Comprehensive Food Security and Vulnerability Analysis (CFSVA)

Ethiopia

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Ethiopia Central Statistical Agency

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Foreword

Although Ethiopia has come a long way in reducing poverty and food insecurity, widespread poverty and food insecurity still persist. The country is prone to drought, which has serious implications on food security as most of the agriculture is dependent on rain. More importantly, structural factors such as land degradation, population pressure, undeveloped farm technology, low levels of household assets and limited opportunities to diversify income make millions of Ethiopians vulnerable to food insecurity.

WFP interventions in Ethiopia contribute to government programmes that aim to prevent food crises and enhance resilience. In this regard, an accurate assessment of food insecurity, in terms of identifying who the food insecure are as well their number, location and the underlying causes of food insecurity will enable WFP and stakeholders to design appropriate interventions.

This Comprehensive Food Security and Vulnerability Analysis (CFSVA) is a joint initiative by the UN World Food Programme and the Central Statistical Agency of Ethiopia. The collaboration involved WFP incorporating food security modules (questionnaires) into the CSA's Welfare Monitoring Survey (WMS) of 2010/11 and also utilizing data from the CSA's Household Expenditure Consumption Survey (HEC) of 2010/11. The WMS and HCE are multi topic surveys; incorporating food security modules into these surveys provides a rich data set to make a comprehensive analysis of food insecurity and vulnerability. This is the first time food security modules have been incorporated into the WMS and it is the first CFSVA for Ethiopia.

The CFSVA examines food availability, markets and household food access. It reviews malnutrition information and links livelihoods to food insecurity and vulnerability. The implications of seasonality and climate risk on food security and vulnerability are also reviewed. The key indicators used in the analysis include indicators on diet quantity, diet quality/diversity and wealth index.

We hope the information in this report will give a good evidence base for many agencies. WFP and the CSA will also continue their collaboration to strengthen food security information and analysis in Ethiopia.

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1. Executive summary

Over the last 10 years, Ethiopia has achieved an overall reduction in poverty levels as well as food insecurity. Nonetheless, poverty and food insecurity remain a big challenge. Over 30% of the population is below the food poverty line, unable to afford the minimum caloric intake for a healthy and active life. Chronic malnutrition is serious, with 44% of children under five years of age stunted and 10% affected by acute malnutrition.

The key findings are:

Diet quantity	Nationally, 40% of households were food energy deficient, using the threshold of **2,550 kilocalories** per adult equivalent per day. The highest prevalence of food energy deficient households was found in Addis Ababa (50%), Amhara (49%), Dire Dawa (42%), and Tigray (42%). Overall, urban areas had a similar share of households affected by food energy deficiency (42%) as rural (40%). At national level the average daily energy consumption per adult stood at 3,127 kilocalories.
Diet quality	Half of households sourced a very high portion (>75%) of their total calories from starchy staples, (i.e. a highly unvaried diet) with a marked difference between urban and rural areas in terms of starch heavy diets. 58% of rural households derived a very high portion of calories from starchy staples, vs. 20% of urban. The highest household prevalence of starch-heavy diets was in SNNPR (70%), Oromia (58%), Tigray (52%), Gambela (51%) and Harari (45%). Nationally, 30% of households consumed three or fewer out of seven food groups over a seven day period. The highest percentage of households consuming three or fewer food groups was found in Afar (47%), SNNPR (43%) and Somali (38%). Rural households were more likely to have less diverse diets (34% consumed three or fewer food groups) than urban households (16%).
Diet adequacy	Nationally, more than one in four households (26%) consumed less than acceptable diets according to the food consumption score. Ten percent of households had poor and 17% borderline food consumption. SNNPR showed a particularly high prevalence, with 63% of households consuming less than acceptable diets (31% poor and 32% borderline diets), followed by Addis Ababa (31%) and Gambela (28%). Poor and borderline food consumption was more prevalent in rural areas where 29% of households had poor/borderline food consumption, compared with 17% in urban.
Food poverty	The food poverty line for 2010/11 stood at 1,985 birr. According to HCE data more than one in four Ethiopians (28%) fell below the food poverty line (29% in rural and 21% in urban), meaning more than one in three Ethiopians spent less on food than is required to consume the minimum level of calories for a healthy, active life. The highest regional prevalence was found in Amhara (35%) and Tigray (30%).
Poverty	Nationally, 23% of households fell below the poverty line, according to HCE data. At regional level, Afar and Somali had the highest prevalence of households below the poverty line with 28% and 25% respectively. Consumption/expenditure on food and non-food essentials was lowest among households living in SNNPR and Amhara. In SNNPR more than a quarter of households (26%) fell into the lowest consumption/expenditure quintiles while in Amhara, 22% were in the lowest quintile. By all indicators of wealth and poverty, the rural areas were poorer than urban areas.

	Simpler measures of wealth/poverty, such as the wealth (asset) index, showed a stronger relationship with dietary indicators. Poorer households (by wealth index) were much more likely to source the majority of their calories from starchy staples, and to consume less diverse diets than richer households. Those households relying primarily on livestock were the most likely to be poor, as measured by all indicators. They were also most likely to be energy deficient alongside daily labourers. Starchy diets (more than 75% of calories coming from starchy staple foods) were particularly common among households making a living from livestock, crop production and crop production and livestock combined.
Food expenditure	At a national level, about half (49%) of total household expenditures were on food. The levels were higher in rural Ethiopia (51%) than urban (41%). Households who spend more than 65% of their expenditures on food are considered to have a high share of food expenditure. The highest rates were found in Afar (28%), Gambela (26%) and Somali (22%). Some 14% of rural households had a high share of expenditure on food, compared to 5% in urban areas.
Malnutrition	At the national level, according to the 2011 Ethiopia Demographic Health Survey, there has been a notable decline in chronic malnutrition rates, but the rate was still 'critical' with 44% of children under 5 years stunted. The level of acute malnutrition (weight-for-height) was 'serious', with 10% or 1.1 million children wasted in 2011, though more than 20% of children in the Afar and Somali regions were wasted, a 'critical' situation per WHO classification. The prevalence of underweight children has seen a stark drop, falling from 41% in 2000 to 29% in 2011, a prevalence that is still deemed 'serious' by WHO cut-offs.
Shocks	Of all households, 35% reported having experienced one or more shocks in the past year, rising to 56% in the Somali region. These households were more likely to have poor food consumption. Food price increases and food shortages were the most common shocks, experienced by 18% and 14% of households. A high percentage (62%) of households with livestock as the main occupation experienced one or more shocks.
Climate vulnerability	Rainfall is one of the main climatic determinants of food production in Ethiopia. Wetter years are generally associated with higher food production. Across most of Ethiopia, households reported lack of/erratic rainfall as the main risk contributing to their food insecurity and overall vulnerability. Overall there have been declines in rainfall between March and September from 1980 to the present.

2. Acknowledgements

This first Comprehensive Food Security and Vulnerability Analysis is a joint endeavor by the World Food Programme and the Central Statistical Agency of Ethiopia (CSA). Staff from both agencies participated and coordinated the work, provided and consolidated information, as well as wrote sections of the report. Thanks to the CSA's willingness, WFP was able to incorporate food security modules into an extensive household survey, the Welfare Monitoring Survey (WMS), and also utilize the whole data set from the WMS and the Household Consumption Expenditure Survey. WFP contributed funding towards the HCE and WMS data collection. Special thanks to WFP Rome VAM staff, who took part in the analysis, organized the write up of the report and facilitated a food security analysis training workshop for the CSA and WFP Ethiopia staff.

3. Process and methodology

3.1 Rationale and objectives

The overall objective of the CFSVA is to provide a comprehensive understanding of the food security and vulnerability of Ethiopian people living in rural and urban areas in order to design effective programmes, to advocate for the hungry and poor, and to inform policy.

To achieve this, food security is analysed from the perspectives of food access, availability, utilization and stability. The CFSVA attempts to answer the following five basic questions:

1. How many people are food insecure or are at risk of becoming so?
2. Who are the food insecure and vulnerable?
3. Where do they live?
4. Why are they food insecure?
5. How can food assistance and other interventions make a difference in reducing poverty, hunger and malnutrition?

Furthermore, ten specific objectives were identified for the CFSVA in Ethiopia. These objectives are:

1. To identify food security and livelihood strategies, constraints and coping mechanisms among different socio economic groups in different regions of the country.
2. To undertake in-depth analysis of the major factors that contribute to food and livelihoods insecurity in order to inform policy and programme design and interventions
3. To establish baseline data on urban food insecurity and vulnerability and lay the foundation for annual monitoring of food insecurity and programme performance including safety nets (PSNP).
4. To complement the data generated by the HEA by analysing the causes of food insecurity in Ethiopia.
5. To bring all food security related sectors into one analysis, by looking at sectorial linkages and interplay of sectors at household level and attempting to understand livelihoods holistically.
6. To contribute to information requirements of the IPC.

7. To enable better characterization and classification of chronic food insecure households vs. acute food insecure.
8. To provide household level data analysis since most assessments in the country have been rapid with the exception of the HEA baselines.
9. To analyse and establish linkages between the MDGs, other policies, and development agenda with household capital, the underlying causes of food insecurity, and the multi-sector analysis of food security.
10. To increase the robustness of analysis with statistically driven figures based on food security definition (access and livelihoods, availability and markets; and nutrition and utilization).

3.2 Implementation

WFP entered into an agreement with the CSA to conduct a Comprehensive Food Security and Vulnerability Analysis (CFSVA) making use of the nationwide, multi-topic Welfare Monitoring Survey (WMS) and Household Consumption and Expenditure Survey (HCE) with the objective of providing a rigorous analysis of the levels of food insecurity and its underlying causes. WFP food security and vulnerability modules were incorporated into the WMS survey instruments to compliment the data already collected. These additional sections included:

- 7-day food consumption frequency and sources
- Perceptions on household food shortages
- Shocks and coping strategies

The data collection of the 2011 WMS took place between April-June 2011 and covered all rural and urban areas of the country except the three non-sedentary zones of Afar and six zones of the Somali Region. All conventional households from different agro-ecologies in the rural areas and from smaller towns to large urban centres were fairly well represented by the survey. The survey was designed to provide estimates at regional, rural and urban levels, as well as estimates for major urban centres (regional capitals, large cities and 10 sub-cities of Addis Ababa). The sample size is 17,664 households in 1,104 enumeration areas (EAs) in urban areas, and 10,368 households in 864 EAs in rural areas, giving a total sample of 27,965 households (after accounting for non-response) in 1,968 EAs.

Since 1996 WMS surveys have been assessing the non-income dimensions of poverty in Ethiopia with the objective of informing socioeconomic policies and programmes. Since the 2011 WMS was to complement the HCE 2010/11[1] which addresses the income dimension of poverty, it included additional questions related to food security, and was conducted in approximately 96% of the households that had already participated in the 2010/11 HCE. Key indicators from the HCE survey have been merged into the WMS database to provide additional insights into poverty and food security.

There is no single measure to capture a nation's food security and nutritional status, rather a variety of indicators and measurement techniques are required. This CFSVA provides a number of indicators to assess food security in Ethiopia and these will be discussed in chapter 6.

[1] The 2010/11 HCE data collection took place between July 2010 and July 2011.

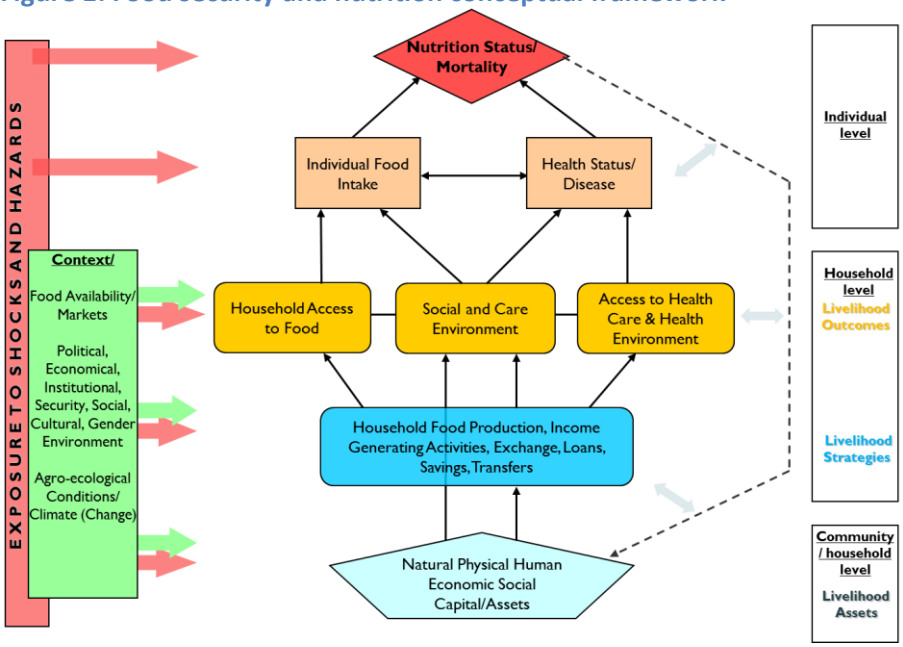
3.3 The food security and nutrition conceptual framework

The conceptual framework was developed by WFP, drawing from several similar frameworks, including the UNICEF framework on the causes of malnutrition, the livelihoods framework, and others that look specifically at food and nutrition security. As food security is multi-dimensional, there is no specific factor or outcome on the framework titled 'food security'; rather, all factors and outcomes are considered when describing the food and nutrition security situation.

"Food security defines a situation in which all people at all times have physical and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life"

World Food Summit, 1996

Figure 1: Food security and nutrition conceptual framework



Food security depends upon four main factors:

Availability of food	Food availability is the physical presence of food in the area of concern through all forms of domestic production, commercial imports and food aid. Food availability might be aggregated at the regional, national, district or community level.
Access to food	Food access concerns a household's ability to acquire adequate amounts of food through own home production and stocks, purchases, barter, gifts, borrowing and food aid.
Utilization of food	Ability of household members to make use of the food to which they have access. This includes an individual's ability to absorb and metabolize the nutrients. It includes the ways in which food is stored, processed and prepared, including the water and cooking fuel used, and hygiene conditions. Utilization can be impaired by illness or poor caring practices.
Stability of food (availability, access, utilization)	Sometimes included as an additional factor to address the time dimension of food security. This can refer to short-term instability or medium term instability, often stemming from climatic, economic, social and/or political factors that may threaten an otherwise food secure situation.

