated taking into account the sampling weights. Total caloric consumption is compared to total caloric requirements for each household, and if caloric consumption is less than 80 percent of caloric requirements, all household members are considered food deprived, i.e., consume insufficient calories (caloric deficiency), otherwise all members are non-deprived; i.e., consume sufficient calories. WFP; *The Status of Food Security and Vulnerability in Egypt*, (Cairo, 2011).

The Food Consumption Score (FCS) is the standard WFP proxy indicator of household access to food. It is a composite score measuring dietary diversity, frequency of consumption and relative nutrition importance of different food groups. It is a proxy for quantity (through days of consumption). Calculation of the FCS takes into account the number of food groups consumed by a household over a period of seven days (dietary diversity); the number of days, a particular food group is consumed (food frequency); and the relative nutritional importance of different food groups. The 2011 HIECS has 16 food group and each group is allocated a score (weight) based on its nutrient density (see Table 2 below). The frequency of each group (number of days consumed by the household) is multiplied by its score and then added for all food groups. Then the total number is normalized to have the maximum number of 112. The higher the FCS, the more diverse and nutritional is the diet.

Figure 21: Contribution of the Food Subsidy System to Total Energy Intake, 2011

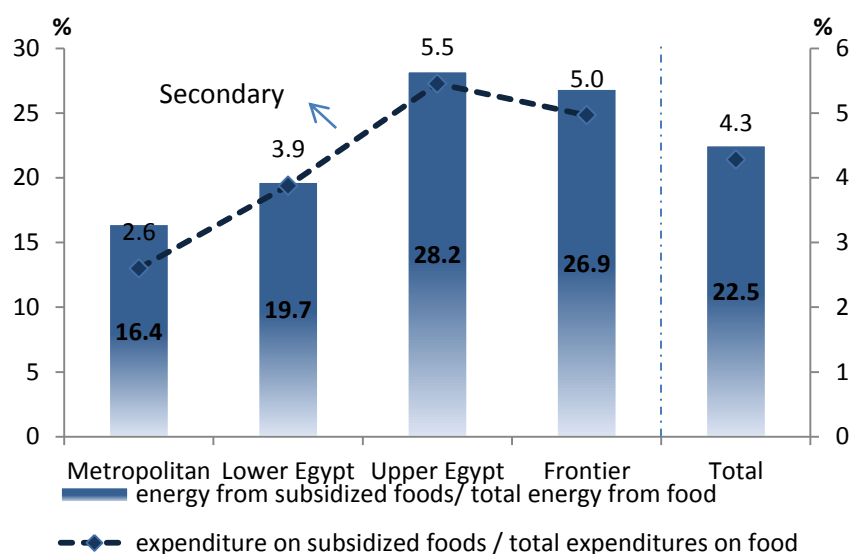


Table 2: Food Consumption Scores

Food Item	Food Group	Weight
Maize, Rice, Sorghum, Millet, Bread and Other Cereals	Cereals, Tubers, and Roots	2
Cassava, Potatoes, and Sweet Potatoes		
Beans, Peas, Groundnuts, and Cashew Nuts	Pulses	3
Vegetables, Relish, and Leaves	Vegetables	1
Fruits	Fruit	1
Beef, Goat, Poultry, Pork, Eggs, and Fish	Meat and fish	4
Milk, Yoghurt, and Other Dairy	Milk	4
Sugar and Sugar Products	Sugar	0.5
Oils, Fats, and Butter	Oil	0.5

WFP guidelines⁴³ set thresholds for the FCS to create the food consumption groups. Below a score of 28 is “poor”; between 28 and 42 is considered “borderline” food consumption,⁴⁴ and over 42 is

⁴³ WFP, Food consumption analysis: Calculation and use of the food consumption score in food security analysis, (Rome 2008); WFP, *Comprehensive*

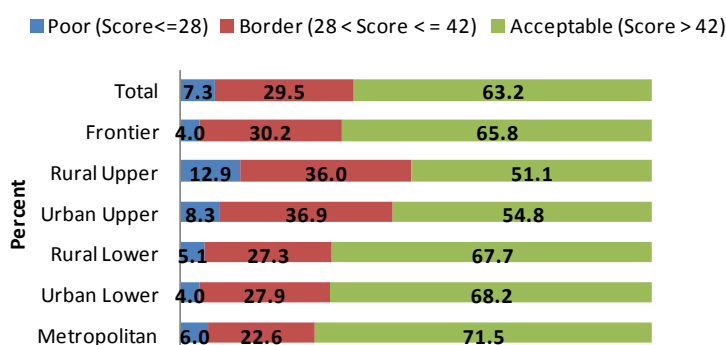
Food Security and Vulnerability Analysis Guidelines, (Rome, 2009)

⁴⁴ Includes expected daily consumption of bread, vegetables, oil and sugar

“acceptable”⁴⁵. Overall, the data shows that **7.3% of households suffer poor food consumption, 29.5% are border line and 63.2% have acceptable food consumption**. The FCS –by definition- does not precisely capture quantities of food consumed and therefore it tends to provide lower estimates of poor food consumption as compared to the cross tabulation of income poverty with caloric deficiency and poor dietary diversity. It is also worth mentioning that a significant percent of households with “borderline” consumption are clustered closely above the lower threshold, such that a 5% increase in the lower threshold results in a 22% increase in the percentage of households with poor food consumption, and a 10 percent increase in the lower threshold would translate into a 55 percent increase on the percent of households with poor food consumption up to 11.3 percent. The derived results have a consistent trend with the those from the cross tabulation of income poverty with caloric deficiency and poor dietary diversity and show that rural and urban Upper Egypt have the highest prevalence of “poor” and “borderline” food consumption (see figure 22).

Results essentially point to a need for geographic targeting in Upper Egypt and proxy-means targeting of pockets of poverty and food insecurity in Greater Cairo and other urban areas, in addition to wide awareness and nutrition education campaigns.

Figure 22: Food Consumption Groups by Region, 2011



Source: Authors' calculations based on 2010/2011 HIECS

8. MALNUTRITION: THERE HAS BEEN A RISE IN THE TRIPLE BURDEN OF MALNUTRITION, SIGNALLED BY WORSENING STUNTING RATES AND A COEXISTENCE OF OBESITY AND HIGH RATES ANEMIA

Stunting (which occurs due to inadequate nutrition over a long period of time or due to chronic illness, is measured by a height for age index and is the most prevalent form of malnutrition among children aged under five), an indicator of chronic malnutrition, rose between 2005 and 2008. According to the Demographic Health Survey (DHS)⁴⁶ the rate increased from 23 percent in 2005 and to 29 percent in 2008. Although using a different approach, the HIECS similarly estimates a high stunting rate of **31 percent in 2011 for children aged 6-59 months** (where 30-39 percent is considered “high” by the WHO). The HIECS data also indicates that stunting rates appear to be highest in urban and rural Upper Egypt (39 percent and 33.3 percent respectively)⁴⁷ and lowest in urban areas of Lower Egypt. These results are generally consistent with the regional prevalence of income poverty as well as of poor dietary diversity. Nearly 32 percent of households with poor or moderate dietary diversity have stunted children, as opposed to by 24.4 percent among households with high dietary diversity. Generally, stunting among children is partially correlated to households' socio-economic status at the regional level as well as the diversity of food consumption. However, the poorest governorates do not have the highest stunting rates. This inconsistency in the relationship between poverty and stunting

⁴⁵ Includes an expected daily consumption of bread, vegetables, oil and sugar, complemented by a frequent (4 days/week) consumption of pulses. The upper thresholds of the FCS were applied instead of the standard thresholds due to the high frequency of daily consumption of sugars and oils in Egypt.