Food security is an outcome of the livelihood strategies adopted by households. A livelihood strategy is an organized set of lifestyle choices, goals, values and activities influenced by biophysical, political, economic, social, cultural and psychological components. In simple terms, livelihood strategies are the behavioural strategies and choices adopted by people to make a living (including how people access food, earn income, allocate labour, land and resources, their patterns of expenditure, the way they manage and preserve assets, how they respond to shocks and the coping strategies they adopt.

Livelihood strategies are based on assets or capital available to households, which include human, social, natural, physical and financial resources. A livelihood strategy is sustainable when "it can cope with and recover from stresses and shocks, and maintain or enhance its capabilities and assets both now and in the future while not undermining the natural resource base" (DFID, 1999).

The conceptual framework recognizes that a household's food security situation is subject to change and fluctuates. This can be either in response to specific shocks — whether naturally occurring or caused by human intervention — or as a result of natural seasonality during the course of the year, reflecting the agricultural cycle of the lean season and times of plenty. In order to do justice to the dynamic nature of food security, the CFSVA analyses households' vulnerability to future shocks and problems and determines their capacities to withstand them. Capacities to withstand shocks such as floods, high food prices and droughts depend on many factors, including a solid asset base, the ease with which households are able to alternate between and rely on the incomes from different livelihoods, the health and physical strength of individual household members and the political environment. By assessing future risks and their potential detrimental impact on household food security, the level of vulnerability of households and individuals is determined.

The framework on which the CFSVA is based considers malnutrition and mortality to be the final outcome or the manifestation of insufficient food intake and/or disease at the individual level. These two immediate determinants of malnutrition and mortality are in turn determined by the household's ability to access food, the care practices used, and the wider health and hygiene environment in which the household lives. Malnutrition can lead to reduced immunity, increased susceptibility to disease, impaired physical and mental development, and reduced productivity. Nutrition is best measured in terms of adequate physical growth in children under five years of age including – underweight (weight-for-age), stunting (height-for-age), and wasting (weight-for-height).

3.4 Linking food security and nutrition to policy

Ethiopia's development plans are well aligned with the Millennium Development Goals and the country is on track to meet many of the MDGs by 2015. The percentage of the population living below the poverty line (set at 3,781 birr/adult/year) has declined from 45.5% in 1995/96 to 29.6% in 2010/11 with poverty more prevalent in rural areas than urban (HCE 2010/11). The percentage of chronically malnourished or stunted children dropped from 58% in 2000 to 44% in 2011 according to the 2011 Demographic and Health Survey.

Nevertheless, the country still has one of the highest malnutrition rates in Sub-Saharan Africa. The levels of underweight and wasting are 'high' by WHO cut-offs, while the level of stunting is considered 'very high'. Underlying causes of food insecurity tend to include land degradation, limited household assets, low level of farm technology, limited diversification of income sources and population pressure. About 85% of the population lives in rural areas, mainly depending on rain fed agriculture, either growing crops

or rearing livestock. Natural disasters such as recurrent drought and floods, as well as high food prices seen since 2008, further aggravate the situation and put a large number of people at risk of becoming food insecure. Causes of malnutrition are multi-faceted and include poor child feeding practices, food insecurity and harmful social and traditional practices.

The main policies and programmes relevant for food security and nutrition in Ethiopia include the Growth and Transformation Plan (GTP) 2010 - 2015, the Agriculture Sector Policy and Investment Framework (PIF), the Food Security Programme (2010-2014), as well as the National Nutrition Strategy.

In order to continue its efforts in reducing malnutrition, the government developed a National Nutrition Strategy in 2008. It included a 10-year National Nutrition Programme that aims to ensure adequate and sustainable nutrition for all Ethiopians. However, its main focus is on the nutritionally vulnerable, particularly children under two years, pregnant and lactating mothers, people living with HIV/AIDS and people in extreme food insecurity situations. Components of the nutrition strategy include nutrition education, micronutrient supplements, child growth monitoring, targeted supplementary feeding and links with water, sanitation and hygiene (WASH).

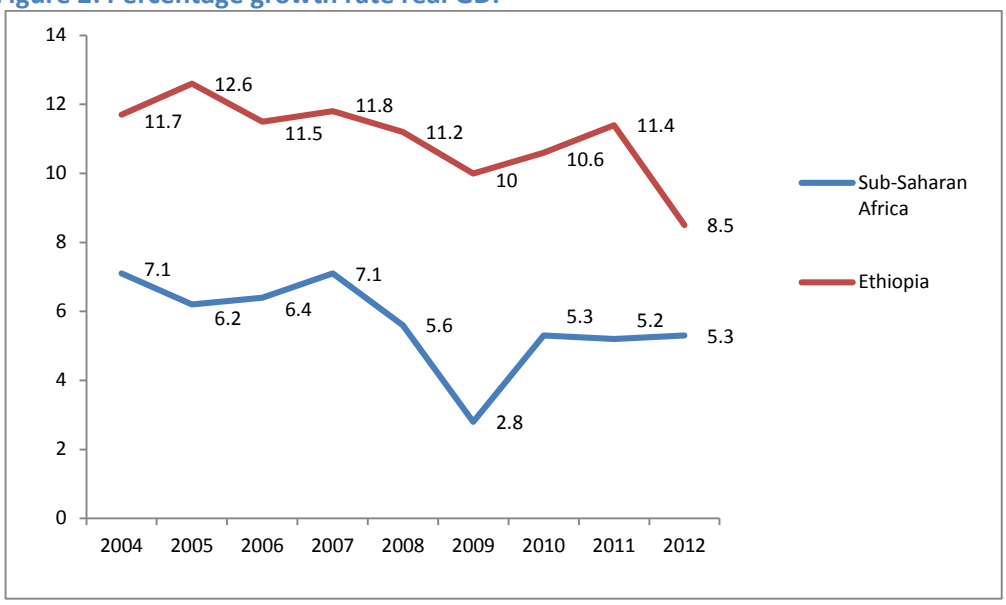
4. Country context

Ethiopia is the second most populous country in Africa with a total population of 86 million[2] and an annual growth rate of 2.6%. Population pressure is a serious problem in the crop farming highland areas. Urbanization is low, with only 17% of the population estimated to live in urban areas.

The Ethiopian economy has been growing fast by any standards in the last eight to nine years. After a downturn due to the severe drought in 2003, the Ethiopian economy recovered in 2004 and GDP grew by an average of 11% between 2004 and 2011/12 in real terms. This is much higher than the growth in Sub Saharan Africa, which grew on average by 5.6% during the same period and higher than the 7% annual growth rate needed to achieve the MDG goal of halving poverty by 2015. Ethiopia's development plans are well aligned with the Millennium Development Goals and the country is on track to meet many of the MDGs by 2015.

[2] This is the population estimated for 2013 by the Central statistical Agency based on the 2007 Census

Figure 2: Percentage growth rate real GDP



Source: Ethiopian Ministry of Finance and Economic Development and IMF SSA report

The agriculture sector contributes 44% of GDP, service 45.6% and industry 11.1%. The main export items in terms of USD value are coffee, followed by gold. International prices for these two commodities highly fluctuate; coffee production is also affected at times by droughts. Ethiopia depends on imports for 100% of its fuel needs, exposing it to increases in world fuel prices.

Despite fast and sustained economic growth, Ethiopia remains one of the world's least developed countries, ranking 173 out of 186 countries in the UNDP 2012 Human Development Index. Gross National Income per capita amounted to USD 370 in 2011, less than a third of the 1258 USD average for sub Saharan African countries. This is partly because the present government, which came to power in 1991, took over a country with a very low development base.

Water and hygiene were classified as safe/unsafe (or improved/unimproved) depending on the source[3]. Nationally, 47% of households rely on an unsafe drinking water source, and 95% do not use improved sanitation[4]. Unsafe drinking water is primarily a rural phenomenon, with 59% of rural households using an unsafe drinking water source, and only 9% of urban households having an unsafe drinking water source. Unimproved sanitation, which is more frequently found in rural areas (99%), is also highly prevalent in urban areas (79%), and even in Addis Ababa 50% of households do not have improved sanitation.

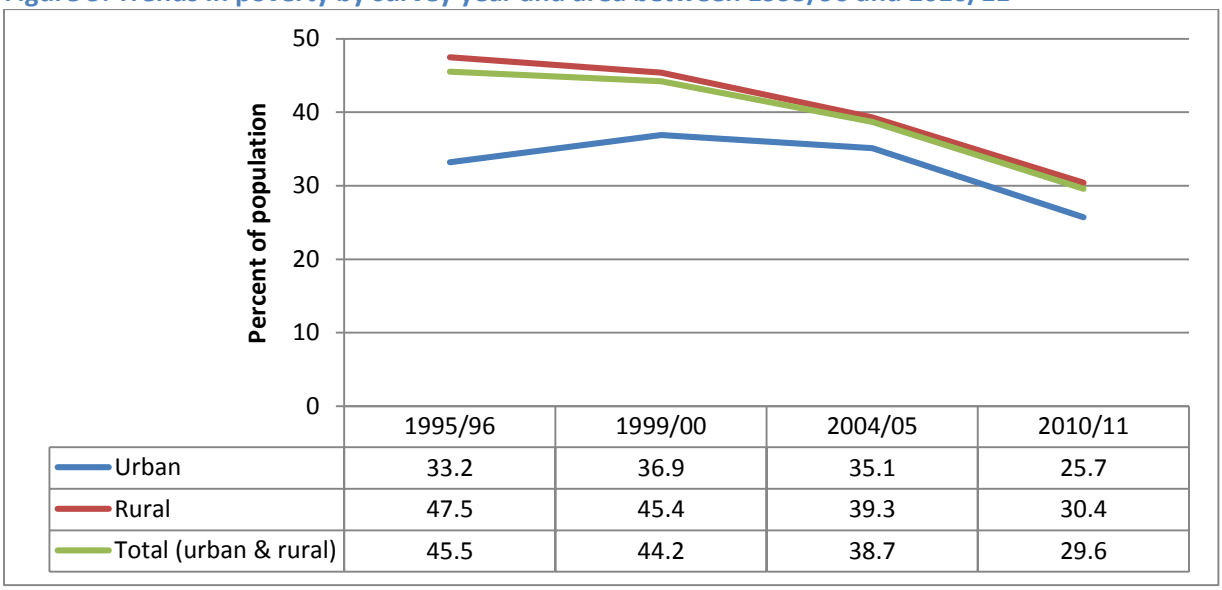
[3] UNICEF standards classify bottled water (water from kiosk) as unsafe (unimproved), but in this analysis it is classified as safe (improved). UNICEF standards classify shared toilets of any kind as unimproved sanitation, but this analysis counts shared flush toilet and shared improved (ventilated) pit latrine as safe

[4] WMS 2011. This data is for the current time of the survey, and the source of drinking water is for the dry season. Rainy season and dry season water sources show very little difference nationally or regionally.

4.1 Poverty trends

Ethiopia has made remarkable progress in bringing down the level and depth of poverty, or the percentage of the population that cannot afford the minimum food and non-food basket worth 3,781 birr/adult/year (HCE 2010/11).

Figure 3: Trends in poverty by survey year and area between 1995/96 and 2010/11



	1995/96	1999/00	2004/05	2010/11
Urban	33.2	36.9	35.1	25.7
Rural	47.5	45.4	39.3	30.4
Total (urban & rural)	45.5	44.2	38.7	29.6

Source: HCE 1995/96, 1999/00, 2004/05 and 2010/11; MoFED (2002, Ethiopian Calendar)

The poverty headcount, which measures the proportion of the population below the poverty line, declined from 45.5% in 1995/96 to 29.6% in 2010/11[5]. This steady drop has been seen in both rural and urban areas. However, it has been much more pronounced in rural areas where poverty has seen a 36.0% reduction over the same period (from 47.5% in 1995/96 to 30.4% in 2010/11). Urban poverty has decreased less by 22.6% (from 33.2% in 1995/96 to 25.7% in 2010/11).

The decline in poverty can be attributed to the wide–ranging and multi-faceted pro-poor programmes that have been implemented in both rural and urban areas. The rural areas have seen diversified extension programmes, rural infrastructural developments, and a range of food security programmes (safety net programmes, provision of credit facilities, market accessibilities, etc.) through the Productive Safety Net Programme, which started in 2005 and is now assisting about 8 million beneficiaries. Since 2005, urban areas have been supported with the implementation of micro- and small-scale

Household vs individual poverty data

This section employs poverty data from the HCE reports, which use the poverty headcount (the prevalence of the population under the poverty line).

In later sections in this report, where WMS and HCE data are analysed together, the percentage of *households* under the poverty line is presented rather than the percentage of the population, in order to match with the household level food security indicators from the WMS data.