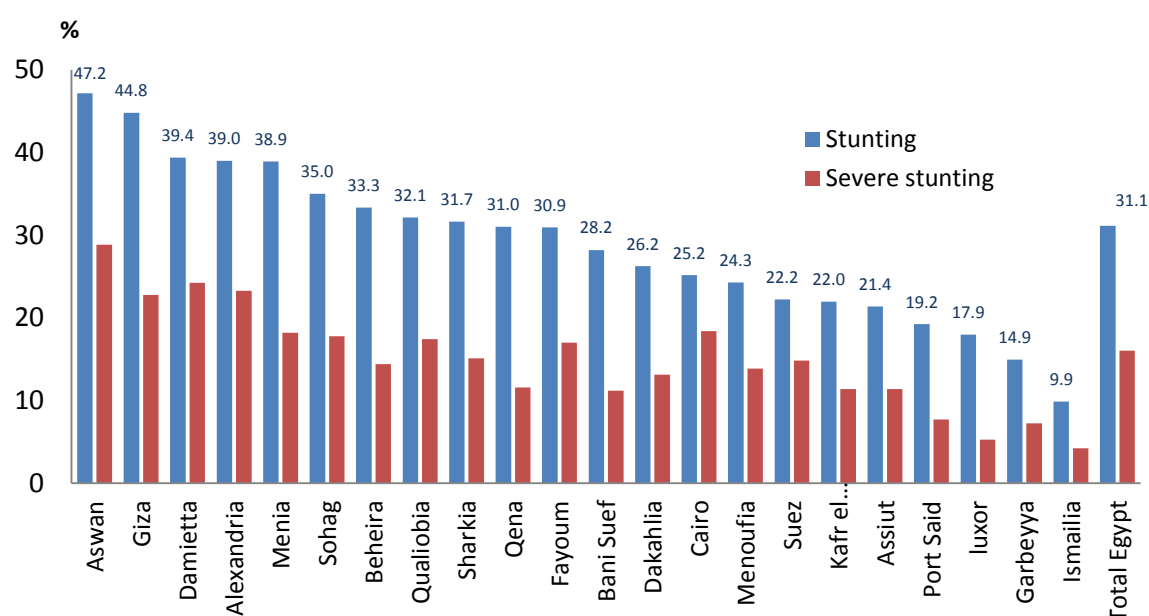
⁴⁶ El-Zanaty, F. and Way, A., Egypt Demographic Health Survey. (Cairo, 2005); El-Zanaty, F. and Way, A., Egypt Demographic Health Survey. (Cairo, 2008)

⁴⁷ Data for malnutrition in Frontier Governorates was excluded due to small sample size

(or malnutrition in general) among children supports assumptions of similar studies, that propose the co-existence of multiple cofounding and/or predisposing factors to malnutrition.

Factors include a pregnant woman's health as well as the antenatal, intrauterine, and postnatal nutrition of mothers,⁴⁸ and the outcome of the pregnancy, birth weight, birth intervals, and the order of a child within a household. They also include infant and young child feeding habits (including exclusive breastfeeding and optimal weaning practices), immunization status of the child, presence of intestinal parasitic infections, recurrent diarrheal and RTI's (Respiratory Tract infections), availability of and access to health care services, lack of awareness regarding dietary diversity, as well as poor water and sanitation.⁴⁹ Such assumptions that take into consideration the nutritional status of women during pregnancy, confirm that malnutrition in children can start as early as intrauterine life. Stunting in early life is associated with adverse functional consequences, including poor cognition and educational performance, low adult wages, lost productivity and, when accompanied by excessive weight gain later on in childhood⁵⁰ an increased risk of nutrition-related chronic diseases.

Figure 23: Prevalence of Stunting among Children (6-59 months), 2011



Source: Authors' calculations based on 2010/2011 HIECS

Data from the 2011 HIECS on wasting conversely shows a slight decline against findings from prior Demographic Health Surveys. Wasting is a failure to receive adequate nutrition during the period immediately before the survey, which may be the result of recent episodes of illness or acute food shortage, and is measured by the weight for height index. **According to the DHS⁵¹ the wasting rate increased from 5 percent in 2005 and to 7 percent in 2008, with the HIECS estimating a rate of 4.4 percent in 2011.**

⁴⁸ Waterlow JC (1994) Introduction Causes and mechanisms of linear growth retardation (stunting). Eur J Clin Nutr 48, Suppl. 1, S1-S4

⁴⁹ Khatab, K., *Childhood Malnutrition in Egypt using Geospatial and Latent Variable Models*, American Journal of Tropical Medicine and Hygiene, 82(4): pages 653-663, (April 2010); Zottarelli LK, Sunil TS, Rajaram S, *Influence of parental and socioeconomic factors on stunting in children under 5 years in Egypt*, East Mediterranean Health Journal, 13: 1330-1342 (2007)

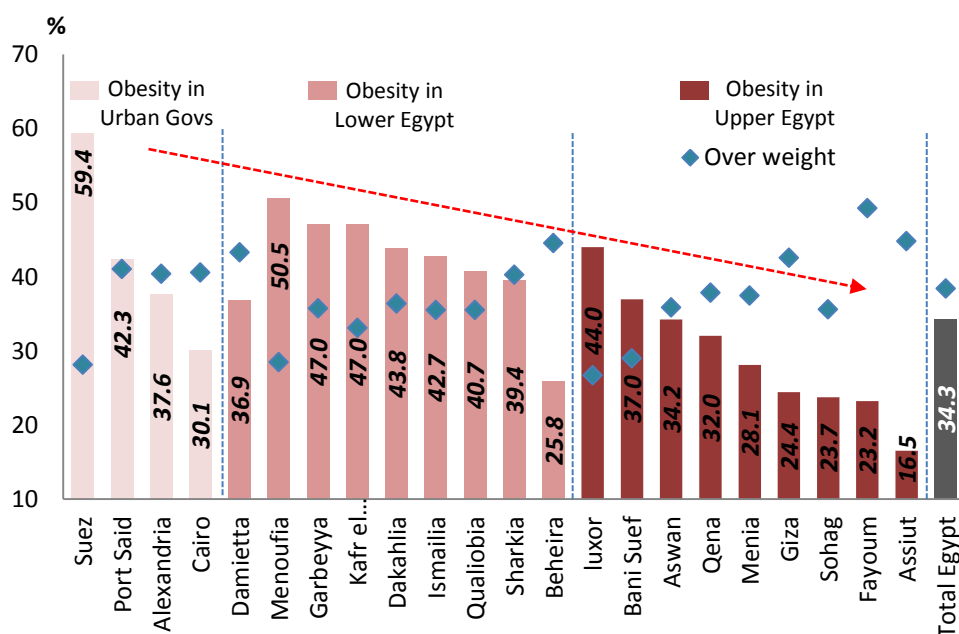
⁵⁰ Victora CG, Adair L, Fall C et al., for the Maternal and Child Under nutrition Study Group, *Maternal and child under nutrition: consequences for adult health and human capital*, Lancet 371, 340-357, (2008).

⁵¹ El-Zanaty, F. and Way, A., Egypt Demographic Health Survey. (Cairo, 2005); El-Zanaty, F. and Way, A., Egypt Demographic Health Survey. (Cairo, 2008)

According to the HIECS, **obesity and overweight** (defined as abnormal or excessive fat accumulation that may impair health and measured using the Body mass index - BMI) **among women aged 20-49 years decreased slightly between 2009 and 2011, from 39.2 to 38.4 percent for overweight and from 38.9 to 34.3 percent for obesity** (Figure 22). The data shows that in general governorates in Upper Egypt have the lowest obesity rates, compared to Lower Egypt and Urban Governorates. The 2011 HIECS thus suggests an inverse correlation between income poverty and obesity levels among women with lower obesity rates in areas of greater poverty (18.3 percent of all obese women are income poor, 24.2 percent are near poor and 57.6 percent are non-poor), though the causality link is weak. **Similarly, there also appears to be an evidence of partial positive correlation between higher dietary diversity and obesity rates;** namely that higher obesity levels are partially correlated with higher dietary diversity. Obesity levels were 31.1 percent among households with poor dietary diversity and reached 35.2 percent and 41.7 percent among households with moderate and high dietary diversity respectively. Overweight and obesity are among the major predisposing risk factors to the hidden epidemic of non-communicable diseases.⁵²

There is a close and confirmed relationship between the epidemiology of non-communicable diseases that are obesity related⁵³, such as cardiovascular disease, hypertension, non- insulin dependent diabetes mellitus and different types of cancer, as well as the risk factors for these diseases to food consumption, dietary patterns, nutrition and lifestyle. The increasing prevalence of overweight and obesity among women is likely to be associated with high intake of energy-dense foods with low nutrient value and rich in fat and sugar, coupled with low levels of physical activity. Further correlations between dietary diversity and overweight and obesity need to be investigated, to detect trends and specific causes.

Figure 24: Percent of Overweight and Obese Women (20-49 years of age)



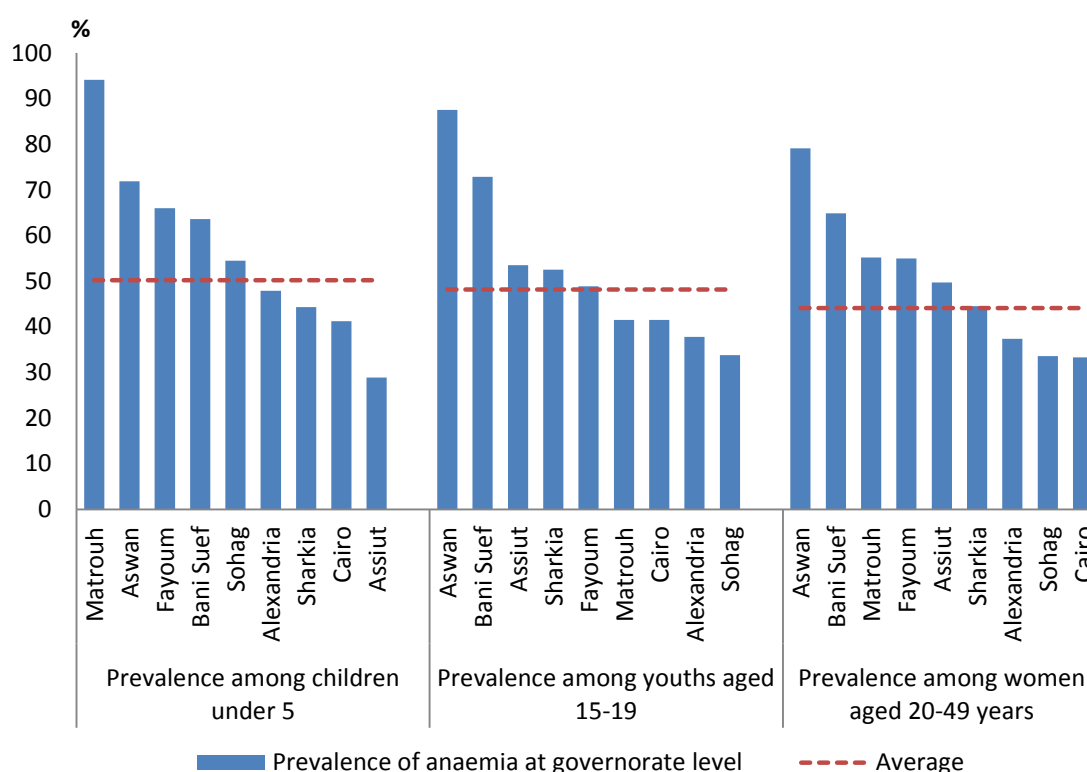
Source: Authors' calculations based on 2010/2011 HIECS

⁵² WHO Consultation - World Health Organization technical report series, 2000

⁵³ Stein, C. and Colditz, G. "The Epidemic of Obesity," in Journal of Clinical Endocrinology and Metabolism, 89 (6): 2522 (2002); Must A, Spadano J, Coakley EH, Field AE, Colditz G, et al., "The disease burden associated with overweight and obesity". JAMA 282: 1523-1529 (1999); Segal, L., Carter, R., Zimmet, P., "The cost of obesity: the Australian perspective. Pharmacoeconomics 5 (Suppl. 1), 45-52, (1994).

Hemoglobin samples drawn from case studies in **9 selected governorates** (see Figure 25, **show high individual levels of anemia, among women and children**, within the different age groups. The weighted average across the 9 governorates by group was 50.2 percent among children aged 6-59 months, 48.2 percent among youths aged 15-19 years, and 44.1 percent prevalence among women aged 20-49 years. Samples used a weighted average for the population, and were representative at the governorate level.

Figure 25: Individuals' prevalence of anemia among selected governorates



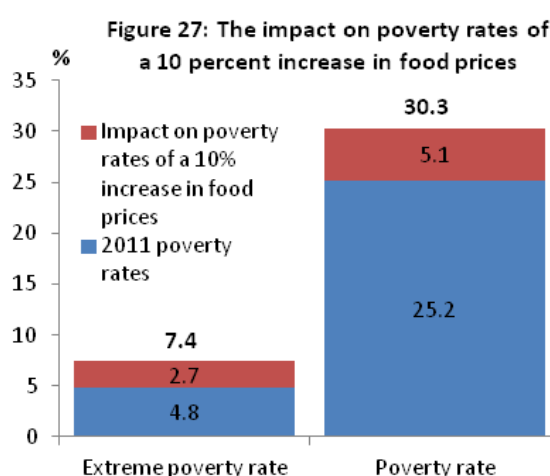
Source: Authors' calculations based on 2010/2011 HIECS

At the household level, prevalence rates were generally found to increase among large-sized households (> 7 people) and among households whose head was working in the agricultural sector (70.6 percent of household heads worked in the agricultural sector) compared to those working in the non-agricultural sector (55.7 percent). **Anemia rates for 15-19 year old youths and women aged 20-49 years increased with income poverty. However, anemia among children aged 6-59 months did not vary according to poverty status.** This strongly suggests that optimal feeding practices for this age group are neither widely practiced, nor necessarily related to the socio economic status of households, and brings to attention poor awareness of proper feeding habits among the population in general. Although the selected sample is not representative at the national level, it is representative at the governorate level and results indicating the presence of a “triple burden of malnutrition” of rising obesity, high stunting rates and high anemia prevalence. All, and stunting in particular, deserve to be a priority on the public health agenda, with interventions targeting malnutrition requiring a focus on prevention.

9. FOOD SUBSIDIES, TARGETING AND PRICE SHOCKS

Food subsidies form a key part of the social safety net system established in Egypt since the mid-1940s and are seen by many Egyptians as one of the key benefits made available by the government. Indeed, of the social safety nets provided, **food subsidies in particular were found to have shielded poor households from the impact of high food prices during recent crises**⁵⁴ through an expansion of the existing scheme from 41 million ration card holders to 63 million in January 2009 - 79 percent of Egypt's population.⁵⁵ **While widely popular and therefore a politically sensitive reform topic, the food subsidy system continues to face challenges. These include its effectiveness in reaching those most in need, in tackling the wide range of poverty-related challenges that exist (including in nutrition), and in providing an effective and cost-efficient safety in difficult economic times. Moreover, while alleviating poverty, the system cannot lift the most vulnerable out of poverty.**⁵⁶

With households in the poorest decile allocating 51 percent of their expenditure on food against the national average of 40.6 percent, and food security remaining an issue of access driven by purchasing power, poorer households are highly vulnerable to food price changes. The important role food subsidies continue to play in cushioning the poorest from food price volatility is evident when looking at a potential food price increase. For example, as demonstrated in Figure 27, a 10 percent increase in food prices, assuming no substitution, could push a further 5.1% of the population into poverty bringing the poverty up to 30.3 percent. Of that, some 2.7 percent could be tipped into extreme poverty, with this rising up to 7.4 percent.



Source: Authors' calculations based on 2010/2011 HIECS

Any reforms undertaken therefore necessarily need to balance popular preferences with economic necessities, and given the entrenched nature of the current system and the poverty-alleviating role subsidies play, will necessitate a gradual phasing of transition to alternative safety net modalities. In-kind food assistance remains the most valued assistance type and is overwhelmingly preferred as a transfer modality to cash and vouchers by most beneficiaries given its tangible nature and lack of susceptibility to price inflation.⁵⁷ A recent World Bank study highlighted that **for the majority of Egyptians sampled, if cuts in government funding to subsidies were required, the preference would be to cut certain types of fuel subsidies rather than those for food.**⁵⁸

Food subsidies are made up of Baladi (local) bread and staple commodities sold at subsidized prices to those holding ration cards. There are no entitlement restrictions for Baladi bread which is sold at 5 piasters a piece on a first-come first-served basis at specific outlets. The 2011 HIECS shows subsidized commodities are made available to some 70 percent of Egyptians through ration cards. Holders of ration cards are entitled to buy set

⁵⁴ World Bank, *Egypt's Food Subsidies: Benefit, Incidence, and Leakages* (Cairo, 2010)

⁵⁵ WFP, *Vulnerability Analysis and Review of the Food Subsidy Program in Egypt*, (Cairo, 2009)

⁵⁶ WFP, *Vulnerability Analysis and Review of the Food Subsidy Program in Egypt*, (Cairo, 2009); World Bank, *Egypt – Towards a More Effective Social Policy: Subsidies and Social Safety Net* (Cairo, 2005); World Bank, *Egypt's Food Subsidies: Benefit, Incidence, and Leakages* (Cairo, 2010)

⁵⁷ WFP, *Analysis of Consumer Profiles and Behaviour Patterns of Food Subsidy Recipient: An Approach to Targeting A Study Prepared for the Ministry of Social Solidarity* (Unpublished, Cairo, 2010)

⁵⁸ Silva, J., Levin, V. and Morgandi, M. *Inclusion and Resilience: The Way Forward for Social Safety Nets in the Middle East and North Africa*, (World Bank, Washington D.C., 2013)

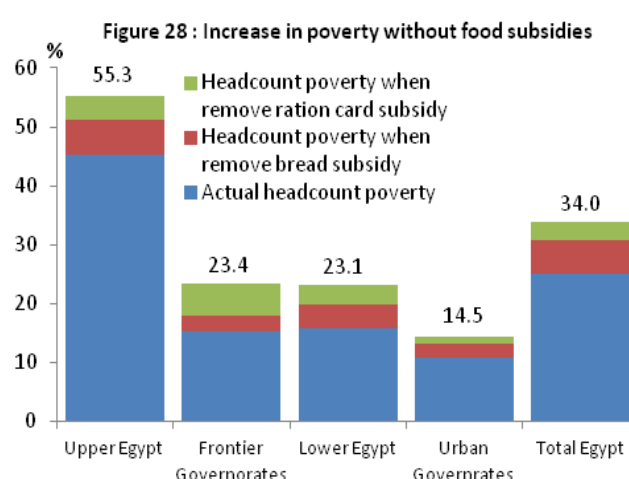
quotas of specific commodities detailed below in Table 3, including sugar, cooking oil, rice and tea. Wheat flour is also distributed in some governorates.