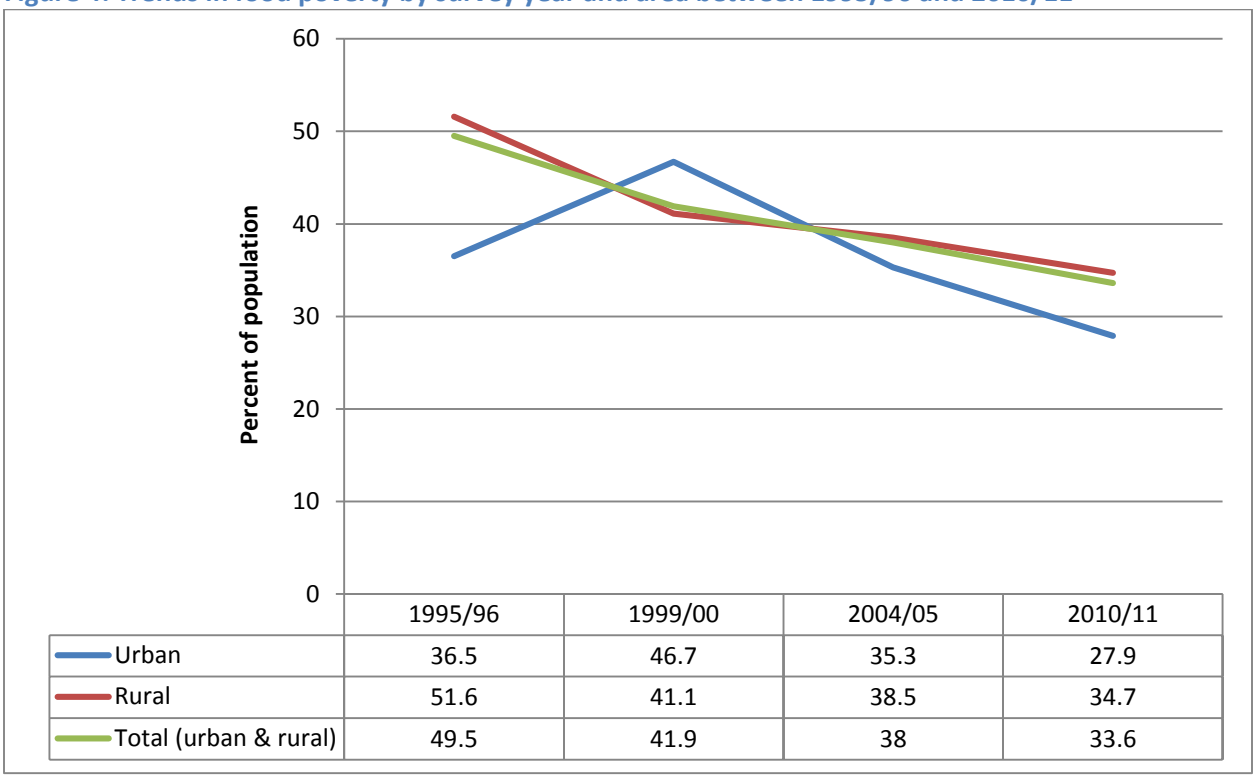
There are differences in the prevalence when using household vs. headcount. For example, in 2010/11, 29.6% of the *population* fell under the poverty line, and 23% of *households* fell under the poverty line. (HCE data)

[5] Interim Report on Poverty Analysis Study (2010/11)

enterprise development programmes, creation of favourable environments for private sector investment job creation activities, credit facility arrangements and distribution of subsidized basic food consumption items supplied to the urban poor in order to manage and monitor price inflation effects.

Similar to Ethiopia's trends in poverty between 1995/96 and 2010/11, food poverty (or the share of the population unable to afford the minimum food basket worth 1,985 birr/adult/year, providing the minimum caloric requirement of 2,200 kilocalories per capita[6] has also steadily declined.

Figure 4: Trends in food poverty by survey year and area between 1995/96 and 2010/11



	1995/96	1999/00	2004/05	2010/11
Urban	36.5	46.7	35.3	27.9
Rural	51.6	41.1	38.5	34.7
Total (urban & rural)	49.5	41.9	38	33.6

Source: HCE 1995/96, 1999/00, 2004/05 and 2010/11; MoFED (2002, Ethiopian Calendar)

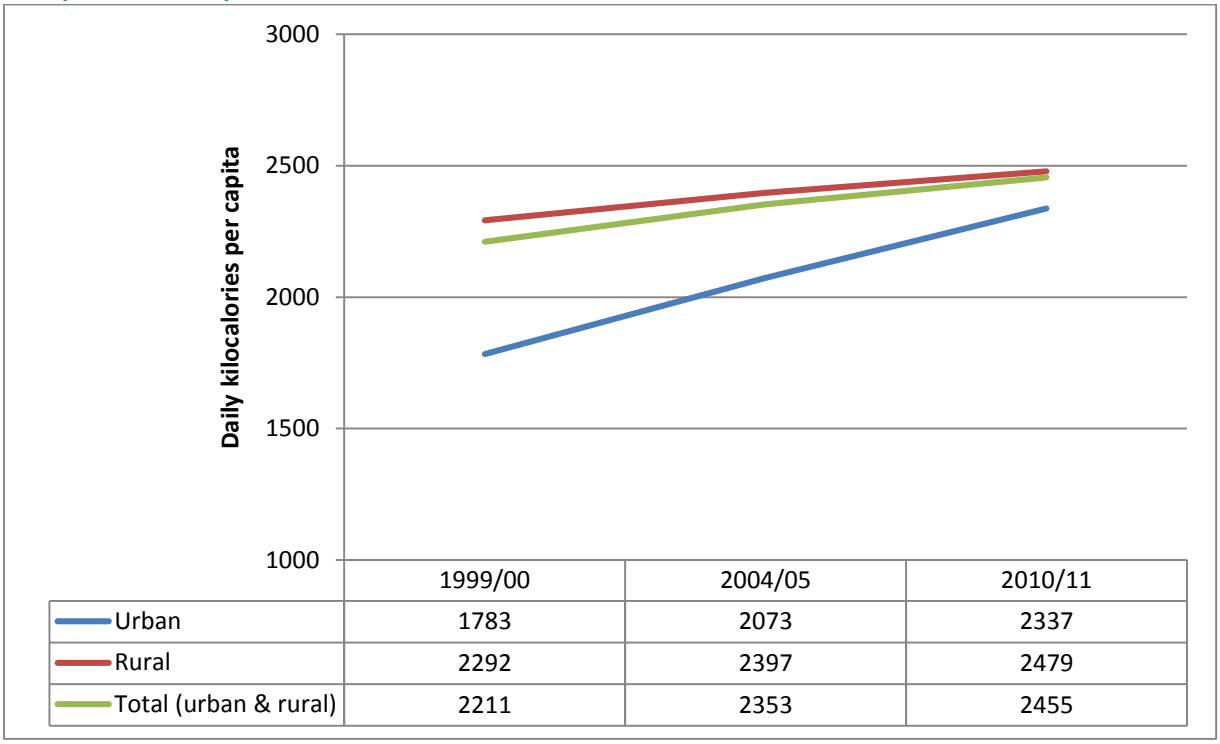
While in 1995/96 almost half of the Ethiopian population was found to spend less on food than is required for the consumption of the minimum level of calories for a healthy, active life (49.5%), by 2010/11 the share of those in food poverty had fallen to 33.6%. In rural areas the drop has been particularly stark, from 51.6% of food poor Ethiopians in 1995/96 to 34.7% in 2010/11. In urban areas food poverty fell by 23.6% over the same period, from 36.5% to 27.9%.

In line with improved economic status, levels of per capita energy consumption (kilocalories) have also been increasing over the years. In 1999/2000, average daily kilocalorie consumption was below the minimum requirement of 2,200 kilocalories in urban areas, and a little above the threshold in rural areas.

[6] The minimum kilocalories per adult differs from the minimum per adult equivalent. The latter takes into account the demographic composition of the population while per adult does not.

However, by 2010/11 it had increased by 31.1% in urban areas and by 8.2% in rural areas. At national level, per capita kilocalorie consumption has seen an increase by 11.0% from 1999/2000 to 2010/11.

Figure 5: Trends in daily per capita gross kilocalorie consumption by survey year and area between 1999/00 and 2010/11



	1999/00	2004/05	2010/11
Urban	1783	2073	2337
Rural	2292	2397	2479
Total (urban & rural)	2211	2353	2455

Source: HICE 1999/00, 2004/05 and HCE Survey 2010/11

However, while household poverty and food poverty rates have fallen over the years, the rates tend to disguise the actual situation on the ground. A more realistic picture is portrayed by the poverty head count, which looks at poor population figures over the years, taking population growth into consideration. In this case, the improvements in poverty and food poverty reduction are significantly less marked. Between 1995/96 and 2010/11 the number of poor Ethiopians dropped by 1.8 million people, while the decrease in the number of food poor is even less with a decrease of about 0.8 million people.

Furthermore, looking at regional population figures, it is worth pointing out that the number of poor Ethiopians has in fact increased over the 15-year period in seven out of 11 regions as seen in Table 1. In Somali, Gambela and Afar, the number of poor people increased by over 50% between 1995/96 and 2010/11. Regions that have seen a substantial reduction in the number of poor include Tigray, SNNPR, Harari and Amhara.

Table 1: Population (in 100,000s) falling below poverty line by region, survey year and percentage change between 1995/96 and 2010/11 (sorted by highest to lowest percentage change)

	1995/96	1999/00	2004/05	2010/11	% change 1995/96 - 2010/11
Somali	1.030	1.402	1.723	1.591	54.5%
Gambela	65	107	NA	100	53.9%
Afar	366	681	487	551	50.6%
Dire Dawa	80	105	130	106	32.5%
Oromia	6.725	8.919	9.280	8.630	28.3%
Addis Ababa	670	901	913	829	23.7%
Ben/Gumuz	226	290	264	233	3.1%
Tigray	1.851	2.268	1.995	1.505	-18.7%
SNNPR	6.139	6.370	5.381	4.861	-20.8%
Harari	31	41	50	22	-29.0%
Amhara	7.902	6.811	7.282	5.596	-29.2%

Source: The 1995/96, 1999/00, 2004/05 HICE, 2010/11 HCE Surveys, and a series of Statistical Abstracts published by the CSA

Table 2: Population (in 100,000s) falling below food poverty line by region, survey year and percentage change between 1995/96 and 2010/11 (sorted by highest to lowest percentage change)

	1995/96	1999/00	2004/05	2010/11	% change 1995/96 - 2010/11
Gambela	54	121	NA	81	50.0%
Afar	368	649	521	492	33.7%
Oromia	8.287	8.495	9.261	9.953	20.1%
Somali	1.279	1.572	1.681	1.295	1.3%
Ben/Gumuz	286	296	264	283	-1.1%
Addis Ababa	813	1.185	909	770	-5.3%
Amhara	8.353	5.296	7.039	7.798	-6.6%
Dire Dawa	95	88	128	81	-14.7%
Tigray	2.141	1.984	1.925	1.756	-18.0%
SNNPR	5.688	6.846	5,211	4.253	-25.2%
Harari	32	52	46	9	-71.9%

Source: The 1995/96, 1999/00, 2004/05 HICE, 2010/11 HCE Surveys, and a series of Statistical Abstracts published by the CSA

The number of food poor has increased in four out of the eleven regions, with largest shares seen in Gambela, Afar, Oromia and Somali. Harari has been by far the most successful in reducing food poverty over the years with a decrease of 72% in food poverty.

4.2 Geography and climate

Ethiopia is located in the North East part of the Horn of Africa bordering Kenya, Djibouti, Eritrea, Sudan and Somalia. Generally speaking, the country is politically stable, but is vulnerable to the fragile geo-political context in the horn of Africa.

It is not only a large country with a total area of 1.13 million km^2, but has a heterogeneous topography and highly variable climate. The massive Ethiopian highlands are found in the northern and central parts of the country divided by the Great Rift Valley into Western and Eastern highlands. The plateaus and mountains on average range from 1500m to 2500m above sea level, the highest mountain standing at 4550m. The densely populated highlands constitute about 40% of the total land area. They are surrounded by semi deserts and lowlands.

The country has a tropical monsoon climate, but high altitude areas have a cool and temperate climate. The climate can be broadly classified into three zones. In altitudes above 2400m, the climate is cool, with temperatures ranging from near freezing point to 16°C, while in areas below 1500m it is significantly warmer with temperatures ranging from 27°C to above 40°C in the daytime. In between, there is a temperate climate.

The varied topography and climate combined with the prevalence of malaria in lowlands translate into different agricultural potential, population settlement and livelihood patterns (see below).

4.3 Population

Much of the data in this report is presented as prevalence (percentage) of populations by geographic areas. These prevalence data provide an indication of the depth of the problem, but fail to account for the breadth of the problem. For example, a smaller prevalence of a given indicator in a highly populated region (such as Oromia) may be describing a larger number of households/people that have a higher prevalence of the same indicator in a less populated region, such as Harari. As such, the total population of the regions must be kept in mind when interpreting results, and when making programmatic decisions.

As of July 2012, CSA estimates the total population of Ethiopia to be 84,320,987 people, based on an extrapolation of the 2007 census data. Using the 2007 estimates of urban/rural populations in each region, the following populations were calculated:

Table 3: Population estimates by regions and rural / urban areas[7]

Region	TOTAL 2012 population projections	Rural population[8]	Urban population[9]	Percent urban (2007 Census)[10]
Tigray	4,929,999	3,966,184	963,815	19.6%
Afar	1,602,995	1,389,476	213,519	13.3%
Amhara	18,866,002	16,551,144	2,314,858	12.3%
Oromia	31,294,992	27,758,658	3,536,334	11.3%
Somali	5,148,989	4,427,101	721,888	14.0%
Benishangul Gumuz	982,004	849,335	132,669	13.5%
SNNPR	17,359,008	15,619,635	1,739,373	10.0%
Gambela	385,997	288,070	97,927	25.4%

[7] Source: http://www.csa.gov.et/images/documents/pdf_files/nationalstatisticsabstract/2011/2011%20population.pdf
[8] Projected 2011 population multiplied by 2007 percent of rural population
[9] Projected 2011 population multiplied by 2007 percent of urban population
[10] Special enumeration areas % urban is based on the urban projected population from 2012

Harari	210,000	96,222	113,778	54.2%
Addis Ababa	3,041,002		3,041,002	100.0%
Dire Dawa	387,000	122,950	264,050	68.2%
Special Enumeration Areas	112,999	77,495	35,504	31.4%
Ethiopia	**84,320,987**	**71,146,269**	**13,174,718**	**13.6%**

Throughout this report, the data is reported by urban and rural strata, by region, and also by urban and rural strata within each region. It is important to note the following points when interpreting the data:

- The region of Addis Ababa has no population classified as rural.
- The regions of Dire Dawa and Harari are geographically very small, and the majority of their populations are urban. The rural populations in these regions tend to have some urban characteristics in their results.
- The survey did not cover the non-sedentary populations in Afar (three zones), and Somali (six zones).