Table 3: Subsidized commodity entitlements available through ration cards

Commodity	Main Quota per person		Main quota per family (4 persons)		Additional Quota per person		Additional Quota per family (4 persons) ⁵⁹	
	Quantity	Price in piasters	Quantity	Price in piasters	Quantity	Price in piasters	Quantity	Price in piasters
Sugar	1 kg	125	4 kg	500	1 kg	125	4 kg	500
Oil	½ kg	150	2 kg	600	1 kg	300	4 kg	1200
Rice	-	-	-	-	2 kg	300	8 kg	1200
Tea per 50g pack	1 pack	0.65	4 packs	260	-	-	-	-
Total paid price		275.65		1360		725		2900

Source: Ministry of Supply, 2013

A further analysis looking at the removal of subsidies for bread and ration card commodities, also highlights the role subsidies currently play in poverty alleviation. Their removal, without an immediate substitution effect by households as they purchase the equivalent non-subsidized commodities, could see poverty at a national level rise from 25.2 percent to about 34 percent. The impact would most notably be felt in the governorates of Upper Egypt that already have the highest poverty rates, as highlighted by Figure 28.



Source: Authors' calculations based on 2010/2011 HIECS; replicated from IFPRI and WFP, *Tackling Egypt's Rising Food Insecurity in a Time of Transition* (Washington D.C., May 2013)

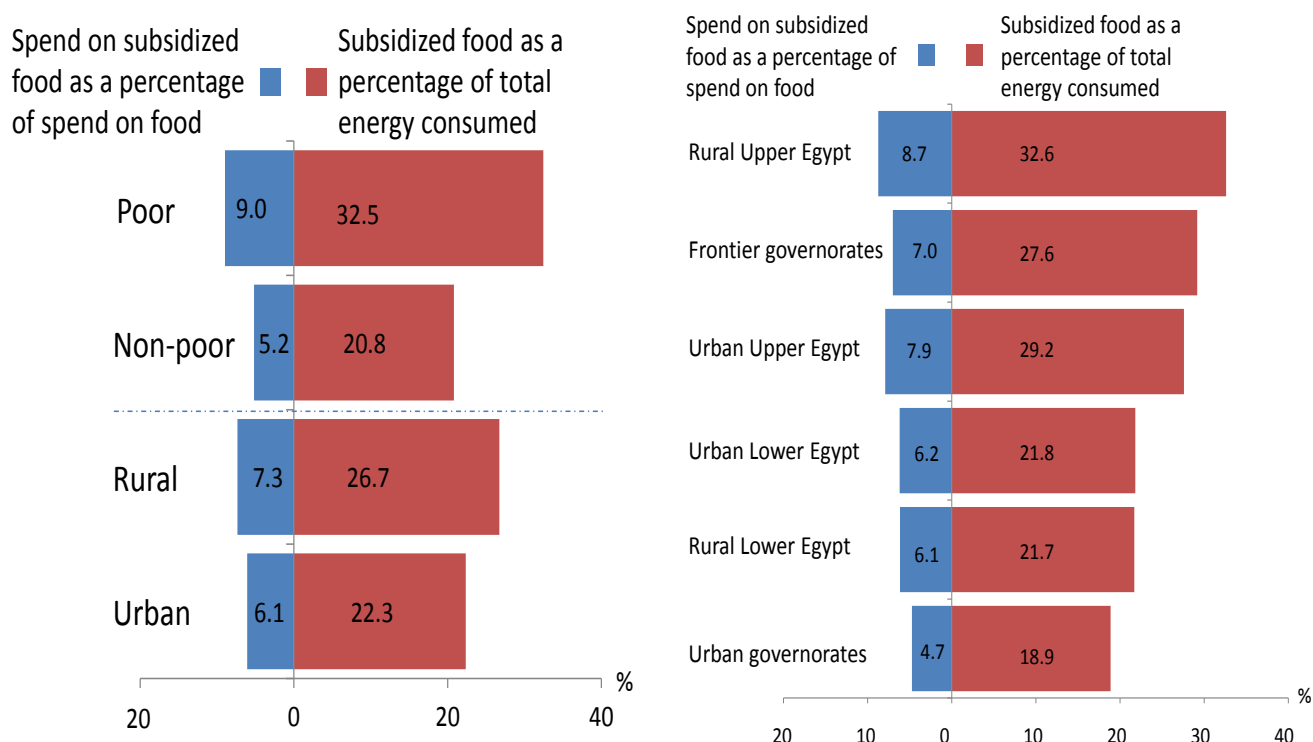
With regard to subsidized commodities, subsidized bread is the most widely consumed accounting for 62 percent of all bread consumed by Egyptians, rising to 74 percent of bread consumed by poor households and against 61 percent for non-poor households. **A removal of bread subsidies would thus have the most significant impact on poverty rates**, adding some 4.5 percent to the national poverty rate against 3.28 percent for all other subsidized food commodities. Of subsidized ration card commodities, oil and sugar are the most widely bought accounting for 62 percent of total household oil and sugar consumption.

With consumption of cheaper food items as the predominant coping strategies of poorer households and in combination with local food preferences, there has been **an increasing overreliance on cheap and calorie-dense foods, such as subsidized commodities, among poor households**. This is to the detriment of dietary diversity and nutritional content. An estimated 17 percent of poor households' food expenditure goes to grains and starch, with these accounting for 51.1 percent of their caloric intake. Rural areas also show a higher consumption of cereals as a share of total calories consumed than urban areas; 54.5 percent and 46 percent, respectively. Similarly, **subsidized food commodities serve as a source of cheap food for the poorest households**, accounting for only 9 percent of their total food spend but 32.5 percent of

⁵⁹ Any additional person after 4 people only receives the main commodities quota

their energy intake, as is evident in Figure 29 below, whereas for non-poor households they make up 5.2 percent of food spend but provide only 20.8 percent of the energy consumed. The same pattern is evident in poorer parts of the country, most notably in rural areas and governorates in Upper Egypt.

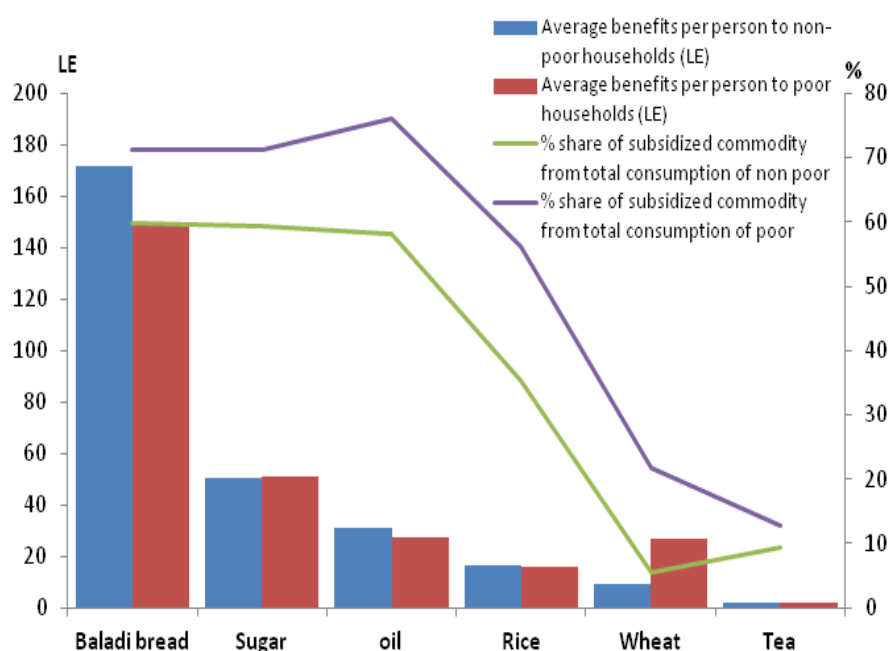
Figure 29: Subsidized Food (as % of total food expenditure and as total % of energy consumed)



Source: Authors' calculations based on 2010/2011 HIECS

From a financial perspective, **households get an average financial benefit of some LE 279 per person per year from subsidized food commodities**, with bread accounting for 60 percent of that, sugar for 18 percent and oil for 11 percent. While poorer households spend a greater proportion of their food expenditure on subsidized food commodities than non-poor households, **non-poor households derive greater financial benefits from subsidized food given their more sizeable expenditure on food relative to poor households**, giving them financial benefits from subsidy consumption equivalent to LE 281 per person per year, against LE 273 for poor households (Figure 30 below).

Figure 30: Average benefits (LE) derived from subsidized commodities & their proportion of total consumption by poor & non-poor households



Source: Authors' calculations based on 2010/2011 HIECS

Moreover, the HIECS data further demonstrates a **poor and limited targeting of food subsidies with 73 percent of non-poor households having access to ration cards while 19 percent of poor households do not**. Current targeting criteria for ration cards include income level, education of the head of household, employment of the head of household, household size and dependency ratio, access to social insurance, housing situation and number of rooms in the house, the absence of a toilet, access to electrical appliances, car ownership, and instances of suffering from chronic disease in the household.⁶⁰ However, these criteria are flexibly applied.

Proxy means testing (PMT) can be used to strengthen targeting options.⁶¹ A formula for this can be developed taking into consideration the inclusions and exclusion errors calculated above from the HIECS and a linear regression model based on household per capita expenditure/consumption as a welfare measure proxy. A number of simple and easy to collect variables are favoured to factor into the model including: location, community characteristics, housing quality and household characteristics (including number of members and dependents, age and gender of household head, socio-economic characteristics of household head) and electricity bills⁶²; these are relatively easy to collect and can be used to identify characteristics that discriminate between poor and better-off households. **The lower the PMT score of a household, the poorer it is.** The PMT scores derived can then be used to derive thresholds for inclusion and exclusion of parts of the population for programme targeting. Analysis of thresholds related to different deciles of PMT scores highlights the related programmatic “under-coverage”, the percentage of eligible households that will not be covered at each coverage threshold, and “leakage”, the percentage of program benefits that are received by people who are not eligible to receive them. The PMT formula is more likely to produce

⁶⁰ Ministry of Supply, 2013

⁶¹ World Bank, Egypt – Towards a More Effective Social Policy: Subsidies and Social Safety Net (Cairo, 2005)

⁶² Enhanced targeting criteria such as these builds on the Ministry of Supply and Internal Trade's MOSIT's targeting project undertaken in 2008 and the results of the Ain El Sera Conditional Cash Transfer Project. Specifically for ration cards, use of up to five easily verifiable indicators to distinguish the food insecure would address exclusion and inclusion errors. Specifically for PMT score classification, more detailed variables have also been put forward in like models, including the following for classification of the ultra-poor: Number of family members are 5 or more; percentage of people who work in the family are less than 25 percent; Share of person per family room is less than 50 percent; Head of Household does not have social insurance; No private bathroom in house; No land line ;The average value of the monthly electrical bill is less than LE 15; The family does not live in a private house or rural house with bricks or better. Dr. Ibtesam El Gaafarawy et al, National Targeting Project for Most Needy Families (Cairo, 2007)

results that recommend the targeting of larger households, those with low access to amenities, poor housing conditions, with older household heads, and where the head has lower levels of education and does not work in permanent employment.

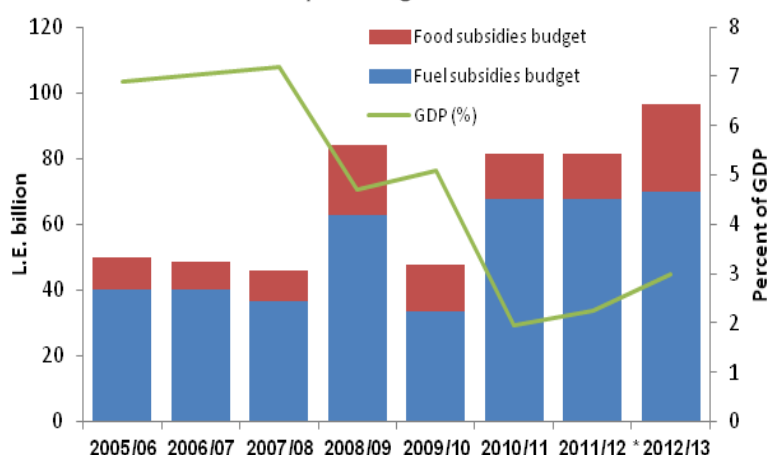
Initial analysis from the HIECS data (comprehensive findings to be published as part of the full report), suggest that **for the in-kind food subsidy system coverage of 40 to 50 percent of the population, as determined by PMT scores, would be deemed acceptable. For cash transfer alternatives 20 percent coverage is likely appropriate.**⁶³ **Determining which threshold should be used is essentially a policy decision depending on policy makers' objectives (such as seeking to reduce poverty by a certain amount), the objectives and nature of specific programmes to be used, the "acceptable" levels of under-coverage and leakage and the budget available.**

While use of Proxy Means Targeting can improve programmatic targeting, its limitations can serve as a barrier to its use. Most notably the associated administrative cost of a complex system and linked to that the challenges of determining and administering more complex criteria for entering and existing the system.

The current food subsidy system, particularly the provision of Baladi bread, also suffers from significant losses through-out the supply chain and resultant reduction in product quality that reduce its impact and benefits. Efforts have been made since the mid-1980s to improve production cost efficiencies and the quality of Baladi bread by separating production and distribution processes and progressively introducing more expensive forms of bread. Baladi bread is currently sold at 5 piasters per loaf⁶⁴ with the sale of 8-piastre loaves currently being piloted. However, with production costs per loaf standing at 25 piasters, incentives to sell wheat on the black market remain.⁶⁵ Combined with manufacturing, storage and distribution inefficiencies, **estimated losses of up to 30 percent occur across the Baladi bread supply chain,**⁶⁶ while its poor quality results in sizeable quantities used for non-consumption purposes such as animal feed.⁶⁷

At a time when government and household resources are constrained, better targeted subsidies can provide a safety net for the most vulnerable and the introduction of efficiencies can create savings for government that can be invested in targeted social safety nets, livelihoods and nutrition programming. The food subsidy system has accounted for some 1-2 percent of GDP the last decade. In the 2012/13 fiscal year, Baladi bread is expected to

Figure 31: food and fuel subsidies in nominal prices and as a percentage of GDP



⁶³ This approach builds on: El-Leithy, H. and Armanious, D., *Targeting Egypt's Poor: Testing Alternative Livelihood Options: Application on Ration Cards*, (Equitable Development Observatory, Social Contract Center, Cairo, 2011)

⁶⁴ One Egyptian pound (L.E.) is equivalent to 100 piastres

⁶⁵ World Bank, *Cost Efficiency in the Production and Distribution of Subsidized Bread in Egypt* (Cairo, 2010)

⁶⁶ WFP and the Egyptian Ministry of Supply and Internal Trade, *Optimizing the Baladi Bread Supply Chain* (Unpublished, Cairo, 2012); World Bank, *Egypt's Food Subsidies: Benefit, Incidence, and Leakages* (Cairo, 2010)

⁶⁷ WFP, *Vulnerability Analysis and Review of the Food Subsidy Programme in Egypt* (Cairo, 2009); Egyptian Cabinet Information and Decision Support Centre, *Evaluation of Wheat Agriculture Policy in Egypt*, (Cairo, September 2011).

account for LE 16 billion (or 61 percent) of the LE 26.6 billion food subsidy, against LE 10.4 billion for ration card commodities.⁶⁸

As is evident from Figure 31, **spending on subsidies has increased at times of economic stress or higher food prices to cushion the impact on households**. Reforms to date have been without sizeable loss in political capital and have included efforts to strengthen efficiencies and reduce losses in the supply chain, including through a recent pilot to liberalize wheat prices and improve bread quality. However, further supply-chain efficiency reforms including automation of processes are required, as is an improvement in targeting. Indeed, the Egyptian Ministry of Supply and Internal Trade (MOSIT) is undertaking a feasibility study for an electronic system based on national identification (ID) numbers to monitor the distribution of subsidized bread.