5. Food availability, markets and production

Market and food production information address some of the immediate and underlying causes of food insecurity, in terms of economic access to food (market prices, household income sources and food availability at a national and sub-national level).

5.1 Agriculture

The majority of the Ethiopian population, about 85%, derives its livelihood from agriculture. Most of these (about 90%) are households with small land holdings, practising crop farming. The average farm holding is estimated at 0.93 hectares with about 55% of farmers cultivating one hectare or less. Some 97% of crops are grown by smallholders who usually keep some livestock too. Pastoralists make up about 10% of the population.

Low agricultural productivity is attributed to a multitude of factors including population pressure which resulted in serious land degradation (close to 50% of agricultural land is highly degraded, see UNDAF 2011-2015) and small farm size, recurrent drought and lack of farm technology.

But agriculture is the main contributor to GDP: though it declined from 57% in 1996 to 44% in 2011/12 there is still great growth potential since Ethiopia has abundant land, water and labour. Currently less than 30% of the arable land is cultivated. Only about 250,000 hectares out of a potential 5 million hectares is irrigated. Agriculture is also the main contributor to external trade, accounting for 90% of exports. The Growth and Transformation plan, (the country's five year plan of 2010-2015) places a special focus on agriculture as the lead sector to fuel development in Ethiopia, since it accounts for about 41% of GDP, 85% of employment and 90% of export.

The Development Objective of the Agricultural Policy and Investment Framework is to "sustainably increase rural incomes and national food security". In order to achieve this objective, the agriculture sector is focused on the following four priorities:

Increasing productivity of smallholders	To produce more food and sustain the increase
Rural commercialization	To encourage smallholders to sell more of their produce
Natural resource management	To protect and nurture the environment
Disaster risk management and food security	To eliminate hunger and protect the vulnerable

So far, programmes to address the above have included irrigation development, market system and infrastructure development, livestock development and provision of safety-nets to protect vulnerable households.

Progress to date is encouraging - but huge investment is still needed. For example, productivity of main crops has grown from 12.1 quintals per hectare in 2004/05 to 18 qt/hectare in 2011/12[11]. Market integration has improved due to improved roads and telecommunications, though still needs to develop further (Dorosh, 2013).

The four most important cereals in terms of area cultivated, yield and consumption are maize, teff, sorghum and wheat. In 2012/13 maize accounted for 26.6% of total grain production (cereals, pulses plus oil seeds) followed by teff (16.3%), sorghum (15.6%) and wheat (14.9%).[12]

As can be seen in Table 4 below, cereal and pulses production in the main (meher) season grew from 11 million tons to 22 million between 2004/05 agricultural year and 2012/13 thanks to increased utilization of improved inputs, increased land under cultivation and favourable weather in some years. Still, compared to sub-Saharan Africa, agricultural productivity is low.

Table 4: Main (meher) season cereals and pulse production from small farm holdings[13]

Year	Area in 1000 hectares	Production in 1000 tons
2004/05	8,986	11,380
2005/06	9,373	12,895
2006/07	9,850	14,458
2007/08	10,247	15,499
2008/09	10,354	16,461
2009/10	10,722	17,432
2010/11	11,048	19,714
2011/12	11,204	21,126
2012/13	11,464	22,401

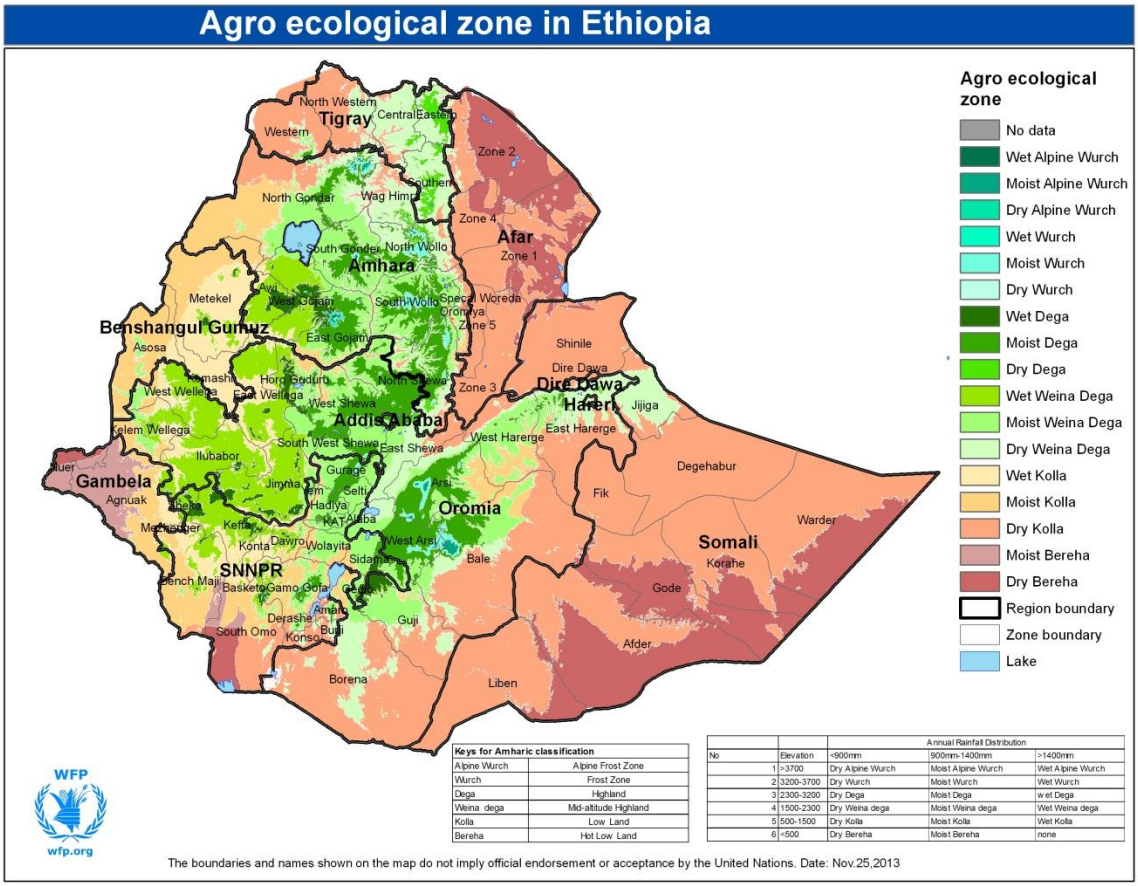
[11] Growth and transformation Plan 2011/12 annual Progress Report
[12] CSA data
[13] CSA area and production reports

5.2 Food availability and markets

Local food production

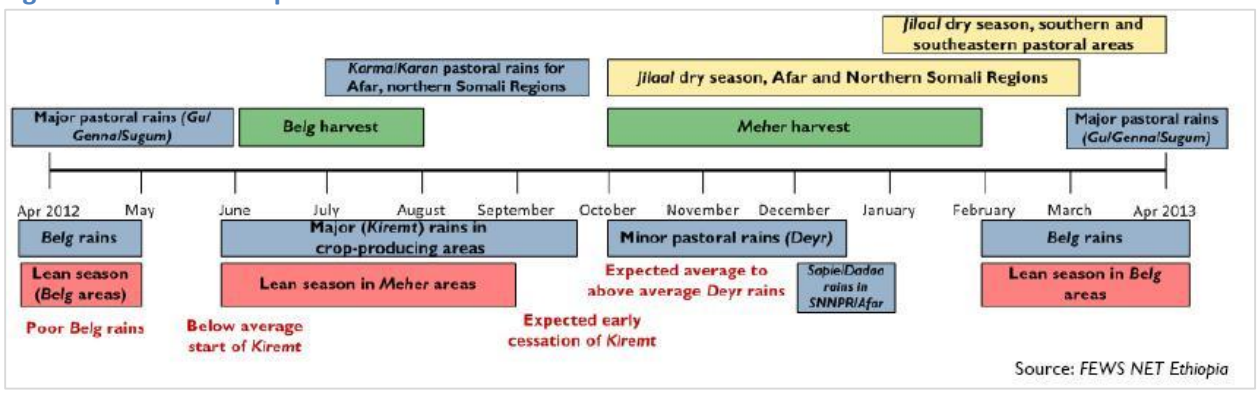
Crops are produced in the high and mid lands which receive better amounts of rain. Important staple crops such as teff can be produced in cold areas. Most of the lowlands in the South as well as in the North Eastern part of the country are sparsely populated and the main livelihood is pastoralism.

Figure 6: Agro ecological zones in Ethiopia



The rainfall system is complicated. The big rains (Meher) occur between mid-June and mid-September and the small rains (Belg) between February and May, these small rains being the main ones for pastoralists in Somali and Oromia regions. Some crop producing areas have a long unimodal rain system with one harvest while other parts of the country have bimodal rains and two harvest seasons. The seasonal calendar below depicts the different rains, production and hunger seasons.

Figure 7: Seasonal crop calendar

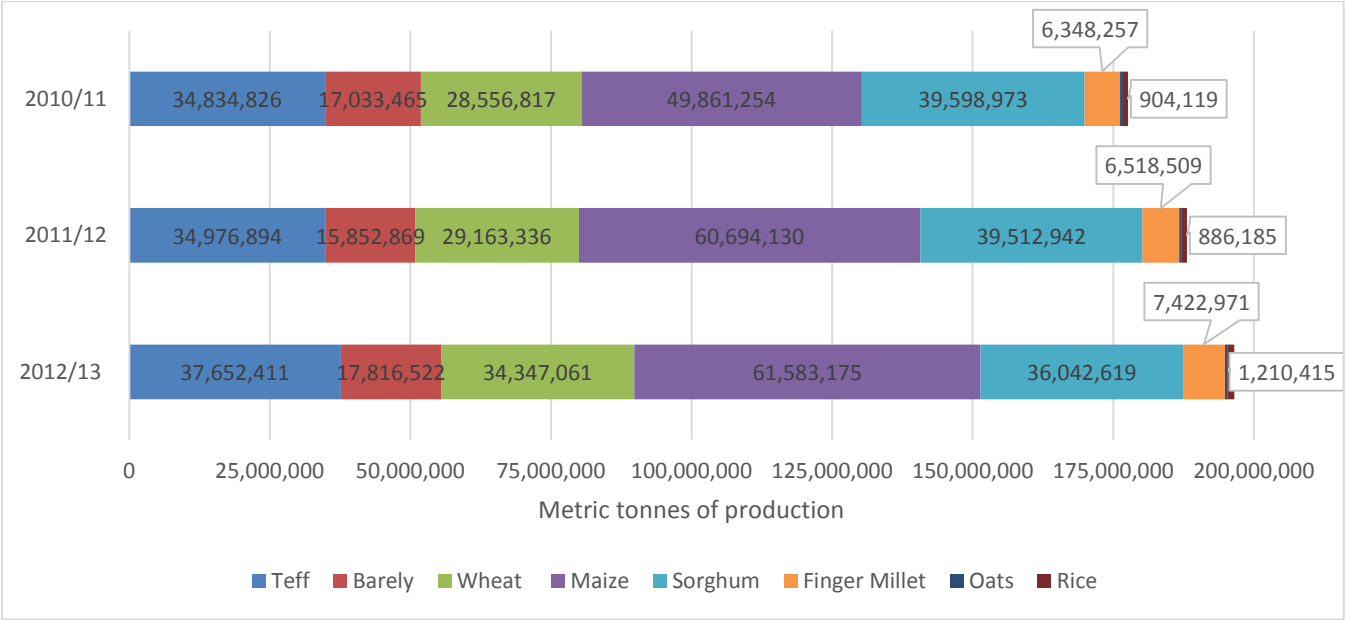


Meher production accounts for about 90% of total grain production. Total grain production has grown annually - by 7.4% over 2010/11 and 2011/12 and by 5.8% between 2011/12 and 2012/13.[14]

In the 2012/13 meher season, total grain production was 23 million mt. Of total cultivated land, cereal (maize followed by teff, sorghum, wheat and barley) accounts for 80%; pulses (chiefly fava bean, field peas, haricot beans and chickpeas) 13% and the remaining 7% oil seeds.

There is high regional disparity in terms of production with Amhara and Oromia regions producing more than three quarters of total grain production. Compared to 2011/12, the production of cereals increased by 36% for rice, 18% for wheat, 12.7% for barley, 8% for teff and 1% for maize. However, the production of oats and sorghum decreased respectively by 8% and 12%.

Figure 8: Production of key crops from 2010 to 2013

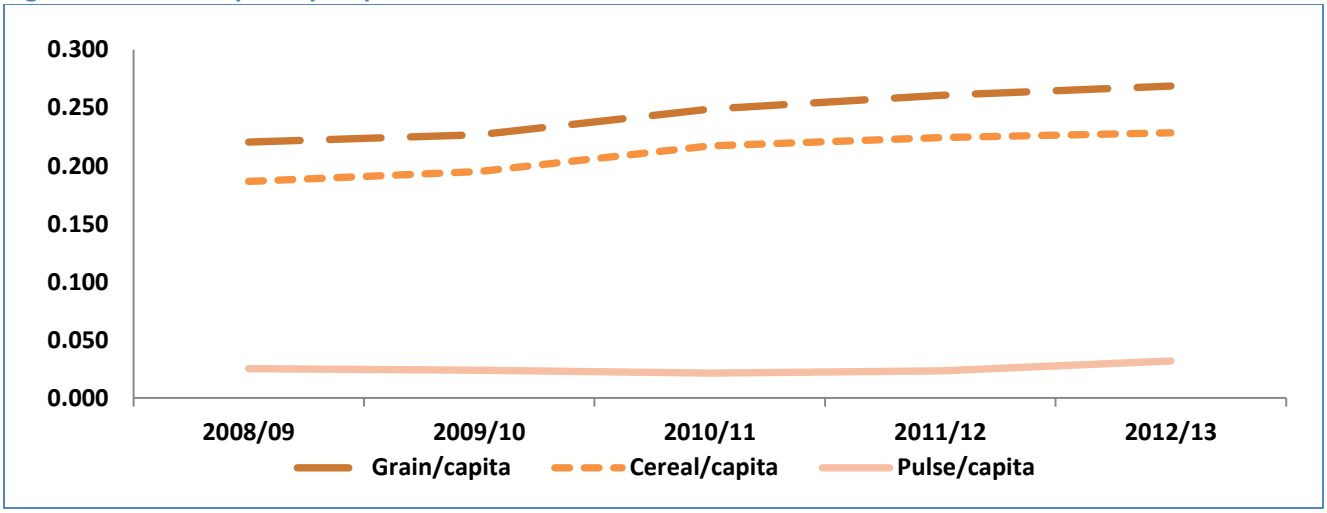


Source: Central Statistics Agency

[14] Based on CSA production result

The per capita production of grain, cereal and pulses steadily increased over the last years (see Figure 9). The per capita production of grain stood just above the minimum consumption threshold level of 0.218mt/person/annum required to meet the basic food requirements [15] of 2100 kilocalories/day recommendation. However, grain production is not uniform throughout the country, so the figures may not reflect localized production disparity. The regional disparity in terms of production has implications for the food security of poor and very poor households living in production deficit areas, particularly during the lean season when these households deplete their stock and largely depend on markets to purchase staples.