While food subsidies require reform, even greater cost savings can be made in the short term from reforming and better targeting fuel subsidies, which have accounted for the bulk of spending on subsidies and 5 to 7 percent of GDP in the last decade. Energy subsidies (with the exception of kerosene) are highly regressive with almost 60 per cent of benefits going to the top two income quintiles, highlighting sizeable areas for potential savings⁶⁹ with less associated political sensitivity.⁷⁰

There is scope to more effectively and efficiently use, improve awareness of and expand on other existing but currently underfunded social safety nets and forms of assistance to ensure more targeted support to the most vulnerable. This does not necessarily require additional funding, particularly if savings from subsidy reforms are made. Social pensions, for example, account for only 0.1 percent of GDP and target only 1.3 million households with LE 300 per month, targeted at orphans and widows. These could be expanded to include top-up funds, amongst other things, for the food insecure to meet their daily requirements. Similarly, **increasing investment in and promoting awareness and use of basic social services (particularly for health and sanitation, health and education) can contribute to a more holistic approach to reducing poverty, food insecurity and malnutrition.**

There is a strong economic argument for cash transfers that could initially top-up and ultimately, in the longer-term, substitute in-kind transfers. Cash assistance allows for access to a greater diversity and choice of goods and services, its injection can boost a local economy and local livelihoods, and it can be a more cost-effective delivery mechanism than in-kind assistance.⁷¹ However, there are also certain challenges that have to be addressed and thus certain preconditions for utilization of cash, such as the presence of appropriate disbursement systems, functioning markets and the availability of quality goods and services that cash can be used for, and account for its potentially inflationary effect. A WFP study⁷² found a sizeable preference for maintaining in-kind food assistance above cash alternatives, noted by 98 percent of households surveyed.⁷³ Household concerns stemmed particularly from the potential erosion of the value of cash transfers due to inflation, as well as from market availability of commodities. **While in-kind transfers remain more effective for vulnerable communities in rural areas where markets do not always offer a full range of inexpensive commodities in exchange for cash or vouchers, in more accessible settings cash and vouchers could**

⁶⁸ Ministry of Finance, *Monthly report* (Cairo, March 2012)

⁶⁹ Government of Egypt and World Bank, *An Energy Pricing Strategy: Mitigation Measures* (2009, Cairo)

⁷⁰ Silva, J., Levin, V. and Morgandi, M. *Inclusion and Resilience: The Way Forward for Social Safety Nets in the Middle East and North Africa*, (World Bank, Washington D.C., 2013)

⁷¹ Standing, G., "How Cash Transfers Boost Work and Economic Security", United Nations Department of Economic and Social Affairs Working Paper No. 58 (April 2008)

⁷² WFP and the Demographic Centre, *Traders Survey: Cash and Voucher Operational Feasibility Assessment*, (Cairo, 2012).

⁷³ World Food Programme and The Cairo Demographic Centre, *Analysis of Consumer Profiles and Behaviour Patterns of Food Subsidy Recipients: An Approach to Targeting: A Study Prepared for the Ministry of Social Solidarity*, (Unpublished, Cairo, 2010)

be used to top-up in-kind food assistance. From a nutritional perspective, this would facilitate access to perishable commodities and therefore greater dietary diversity.

Conditional cash transfers programmes have proved to be successful in parts of Latin America in particular, with conditionality as an incentive for participation. For example, requirements for pregnant and lactating mothers to visit health clinics for check-ups prior to receiving assistance, or school feeding programmes based on a minimum attendance rate. **However, conditionality also has certain prerequisites that have to be met.** For example, the affordability and administrative burdens of setting up and monitoring a means testing system, as noted for PMT above. Moreover, there should not be a mismatch of preferences to resources available, and where facilitating access to basic services, the capacity to provide adequate quality services with increased demand. Government staff also require capacity building to establish such programming and a communication campaign for potential beneficiaries is key.⁷⁴ These lessons are reinforced by learning from the Ain El Sera Project,⁷⁵ which highlighted the importance of improved targeting focusing on the ultra-poor when looking at the use of cash transfers, and given the specific objective of improving access to services factored in service improvement, most notably for education. **Improving the quality of basic services alongside transfers serves not just as a means of improving access but to also facilitate lifting people out of poverty, rather just poverty alleviation.**⁷⁶ For the Egyptian context, prerequisites would need to be established, unconditional cash transfers could be considered in the medium term.⁷⁷ **Any transition will need to be staggered over time and phased to take account of preferences and local implementation capacity.**

10. RECOMMENDATIONS

The below recommendations are positioned in the context of economic constraints and an evolving policy agenda, highlighting opportunities that exist for cost savings and that can be directed to interventions which address specific challenges highlighted by this report as well as more targeted and efficient social safety nets.⁷⁸

1. **Encouraging pro-poor investment policy and economic growth:** At a macroeconomic level, the priority in the face of increasing poverty rates is to stimulate pro-poor job-creating growth that can address poverty-related food insecurity. In the context of evolving policy post-revolution, there is a real opportunity to bring this about and create a backdrop for other more targeted interventions. An altered investment policy approach is required that includes a clear investment plan, creating incentives for both local private investment, as well as foreign direct investment and other generators of foreign reserves. This could link production between all economic sectors, promoting areas where Egypt has a comparative advantage, and would ideally move to a programme-based pro-poor fiscal policy.
2. **Targeted interventions by geography and vulnerability:** While the primary geographic focus of interventions should remain on rural Upper, findings suggest that assistance programmes need to include affected urban areas where pockets of vulnerability are on the rise and absolute numbers of people affected are sizeable. Efforts here should focus on stabilizing real incomes and reducing inequalities, including through price

⁷⁴ Das, J., Do, Q. and Ozler, B. "Reassessing Conditional Cash Transfer Programmes", Oxford University Press Journals, 20:57-80 (World Bank, 2005).

⁷⁵ Hania Sholkamy *No Path to Power: Civil Society, State Services, and the Poverty of City Women*, IDS Bulletin 41.2: 46-53 (UK, 2010); Case Study: Pathways to Women's Empowerment, *Conditional Cash Transfers in Egypt*, (IDS, UK, 2011)

⁷⁶ Silva, J., Levin, V. and Morgandi, M. *Inclusion and Resilience: The Way Forward for Social Safety Nets in the Middle East and North Africa*, (World Bank, Washington D.C, 2013)

⁷⁷ Das, J., Do, Q. and Ozler, B. "Reassessing Conditional Cash Transfer Programmes", Oxford University Press Journals, 20:57-80 (World Bank, 2005).

⁷⁸ See also for complementary policy recommendations: IFPRI and WFP, *Tackling Egypt's Rising Food Insecurity in a Time of Transition* (Washington D.C, May 2013)

stabilization. For rural areas the focus should be on structural reform to raise the mean level of income. For all of Upper Egypt as a whole (with Assiut, Sohag and Beni Suef as priorities) and Qalubia, emphasis on income generation programmes, improving food intake and diversity as well as raising nutritional Awareness is recommended. For Frontier governorates and the rest of Lower Egypt, emphasis should be on nutritional awareness programs. For optimal reach and improving the effectiveness and efficiency of national assistance programmes, particularly subsidies, a long-standing recommendation of improved targeting still holds. While targeting by geography remains relevant for Upper Egypt, the use of Proxy Means Testing is recommended for Lower Egypt and Cairo to ensure programme coverage of the most vulnerable and reduce “leakage” through the inclusion of less vulnerable.

3. **Improving agricultural practices, access to finance and markets as well as support to agribusiness in rural areas:** More specifically for rural areas emphasis should be on income generation programmes, including facilitating access to credit at lower rates as well as insurance for farmers and small businesses, in line with challenges and recommendations highlighted in wider literature. For agricultural production to follow increases in demand and the potential impacts of climate change, focus should be on access to weather and price forecasts for farmers and guidance on crop planning. Following the poor wheat harvest in 2009-10, the introduction of price forecasts for strategic crops during the planting season by the Ministry of Agriculture from 2011-12 saw increases in production; extending the accessibility of price information including for other crops is key in assisting farmers to plan. To further strengthen production there is a need for improved agricultural practices, particularly around the use of new and improved crop varieties, cultivation of higher value crops and herbs, as well as use of inter-cropping. Post harvesting, the issue of sizeable losses, particularly for vegetables, will initially require greater investigation around the specific points in the supply chain where losses are occurring, and can subsequently be addressed through improved storage, greater links to markets and value addition to crops. Finally, given the risk posed to the regular supply of key food commodities, such as wheat, in the current economic circumstances, efforts to improve production and yield for wheat will need to be complemented by a reduction in wheat flour supply chain losses, particularly for subsidized Baladi bread, as well as efforts to further secure foreign reserves.
4. **Strengthening the primary health care system including mobilization of resources to invest in nutrition interventions, focusing on maternal and child nutrition:** Findings highlight the need for more targeted health and nutrition interventions, particularly the prioritization of malnutrition prevention on the national public health agenda. This should focus on strengthening of primary health care including financial investment and capacity building for staff, to adequately and regularly detect, monitor, and treat malnutrition, especially for children below five years of age. The approach should be tailored to each region to assess and address the specific risk factors, using research-guided and evidence-based interventions. Community-level interventions to support structured coping strategies in the face of food insecurity could also be adopted in parallel to high-level policy interventions. Behavioral change communication (BCC) that spans from community to policy and decision making levels, is an important pillar of nutrition targeted interventions on a national scale. Nutrition awareness raising needs to focus on appropriate BCC for different target groups, should place a specific focus on the most vulnerable, and in particular through the education system. Optimal infant and young child feeding practices, particularly exclusive breastfeeding and proper weaning practices need to be promoted and established at community level. Information generated from nutrition programmes targeting children below five years of age can assist surveillance systems for improved and targeted monitoring. For pregnant and lactating women, the use of conditional cash and voucher transfers on attendance for health checks, can allow access to a wider range of local foods to aid dietary diversity, and strengthen the link with primary health care facilities, thus allowing for monitoring and follow up of this target group.
5. **Advocating for issuing of legislations for making fortification of wheat flour mandatory for both the public and private sectors:** Building on efforts to improve the nutritional content of subsidized Baladi bread through the use of wheat fortified with iron and folic acid since 2008, fortification could be made mandatory for the private sector as well. The cost benefit ratio of the flour fortification programme is estimated to be about

1:23.⁷⁹ Wheat flour is a staple food for the majority of the Egyptians and is part of the daily diet in a variety of forms. Issuing legislation making fortification mandatory could pave the way for encouraging the private sector to fortify foods using safe and authorized fortification standards for different food items.