Figure 9: Trends in per capita production, mt



Source: Central Statistics Agency

Imports/exports

As a land locked country Ethiopia has high import costs. Although, the majority of food needs are met through domestic production, about 1 million tons a year is imported through food aid and government procurement. Very low cereal volumes are imported through the private sector.

Historically, the country is less dependent on commercial imports for staple cereals, except of durum wheat for the production of pasta in food processing factories. However, to safeguard low income households from the impact of the food price hike that happened in 2007/08, the Government has started to import wheat grain from international markets for sale at subsidized prices to low income, urban households and mills to stabilize white bread prices in order to protect the consumer (especially poor households).

Wheat imports peaked in 2010/11 when they stood at 22.5% followed by 2008/09 (20%) and 2011/12 (7%). The introduction of the wheat grain subsidy helped stabilize prices and guarantee a minimum weight of white bread which is mainly consumed by the urban poor. Furthermore, this intervention prevented

[15] The basic requirements, assuming all energy comes from cereals, is set at 2,100 kilocalories/person/day on average, which translates to about 0.255 mt of cereals/person/year, assuming about 3,000 kilocalories from 1kg of cereal.

the price of locally produced wheat and its substitutes from rising sharply, thereby protecting the low income urban population. Subsidized wheat flour is 20% less than wheat sold by private millers.

Export bans of staple cereals have been in place at various times in the past years. As food costs spiralled in Ethiopia in early 2011, the Federal Ministry of Trade set retail price ceilings for 18 basic food products and implemented direct sales of cooking oil and sugar. Price ceilings were removed around mid-2011 for most but remained in place on Government imported sugar, palm oil and wheat distributed to consumers through traders, cooperatives and consumers' associations.

Ethiopia's Emergency Food Security Reserve Agency is able to store over 400,000 tons of grain. According to USAID (2012), the reserve loaned grain to humanitarian agencies against a promise of replenishment. As of July 2013, EFSRA stocks were estimated at 212,970 mts.

The Ethiopian Government has intermittently banned the export of staple cereals to neighbouring countries in an effort to stabilise local cereal prices. Though the export ban is in place, maize, fava beans, lentils and chickpeas are traded out through informal routes. For instance, FEWS NET cross border trade monitoring data showed 1386mt of cereal and 5547mt of pulses were traded out to South Sudan and Sudan from January to July 2013. Pulses are mainly formally exported.

On the bright side, the export earnings have grown by 37% between 2009/10 and 2011/12. This increase is due to increased volume of exported items such as gold, oil seeds, pulses, live animals and meat, flowers, fruits and vegetables as well as a rise in international prices for some of these items. However, export earnings are vulnerable to price changes in international markets and domestic factors as indicated in the decline in export earnings between 2011/12 and 2012/13.

5.3 Market environment

Policies affecting market functionality

In a context of food inflation, the government closely monitors food markets and intervenes in markets to keep prices affordable for low income households.

Since the lion's share of a household budget is spent on cereals, food price inflation mainly comes from a rise in the price of staples. There seems to be a consensus for the expansion of social safety net programmes that target the poorest who are cereal dependent and vulnerable to price fluctuations (von Braun, 2008).

In the recent market stabilisation programme, the Government of Ethiopia has shifted from subsidising fuel oil to grain to ease the spiralling cost of food. The measures include companies and traders avoiding value added tax (VAT) on grain trade, intermittent bank loan freezes to curb the money supply in the economy (which is believed to be one of the factors causing high inflation in the country), increased bank reserve requirements from 5% to 10%, wage rate adjustment, export ban of cereals, setting wholesale and retail ceiling prices on selected basic commodities and import of wheat, sugar and palm edible oil for distribution at subsidized prices.

Although the 20% devaluation of the Birr in September 2010 did not translate into an immediate increase in inflation (USAID, 2011), the decision nonetheless had implications for the competitiveness of local goods relative to imports. The prices of imported commodities in particular have risen in tandem with the exchange rates. The Birr has been steadily declining in value over the past decade. Meanwhile, the price of agricultural inputs and the price of oil have increased following the devaluation, directly impacting the purchasing power of poor households whose income has remained relatively stagnant.

5.4 Market access, market dependence and purchasing behaviour of households

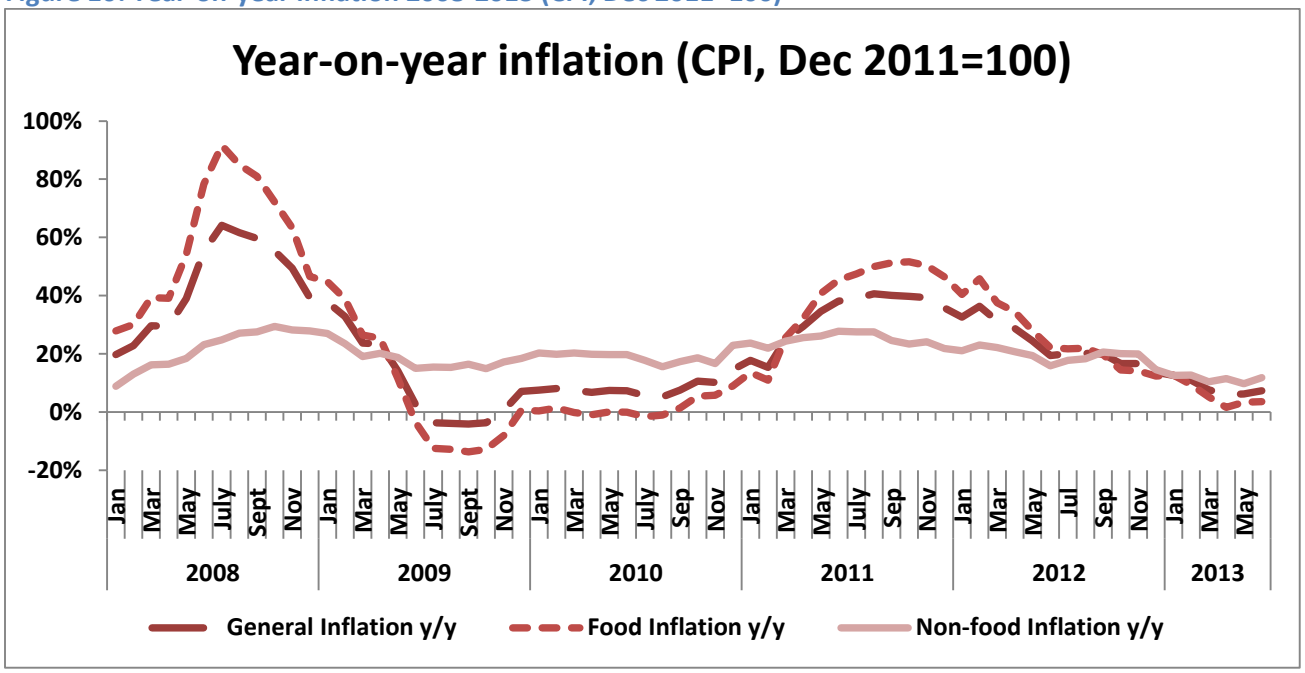
CPI/inflation

Generally, in countries like Ethiopia where poor households spend a significant proportion of their income on food, inflation will hit poorest households hardest. The most vulnerable households are those that earn income from a single income source, unskilled wages, pensioners, the disabled, female headed households and households that are highly dependent on market purchases. For these households, rising food prices are likely to negatively impact their food security situation.

High inflation affected food security in Ethiopia between 2008 and 2012. A hike in cereal prices was the main contributor. In July 2008 the year-on-year country level inflation rate peaked sharply and stood at 64% (Dec 2006=100) before falling to below zero in mid-2009. Similarly, the year-on-year food inflation rate also peaked in July 2008 (91.6%) and sharply dropped to below zero from June to November 2009. General inflation remained stable in 2010, but started to move upwards slightly in September 2010 despite favourable weather conditions for both harvest seasons coupled with markets and administrative measures taken. Inflation rates steadily increased again in 2011, reaching 40% (general) and 50% (food) in August and remained high until starting to decline in December. The decrease in general inflation rates in December also coincided with a decrease in food inflation as the 2011 harvest started coming in.

Inflation has been brought to a one digit figure now standing at 6.3%. However, it will remain a challenge due to dependence on imported fuel as well as domestic factors like borrowing. More importantly food prices are still higher than the five year average.

Figure 10: Year-on-year inflation 2008-2013 (CPI, Dec 2011=100)



Source: Central Statistics Agency

The average annual inflation rate indicates that the period from July 2008-June 2009 showed the highest inflation rates followed by July 2011-June 2012. The minimum inflation rates were observed from July 2009 to June 2010 (see Table 5). The volatility of prices is more pronounced for food than non-food. With regards to inter-year comparison of price volatility, 2009 followed by 2010 were highly volatile for general, food and non-food inflation.

Table 5: Annual average inflation rates

Year	General	Food	Non-Food
2007- 2008	24.9	34.2	12.3
2008- 2009	38.7	48.6	24.1
2009- 2010	3	-5	18.1
2010- 2011	18	15.8	21.6
2011- 2012	34.3	42.9	22.4

Note: budget year is from July to June

Source: Central Statistics Agency

Physical access to markets

Most Ethiopians still rely on pack animals and carrying loads on their own heads and backs to get goods to market. The Ministry of Finance and Economic Development indicates some 48 million people in rural areas live further than two km away from the nearest all weather road and the average time taken to reach the nearest all weather road is about 2.94 hours. On average, households are more than 10 km away from a dry-weather road and 18 km away from public transport services.

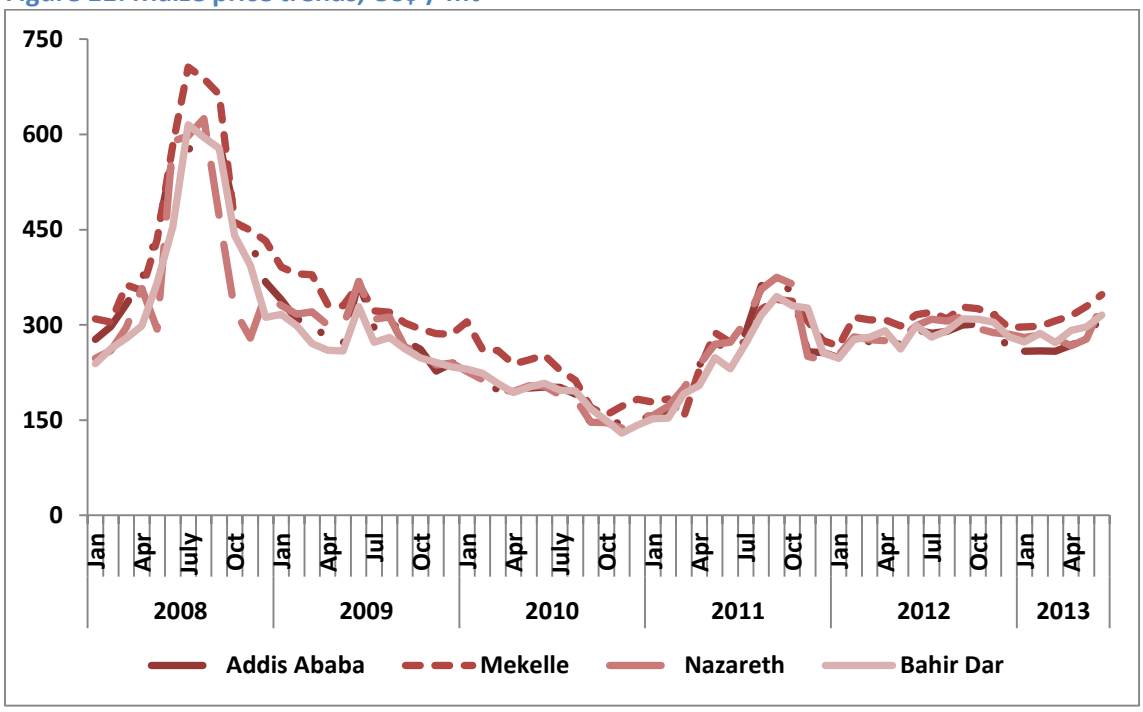
Some 43% of all Kebele do not have any motorable access and are impassable or unreachable by motorized transport in any season. Though regional disparity exists, on average it takes 4.4 hours to reach the nearest market centre, which is on average 13.25kms away.

5.5 Market structure and performance

Millions of farmers and consumers as well as a number of marketing agents are engaged in the production and consumption of grain and in the provision of diverse marketing services, namely, buying, selling, transporting, storing, processing and retailing. The main grain market actors in Ethiopia consist of smallholder producers, assemblers, inter-regional traders, Ethiopian Grain Trade Enterprise (Government owned), private wholesalers, processors, retailers and consumers. Producers' market outlets include: (a) direct sales to rural and urban consumers (b) direct sales to rural assemblers/farmer-traders, (c) sales to retailers, (d) direct sales to inter-regional traders, (e) direct sales to Government and (f) direct sales to privately owned large mills.