6. **Creating efficiency savings through improvements to the supply-chain of subsidized food commodities can fund parallel and more targeted interventions to tackle poverty, food insecurity and malnutrition:** Any reforms undertaken to food subsidies necessarily need to balance popular preferences with economic necessities, and given sizeable popular support for food subsidies and sizeable entrenched interests on the supply-side, and change will require a phased transition. However, there are a number of options that can allow sizeable efficiency savings particularly through-out the more costly Baladi bread supply chain and can be brought about in the short to medium term. Market mechanisms should continue to be introduced throughout the supply chain through further roll-out of recent government pilots to deregulate wheat flour prices. To complement these moves and assist in the oversight of wheat availability, the national strategic inventory could be strengthened by shifting its management to the General Authority for Supply Commodities (GASC) that could act as a private trader. GASC would then oversee buying wheat from international markets when prices were low and selling it locally when prices increase internationally. To assist in managing supplies and reducing losses, additional silos could be built in key locations—potentially by the private sector— combined with encouragement of covering of open bunkers of wheat stores. This would reduce pressure on securing foreign currency reserves to procure wheat from international markets.

Similarly, **improvements to the quality of Baladi bread would assist waste reduction and could likewise be tackled in the short term** through agreeing one set of bread quality standards that is monitored through a Control Tower⁸⁰ and enforced through a restructured system of existing inspectors. Packaging of bread could also be introduced to reduce manipulation, enhance shelf-life and inform consumers of nutritional content and bread specifications. In the medium term, the introduction of a closed smartcard system for bread would help reduce potential for leakage further. Moreover, the introduction of 10-piaster loaves of improved quality bread and gradual phase out of 5-piaster loaves, could occur through the introduction of full and partial rations for poor and non-poor households; sizeable public awareness campaigns would be required ahead of implementation. Similarly, self-targeting could be encouraged through registration for bread as a disincentive for better-off households. Finally, to further reduce losses and achieve economies of scale in production, model bakeries⁸¹ could be established through public-private partnership initiatives.

For ration card commodities, similar supply-chain improvements could also be made. With the current smart card for rationed commodities not currently linked to unique identity codes and with high transaction costs per use, this could in the medium term be replaced with a smart national ID card through which food and other subsidies and entitlements could be determined, received and monitored to reduce waste, improve targeting and reduce ghost users. A nationwide campaign could help register persons without ID numbers. Bread quotas could be linked to this above for ease of targeting. Furthermore, better off households could be gradually weaned off subsidies through the introduction of partial and full rationing through smart cards, targeting enhanced quantities for more vulnerable households. Partial rations for the better off could then be gradually phased out. This would both improve targeting and allow for budgetary savings. As part of the process, while geographic targeting could be utilized for Upper Egypt, Proxy Means Testing, with clear and easily verifiable indicators, for urban areas and Lower Egypt. Moreover, self-targeting could be introduced through re-registration for rations, serving as a disincentive for better-off households. The phasing in of conditional cash transfers to top-up in-kind subsidies could then be linked to these.

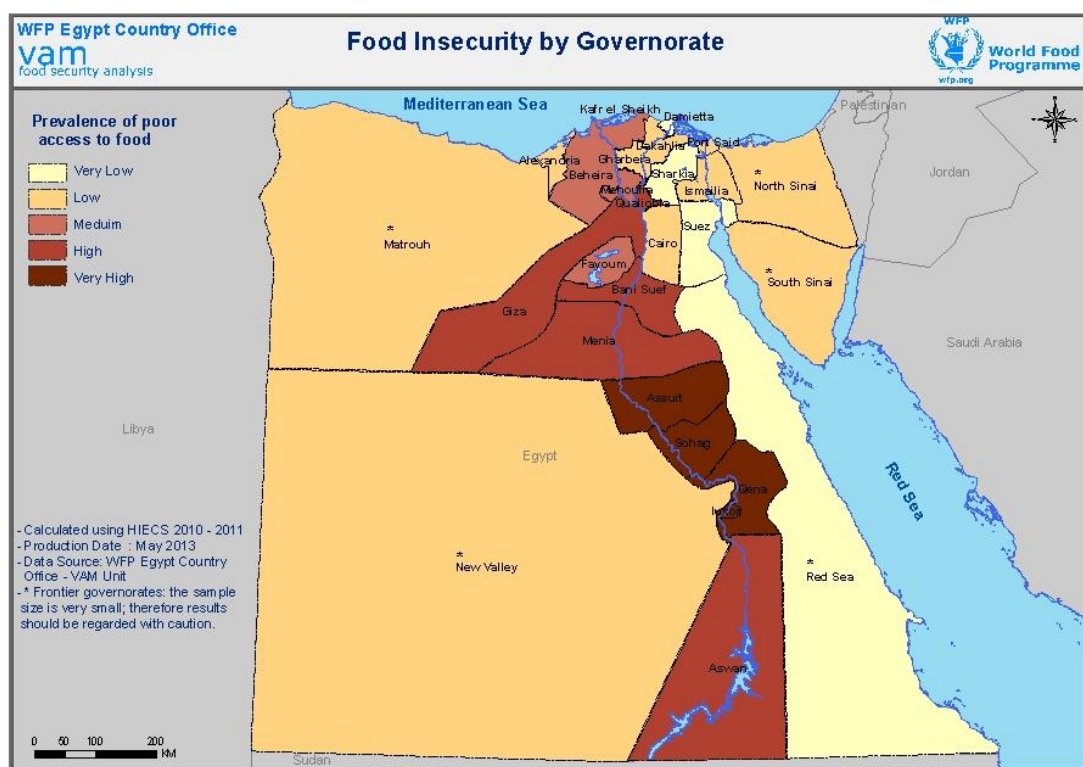
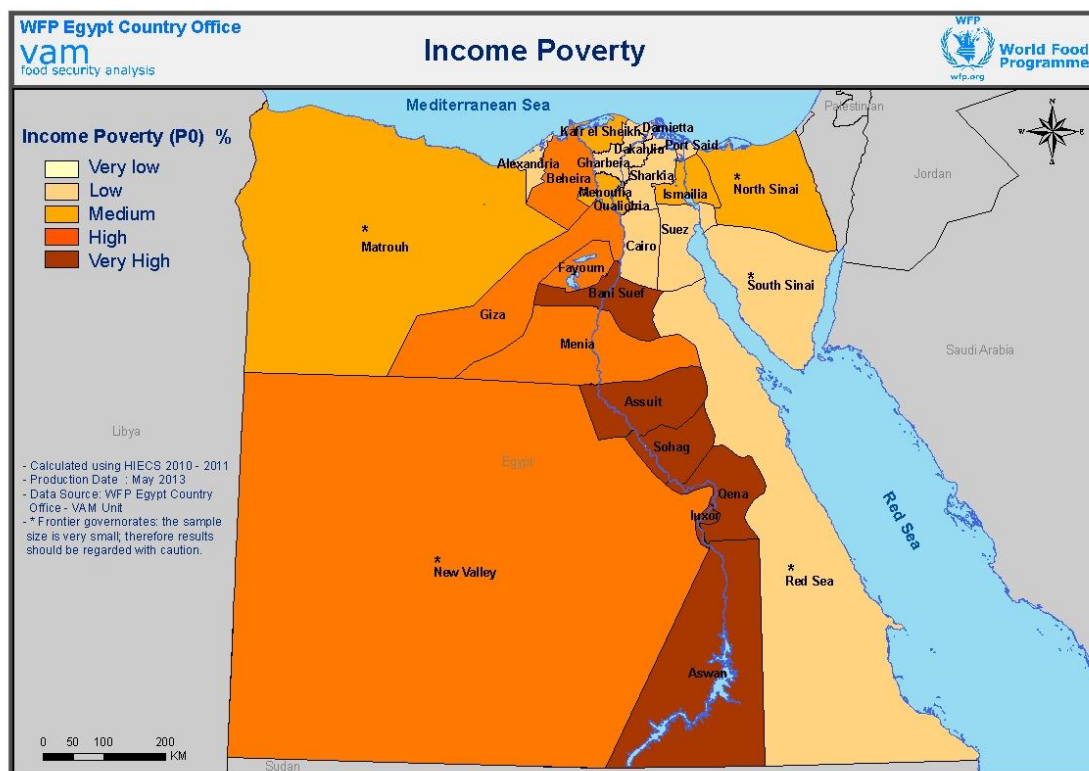
⁷⁹ World Food Programme (2010) Economic Benefits of Flour Fortification in Egypt: Applying Global Evidence to the National Environment