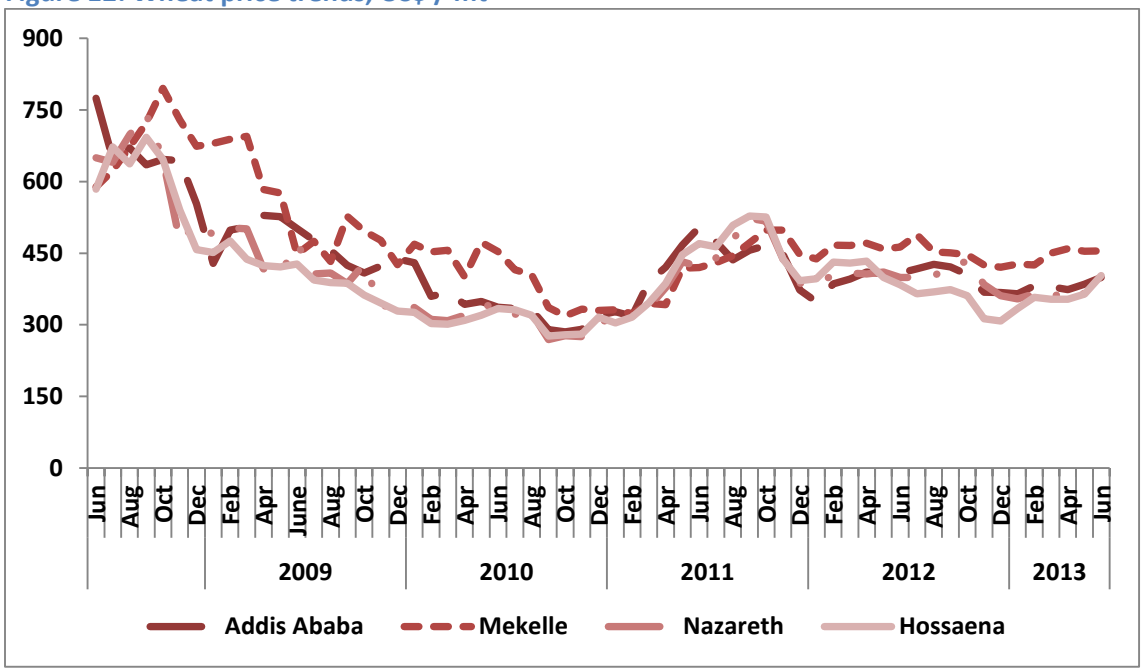
The price analysis depicted in Figure 11 and Figure 12 below is computed for maize and wheat, which are produced and consumed by most rural households. It is based on wholesale nominal prices and on the conversion of local prices to US dollars using the respective monthly exchange rates. Price trends showed an almost uniform situation across different markets.

Figure 11: Maize price trends, US$ / mt



Source: Ethiopian Grain Trade Enterprise

Figure 12: Wheat price trends, US$ / mt



Source: Ethiopian Grain Trade Enterprise

6. The state of food and nutrition security in Ethiopia

This section provides a geographic overview of the household level food security situation across Ethiopia based on a number of outcome indicators as listed above i.e., diet quantity, diet quality, diet adequacy, wealth and poverty, and nutrition. Results are presented for each region, by rural and urban areas, as well as overall rural and urban areas separately. The indicators of diet and poverty are primarily linked to food access, particularly economic access. Nutrition indicators may be viewed as an outcome of food access, and can also be viewed as indicators of food utilization. This section addresses the questions of where the food secure are located and how many they are, and just begins to touch on the questions of who is food insecure and why.

There are several proxy indicators for food security analysed in this report, so estimates of food insecurity differ according to the criteria used. The key proxy indicators of food security and the household prevalence at the national level are presented here, and further described in the following sections.

Table 6: Key food security proxy indicators

Dimension of food security	Indicator description	National prevalence (percentage of households)
Diet quantity	Food Energy Deficiency (household caloric consumption less than 2,550 per adult equivalent per day)	40%
Diet quality	Households with high percent of calories from starch staples (>75%)	50%
	Households that consumed an average of three or fewer food groups (out of 7) per week	30%
Diet adequacy	Poor/borderline Food Consumption Score	26%
Wealth and poverty	Absolute poverty (household consumption-expenditure below the poverty line)	23%[16]
	Food poverty (household food consumption expenditure below the food poverty line)	28%[17]

Table 7 below summarizes each of these indicators by the reporting strata of the WMS and HCE as well as by wealth, livelihoods and the gender of the household head.

[16] This is the percent of ***households*** under the absolute poverty line. The CSA official numbers report that 30% of the ***population*** (poverty headcount) are below the poverty line. Households under the poverty line are on average larger (more members), so the household prevalence of poverty underestimates the population prevalence of poverty.

[17] This is the percent of ***households*** under the food poverty line. The CSA official numbers report that 38% of the ***population*** (food poverty headcount) are below the food poverty line. Households under the food poverty line are on average larger (more members), so the household prevalence of food poverty underestimates the population prevalence of poverty.

Table 7: Key indicators by main strata

	Diet Quantity		Diet Quality		Food Consumption Adequacy		Economic Vulnerability				
	Mean kilocalories per adult equivalent per day	Consumption < 2550 kcal / adult equivalent / day (% of households)	>75% of total household calories coming from starch staples (% of	Low dietary diversity (<=3 food groups over 7 days) (% of households)	Poor food consumption (% of households)	Poor or borderline food consumption (% of households)	Below absolute poverty line (% of households)	Below food poverty line (% of households)	75% or more of total expenditures on food (% of households)	65% or more of total expenditures on food (% of households)	Lowest total expenditures per capita quintile (% of households)
Total (Ethiopia)	**3127**	**40%**	**50%**	**30%**	**10%**	**26%**	**23%**	**28%**	**2%**	**12%**	**20%**
REGIONS											
Tigray	3048	42%	52%	20%	3%	15%	24%	30%	1%	11%	16%
Afar	3091	38%	43%	47%	1%	6%	28%	25%	9%	28%	17%
Amhara	2794	49%	33%	36%	2%	11%	24%	35%	3%	14%	22%
Oromia	3181	40%	58%	20%	6%	20%	22%	27%	1%	9%	19%
Somali	3132	40%	39%	38%	7%	16%	25%	21%	6%	22%	17%
Benishangul Gumuz	3339	36%	32%	18%	2%	17%	23%	28%	2%	11%	18%
SNNPR	3529	27%	70%	43%	31%	63%	24%	22%	3%	16%	26%
Gambela	3319	35%	51%	30%	7%	28%	24%	20%	7%	26%	13%
Harari	3208	31%	45%	9%	0%	9%	9%	4%	2%	6%	1%
Addis Ababa	2834	50%	8%	30%	8%	31%	21%	19%	3%	9%	3%
Dire Dawa	2914	42%	30%	10%	0%	11%	21%	17%	1%	6%	3%
RURAL / URBAN											
Rural	3164	40%	58%	34%	11%	29%	24%	29%	2%	14%	24%
Urban	2985	42%	20%	16%	4%	17%	19%	21%	1%	5%	4%
REGIONS (RURAL ONLY)											
Tigray	3018	44%	61%	25%	3%	17%	29%	33%	2%	14%	21%
Afar	3077	38%	57%	65%	1%	5%	33%	27%	13%	40%	25%
Amhara	2758	51%	36%	41%	2%	12%	24%	38%	3%	15%	25%
Oromia	3227	39%	65%	22%	6%	22%	24%	28%	1%	10%	21%
Somali	3157	40%	46%	43%	7%	16%	27%	22%	6%	25%	20%
Benishangul Gumuz	3327	37%	35%	19%	2%	17%	24%	30%	3%	13%	21%
SNNPR	3575	27%	75%	47%	34%	68%	25%	22%	4%	17%	29%
Gambela	3473	30%	60%	35%	8%	29%	25%	19%	10%	35%	14%
Harari	3639	15%	86%	17%	0%	11%	9%	4%	0%	4%	1%
Addis Ababa											
Dire Dawa	3363	19%	80%	18%	1%	3%	12%	12%	1%	3%	6%

	Diet Quantity		Diet Quality		Food Consumption Adequacy		Economic Vulnerability				
	Mean kilocalories per adult equivalent per day	Consumption < 2550 kcal / adult equivalent / day (% of households)	>75% of total household calories coming from starch staples (% of	Low dietary diversity (<=3 food groups over 7 days) (% of households)	Poor food consumption (% of households)	Poor or borderline food consumption (% of households)	Below absolute poverty line (% of households)	Below food poverty line (% of households)	75% or more of total expenditures on food (% of households)	65% or more of total expenditures on food (% of households)	Lowest total expenditures per capita quintile (% of households)
REGIONS (URBAN ONLY)											
Tigray	3135	37%	26%	7%	1%	10%	11%	19%	0%	1%	3%
Afar	3119	39%	12%	10%	1%	8%	17%	20%	0%	2%	2%
Amhara	2987	40%	16%	12%	1%	6%	21%	20%	1%	5%	3%
Oromia	2958	42%	26%	13%	2%	12%	17%	24%	1%	4%	6%
Somali	3029	41%	13%	21%	5%	17%	21%	16%	4%	9%	8%
Benishangul Gumuz	3406	30%	13%	11%	0%	15%	14%	18%	0%	1%	3%
SNNPR	3207	33%	34%	14%	7%	29%	18%	20%	1%	4%	5%
Gambela	2966	46%	29%	19%	4%	28%	23%	22%	1%	3%	9%
Harari	2874	42%	14%	3%	0%	9%	9%	3%	3%	7%	1%
Addis Ababa	2834	50%	8%	30%	8%	31%	21%	19%	3%	9%	3%
Dire Dawa	2751	50%	12%	7%	0%	14%	24%	19%	1%	7%	2%

6.1 Diet quantity / food energy deficiency

KEY MESSAGES

Nationally, 40% of households are food energy deficient, using the threshold of 2,550 kilocalories per adult equivalent per day

The highest prevalence of food energy deficient households are found in Addis Ababa (50%), Amhara (49%), Dire Dawa (42%), and Tigray (42%)

Overall, urban areas have a similar share of households affected by food energy deficiency (42%) as rural areas (40%)

Households consuming fewer than a minimum amount of calories required for its members to stay healthy and maintain regular physical activity can be classified as food energy deficient. *Average daily food energy consumption per adult equivalent* is calculated by dividing each household's calculated average daily caloric consumption by the number of household members, adjusting for age and sex. Households that do not consume the daily minimum requirement of 2,550 kilocalories per adult equivalent (UNU, WHO, and FAO, 2004) (Smith, 2007) are considered to be food energy deficient.

At national level the average daily energy consumption per adult stands at 3,127 kilocalories. In Tigray, Afar, Amhara, Addis Ababa and Dire Dawa, average national kilocalorie consumption per adult falls below the national average. Above national average kilocalorie consumption was found in SNNPR, Beshangul, Gambela, Oromia, Somali and Harari. Urban areas are characterized by lower average kilocalorie consumption than rural. However, these numbers reflect averages and are easily affected by outliers, particularly those on the high end of the range.

Statistical note

The data from the HCE survey has been merged into the WMS database for analysis, which results in a small loss of data (approximately 3.6% of households in the WMS database do not have data from the HCE survey), and a slightly different probability weighting scheme is used (household weights). As such, some results may vary slightly from the official CSA published results of the HCE data. Though the differences are small, and do not affect the findings of this report, where they differ, the official HCE results should be reported from the CSA published reports.

Table 8: Mean kilocalories of consumption per adult equivalent per day sorted by lowest value in total column

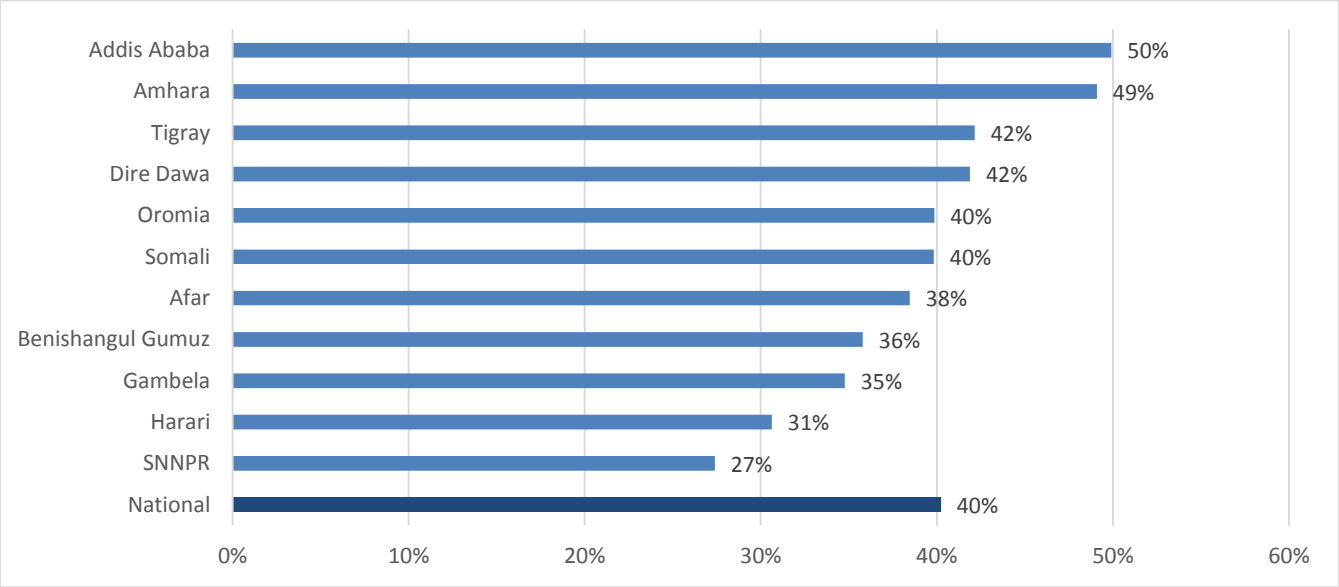
	Rural	Urban	Rural & Urban (Total)
Amhara	2,758	2,987	2,794
Addis Ababa	.	2,834	2,834
Dire Dawa	3,363	2,751	2,916
Tigray	3,018	3,135	3,048
Afar	3,077	3,119	3,091
Somali	3,157	3,029	3,132
Oromia	3,227	2,958	3,181
Harari	3,639	2,874	3,208
Gambela	3,473	2,966	3,319
Benishangul Gumuz	3,327	3,406	3,339
SNNPR	3,575	3,207	3,529
Total	**3,164**	**2,985**	**3,127**

Source: HCE 2011

The data presented above can mask the existence of households that do not achieve sufficient caloric consumption. Using the standard threshold of 2,550 kilocalories per adult equivalent per day, classifying households as food energy deficient or food energy sufficient becomes more meaningful.