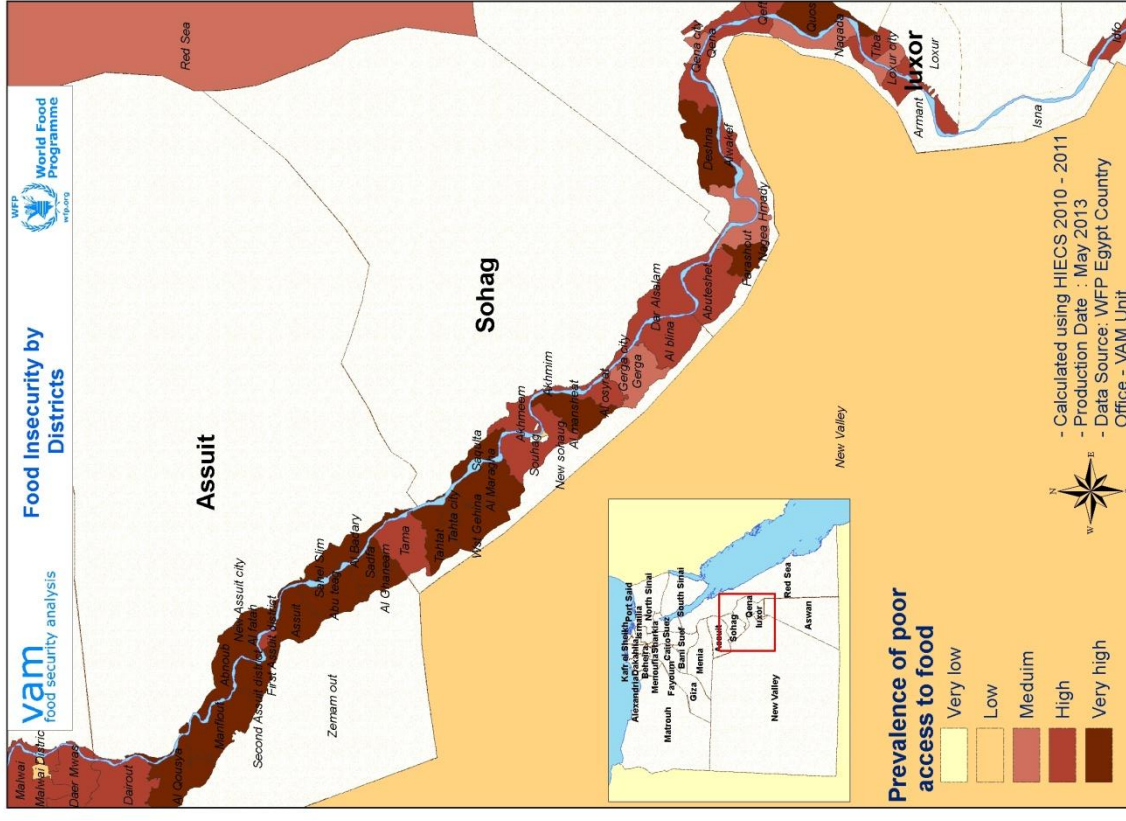
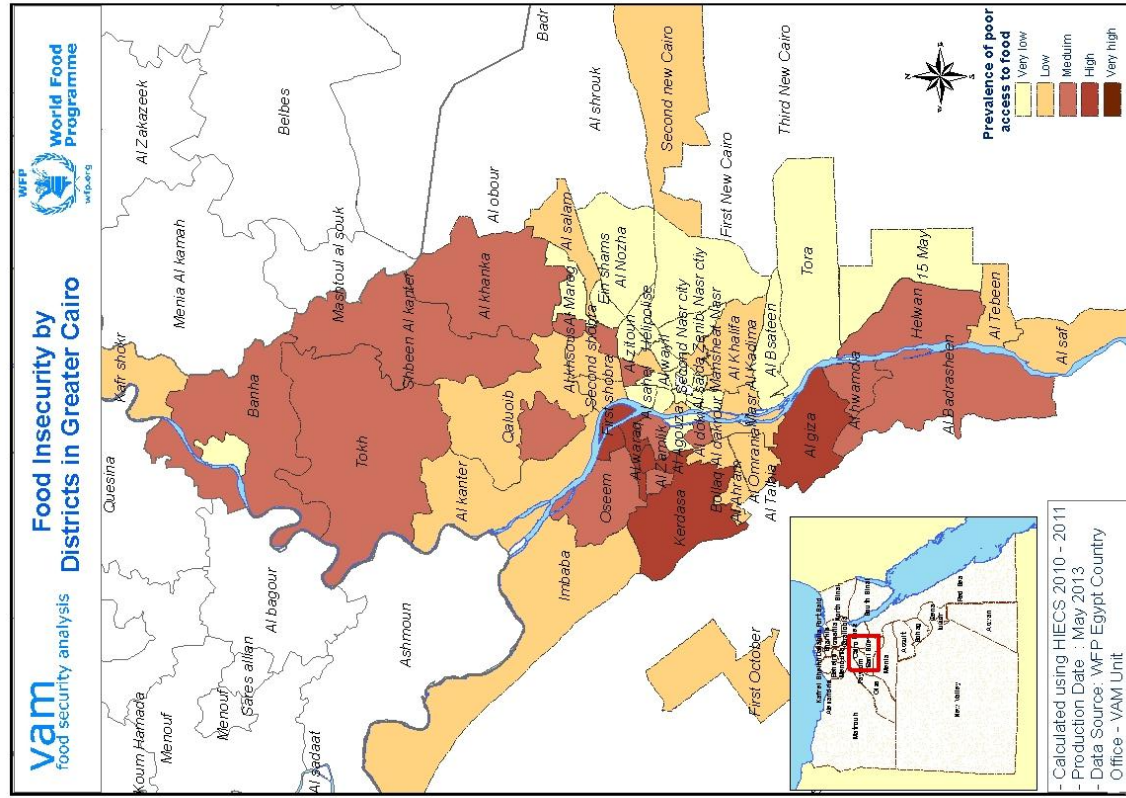
⁸⁰ A suggested mechanism for monitoring and evaluation of the reforms to the Baladi Bread system proposed by: World Food Programme and the Egyptian Ministry of Supply and Internal Trade (2012), Simplification of the Baladi Bread Supply Chain

⁸¹ WFP (2010) Baladi bread supply chain review for MOSIT. (Unpublished report).

7. **Greater investment in targeted social safety nets and basic social services:** With heightened poverty and food insecurity and many more on the cusp of both thresholds, greater investment in basic social services (education, health and nutrition, water and sanitation) and, from the medium term, consideration of well-targeted conditional safety nets that can support the most vulnerable to rise out of multidimensional poverty. These should form part of a broader development strategy with a shift in emphasis from poverty alleviation to poverty reduction. Moreover, investment in social safety nets could work alongside specific targeted interventions on job creation, health and nutrition. Schools also continue to be an important platform for conditional safety net provision for the most vulnerable, including through school feeding to incentivize attendance and aid nutrition.
8. **Supplementing subsidies with cash and voucher transfers for poorer sections of the population with a gradual shift to transfers over the longer term:** Focus in Egypt has been on in-kind assistance programmes, largely through food and fuel subsidies, which continue to be the preferred transfer modality for most. While widely popular and therefore a politically sensitive reform topic, the food subsidy system continues to be challenged in terms of effectiveness to reach those most in need, to tackle the wide range of poverty-related challenges that exist including nutrition, and to provide a cost-efficient safety net in difficult economic times. In the short term improvements in targeting and efficiency in the subsidy system can be complemented by index-linked transfers for the most vulnerable, while the better off could be moved to non-index linked transfers in the medium term that could gradually be phased out. Underpinning any assistance is investment in basic services, particularly education and health, to both increase access and quality.
9. **Strengthening food security monitoring systems to support policy-making:** Current systems that provide information on the food security and nutrition context at national and local level should be strengthened to better monitor the evolving context and linked to policy-makers to support evidence-based decisions. Emphasis on assessing both the potential and actual impact of shocks, such as price changes, can allow for risk reduction and early response action.
10. **Further research on poverty and food security in Urban areas and Frontier governorates:** With pockets of vulnerability emerging in Urban areas, particularly Greater Cairo, and a relatively small sample size for Frontier governorates in the HIECS that precluded deeper analysis, further research is recommended for these areas to take a deeper look into the drivers of change to better inform policy options.

ANNEX 1: MAPS







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