Nationally, 40% of households are food energy deficient, using the threshold of 2,550 kilocalories per adult equivalent per day[18]. The highest prevalence of food energy deficient households is found in Addis Ababa (50%), Amhara (49%), Dire Dawa (42%), and Tigray (42%). The regions of SNNPR (27%), Gambela (35%), Benishangul Gumuz (36%) and Harari (31%) have the lowest shares of food energy deficient households.

Figure 13: Percent of food energy deficient households (<2,550 kilocalories/adult equivalent/day) by region



Source: HCE 2011

Urban areas have similar shares of households affected by food energy deficiency (42%) as rural areas (40%), though in some regions there are more pronounced differences between urban and rural areas. For instance rural areas of Tigray, Amhara and Benishangul Gumuz have a higher prevalence of energy deficient households than urban, while rural areas of SNNPR, Gambela, Harari and Dire Dawa have a lower prevalence of food energy deficient households than urban.

Table 9: Percent of food energy deficient households (<2,550 kilocalories/adult equivalent/day) by region and rural/urban

	Rural	Urban	Total
Tigray	44%	37%	42%
Afar	38%	39%	38%
Amhara	51%	40%	49%
Oromia	39%	42%	40%
Somali	40%	41%	40%
Benishangul Gumuz	37%	30%	36%
SNNPR	27%	33%	27%

[18] HCE 2011; The present analysis uses *adult equivalents* instead of *per capita* kilocalorie consumption.

Gambela	30%	46%	35%
Harari	15%	42%	31%
Addis Ababa	-	50%	50%
Dire Dawa	19%	50%	42%
National	**40%**	**42%**	**40%**

Source: HCE 2011

6.2 Diet quality / diversity

KEY MESSAGES

50% of households source a very high portion (>75%) of their total calories from starchy staples, i.e. they have a highly unvaried diet	There is a marked difference between urban and rural areas in terms of starch heavy diets. 58% of rural households have a very high portion of their total calories from starchy staples, as compared to 20% of urban households. Starchy staple-heavy diets characterize households in SNNPR (70%), Oromia (58%), Tigray (52%), Gambela (51%) and Harari (45%).
Nationally, 58% of households consume four or fewer out of seven food groups, and 30% consume three or fewer	The highest percentage of households consuming three or fewer food groups (out of seven) are found in Afar (47%), SNNPR (43%), Somali (38%) and Amhara (36%). Rural households are more likely to have less diverse diets (34% consume three or fewer food groups) than urban households (16%).

As income/expenditure decreases, households tend to spend a larger share, if not all, of their food budget on stomach-filling staples, such as rice and wheat, which provide "cheap" sources of calories. In doing so, they forfeit more nutritious items and may lack adequate consumption of proteins and micro-nutrients. This also results in a less diverse diet overall, with dietary patterns limited to a poor variety of foods.

Dietary quality/diversity is captured in the WMS and HCE in two ways:

The number of food groups (out of seven) that a household consumes over a reference period of seven days	This descriptive score of Dietary Diversity [19] is less influenced by different staple food patterns, such as the high dairy consumption observed among pastoralists, as there are no weights on the food groups as is the case in the food consumption score.
The share of total household caloric consumption derived from staple foods.	Generally speaking, a higher percent indicates less diverse diets and a higher reliance on (generally) cheaper calories from starchy foods

[19] The household dietary diversity score used in this report is based on a 7-day, rather than 1-day recall as is often used. It also uses seven food groups as opposed to 12.

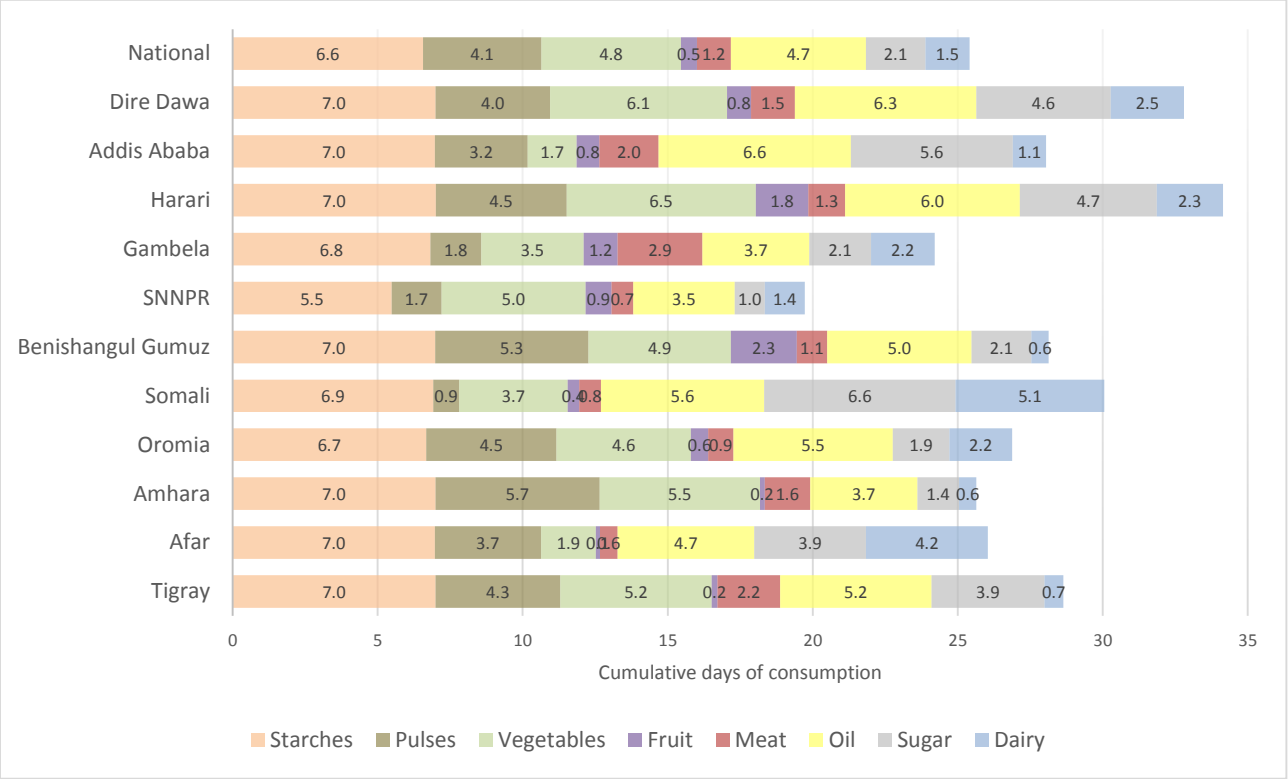
Looking at the seven-day recall of food groups consumed by the households, the frequent consumption of starches is evident. Only in SNNPR are starches eaten on fewer than 6 to 7 days a week average. The average number of days that households consume each food group (out of 7 days) is shown in Table 10 below and in Figure 14.

Table 10: Mean number of days of consumption (out of 7) of all food groups by region, urban/rural

Region	Starches	Pulses	Vegetables	Fruit	Meat	Oil	Sugar	Dairy
Tigray	7.0	4.3	5.2	0.2	2.2	5.2	3.9	0.7
Afar	7.0	3.7	1.9	0.1	0.6	4.7	3.9	4.2
Amhara	7.0	5.7	5.5	0.2	1.6	3.7	1.4	0.6
Oromia	6.7	4.5	4.6	0.6	0.9	5.5	1.9	2.2
Somali	6.9	0.9	3.7	0.4	0.8	5.6	6.6	5.1
Benishangul Gumuz	7.0	5.3	4.9	2.3	1.1	5.0	2.1	0.6
SNNPR	5.5	1.7	5.0	0.9	0.7	3.5	1.0	1.4
Gambela	6.8	1.8	3.5	1.2	2.9	3.7	2.1	2.2
Harari	7.0	4.5	6.5	1.8	1.3	6.0	4.7	2.3
Addis Ababa	7.0	3.2	1.7	0.8	2.0	6.6	5.6	1.1
Dire Dawa	7.0	4.0	6.1	0.8	1.5	6.3	4.6	2.5
Rural	6.5	4.0	5.0	0.5	1.0	4.2	1.4	1.6
Urban	6.9	4.4	4.2	0.9	1.8	6.3	4.4	1.2
Total	6.6	4.1	4.8	0.5	1.2	4.7	2.1	1.5

Source: WMS 2011

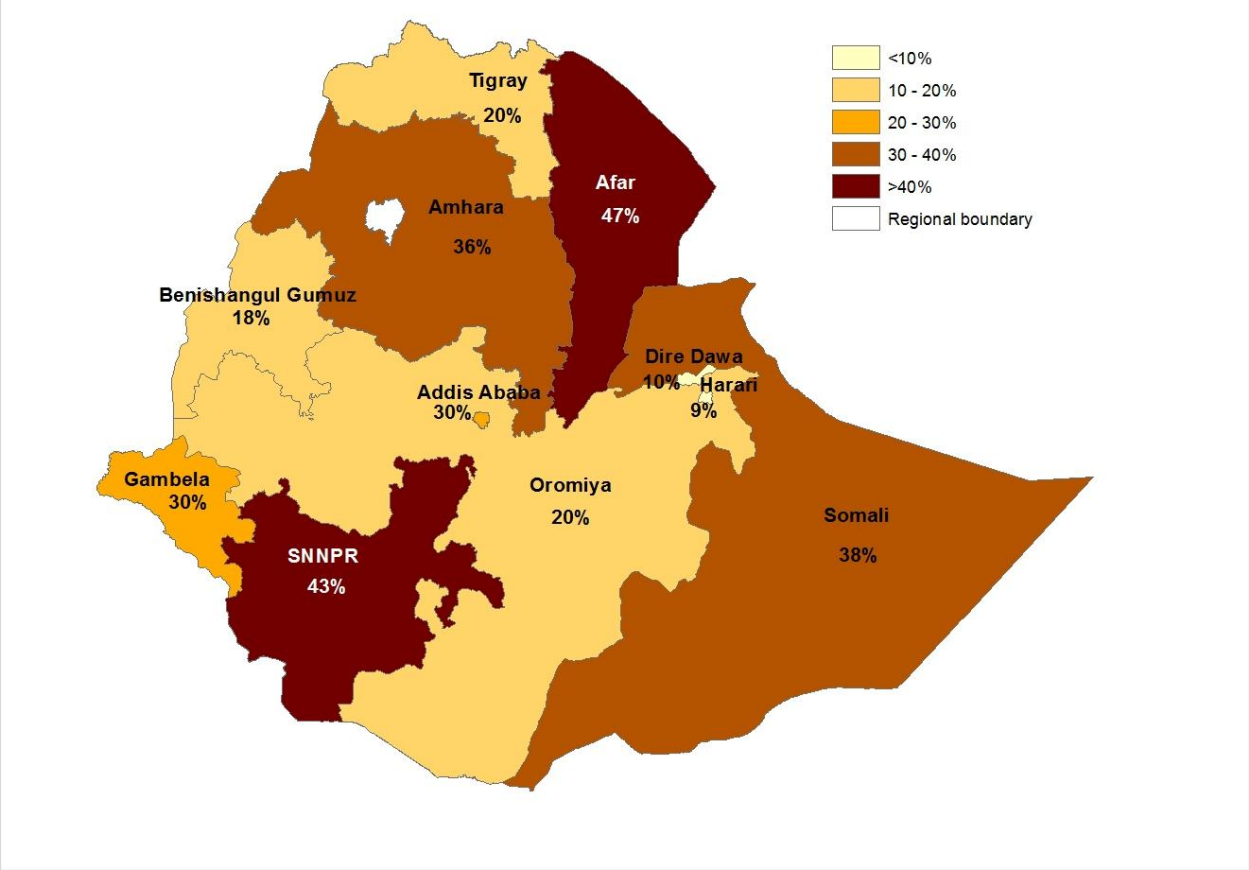
Figure 14: Mean number of days of consumption (out of 7) of all food groups by region



Source: WMS 2011

Large shares of Ethiopian households tend to consume highly unvaried diets. Nationally, 58% of households consume four or fewer food groups, and 30% three or fewer. The highest percentages of households consuming three or fewer food groups are found in Afar (47%), SNNPR (43%), Somali (38%) and Amhara (36%). Rural households across all regions are more likely to have less diverse diets (34% consume three or fewer food groups) than urban households (16%).

Figure 15: Percent of households eating three of fewer food groups (out of seven) by region



Source: WMS 2011

Rural households are more likely to have less diverse diets (30% consume fewer than three groups) than urban households (9%). This urban/rural difference holds true when looking at each region individually.

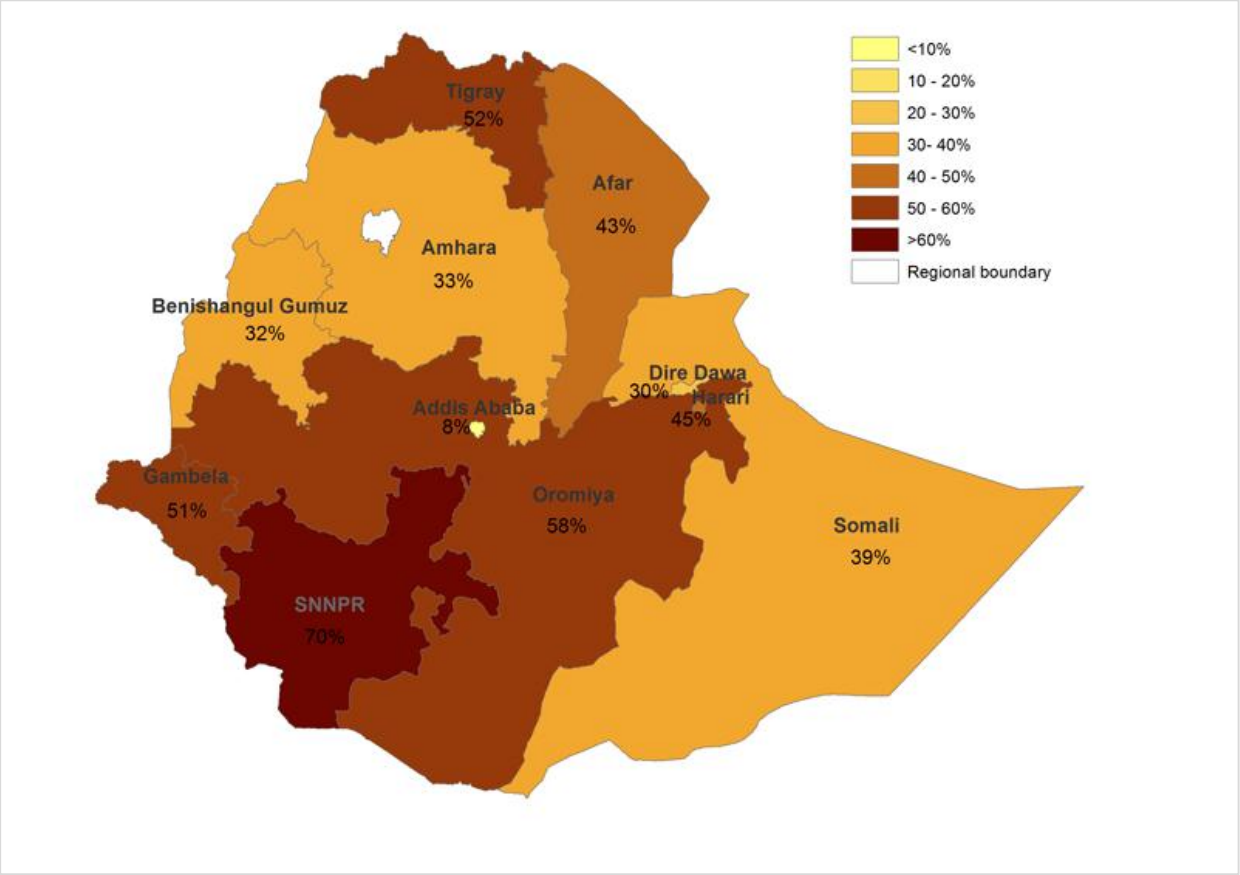
Table 11: Percent of households eating three or fewer food groups (out of seven) by region and urban/rural

Region	Rural	Urban
Tigray	24.6%	7.3%
Afar	64.6%	9.8%
Amhara	40.6%	12.4%
Oromia	21.9%	13.3%
Somali	42.9%	20.7%
Benishangul Gumuz	19.4%	11.3%
SNNPR	47.1%	14.0%
Gambela	34.6%	19.0%
Harari	17.0%	3.5%
Addis Ababa	-	29.8%
Dire Dawa	18.1%	6.9%
Total	**33.5%**	**16.2%**

Source: WMS 2011

Looking at the sources of calories consumed by households, 50% of households source a very high portion (>75%) of their total calories form starchy staples, i.e. they have a highly unvaried diet. Households in rural areas are much more likely to have high-starch diets than urban households: 58% of rural households derive more than 75% of their calories from starchy staples, compared with 20% of urban households. More than 80% of households living in rural areas of Dire Dawa, Harari and SNNPR have starch heavy diets.

Figure 16: Percent of households consuming a high starch diet (greater than 75% of total household kilocalories from starchy staples) by region



Source: HCE 2011

Households in rural areas are much more likely to have high-starch diets than urban households: 58% of rural households derive more than 75% of their calories from starchy staples, compared with 20% of urban households. This large urban/rural difference holds across all regions. Households living in rural areas of Dire Dawa, Harari and SNNPR derive more than 80% of kilocalories from starchy staples. In urban areas, there is slightly less variation between regions, with households in urban Tigray and SNNPR getting the highest shares of kilocalories from starchy staples, (both 64%) followed by urban households in Oromia and Harari (both 61%).

Table 12: Percent of households consuming a high starch diet (greater than 75% of total kilocalories from starch staples) by region and rural/urban areas

	Rural	Urban
Tigray	61%	26%
Afar	57%	12%
Amhara	36%	16%
Oromia	65%	26%
Somali	46%	13%
Benishangul Gumuz	35%	13%
SNNPR	75%	34%
Gambela	60%	29%
Harari	86%	14%
Addis Ababa	.	8%
Dire Dawa	80%	12%
Total	**58%**	**20%**

Source: HCE 2011

6.3 Diet adequacy

KEY MESSAGES

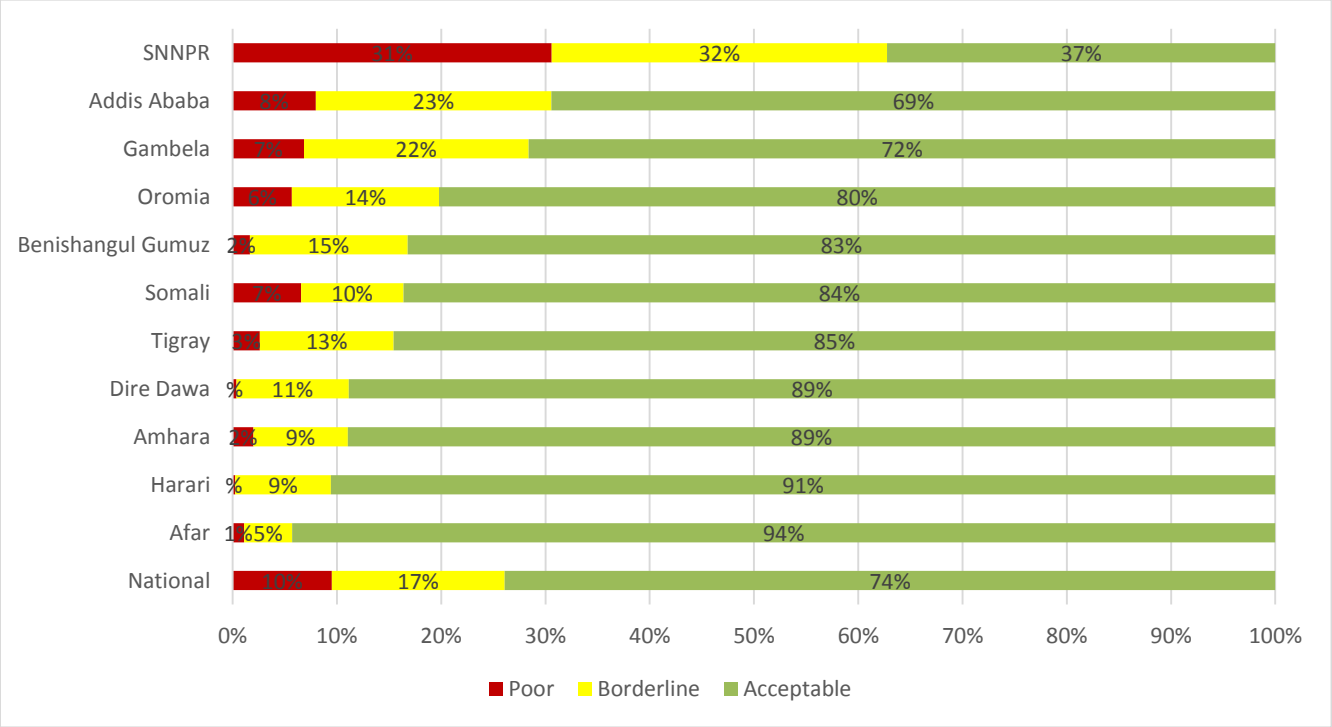
Nationally, at the time of the WMS, more than one in four households (26%) consumed less than acceptable diets according to the Food Consumption Score.

SNNPR shows a particularly high prevalence, with 63% of households consuming less than acceptable diets

The *Food Consumption Score* (FCS) combines the elements of 'quantity' and 'quality' of food. It measures food diversity (the types of food consumed), food frequency (the number of days each food group is consumed) and the relative nutritional importance of different food groups. The FCS uses standardized and calibrated thresholds that divide households into three groups: poor food consumption, borderline food consumption and acceptable food consumption. In analysis, those households with poor and borderline food consumption are combined to describe households with less than acceptable food consumption.

Nationally, more than one in four households (26%) consume less than acceptable diets: Ten percent of households have poor food consumption and 17% borderline. At regional level, by far the highest prevalence of households with a less than acceptable diet can be found in SNNPR with 63% (31% of whom consume poor and 32% borderline diets). SNNPR is followed by Addis Ababa and Gambela where 31% and 28% of households respectively consume unacceptable diets. Lowest shares of households with less than acceptable food consumption have been found in Afar (6%), Harai (9%), Amhara and Dire Dawa (both 11%).

Figure 17: Percent of households with poor, borderline and acceptable food consumption by region and national level



Source: WMS 2011

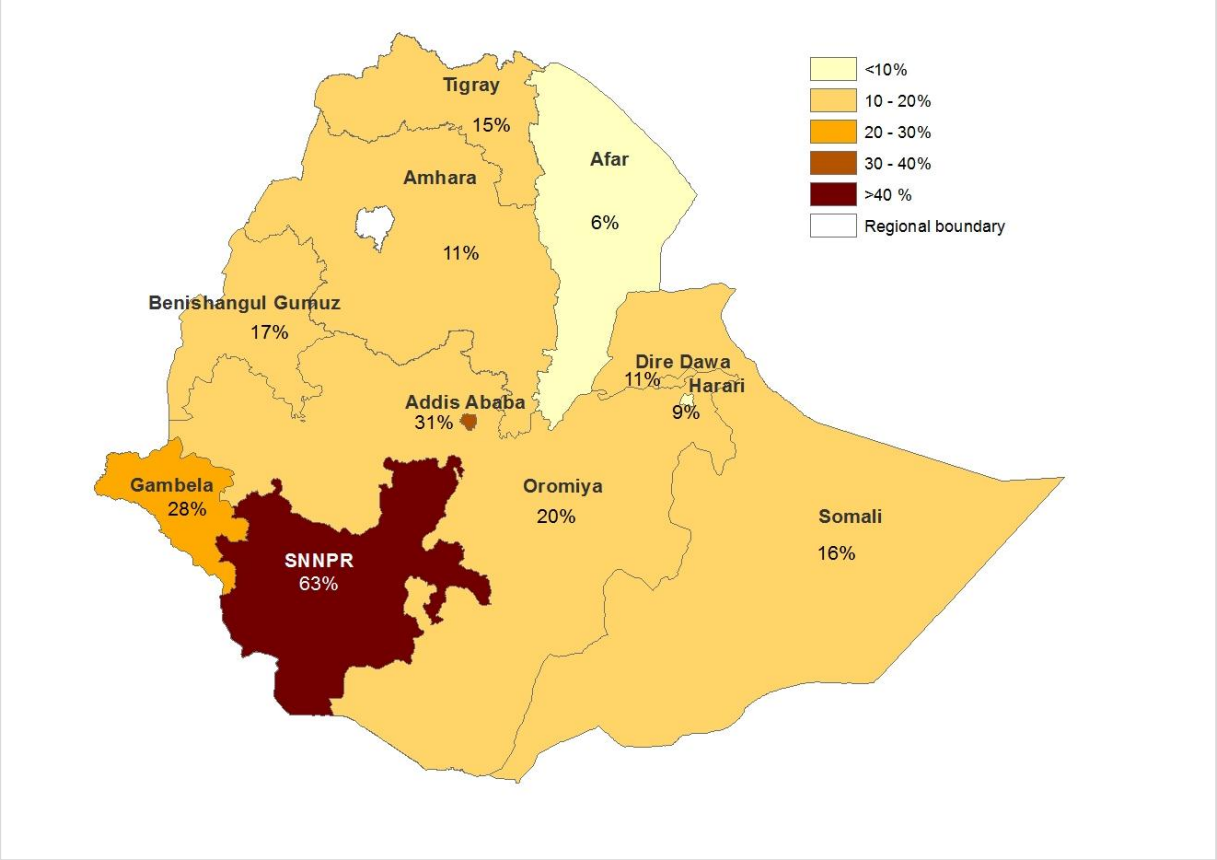
Poor and borderline food consumption is clearly more prevalent in rural areas where 29% of households have poor or borderline food consumption, compared with 17% in urban. This rural-urban divide is consistent across all regions, with the exceptions of Dire Dawa and Afar, which are predominantly urban areas. The highest shares of urban households with poor or borderline food consumption are found in Addis Ababa (31%), SNNPR (29%) and Gambela (28%).

Table 13: Percent of households with poor or borderline food consumption by rural / urban areas

	Rural	Urban
Tigray	17%	10%
Afar	5%	8%
Amhara	12%	6%
Oromia	22%	12%
Somali	16%	17%
Benishangul Gumuz	17%	15%
SNNPR	68%	29%
Gambela	29%	28%
Harari	11%	9%
Addis Ababa	-	31%
Dire Dawa	3%	14%
Total	**29%**	**17%**

Source: WMS 2011

Figure 18: Percent of households with poor or borderline food consumption by region



Source: WMS 2011

6.4 Food access and sources of food

As seen earlier in this report, food consumption (diet) has been described using several indicators, some of which are more indicative of quantity, some of quality, and some that measure aspects of both. The two surveys (WMS and HCE) collected different types of food consumption data, and at different times of the year.

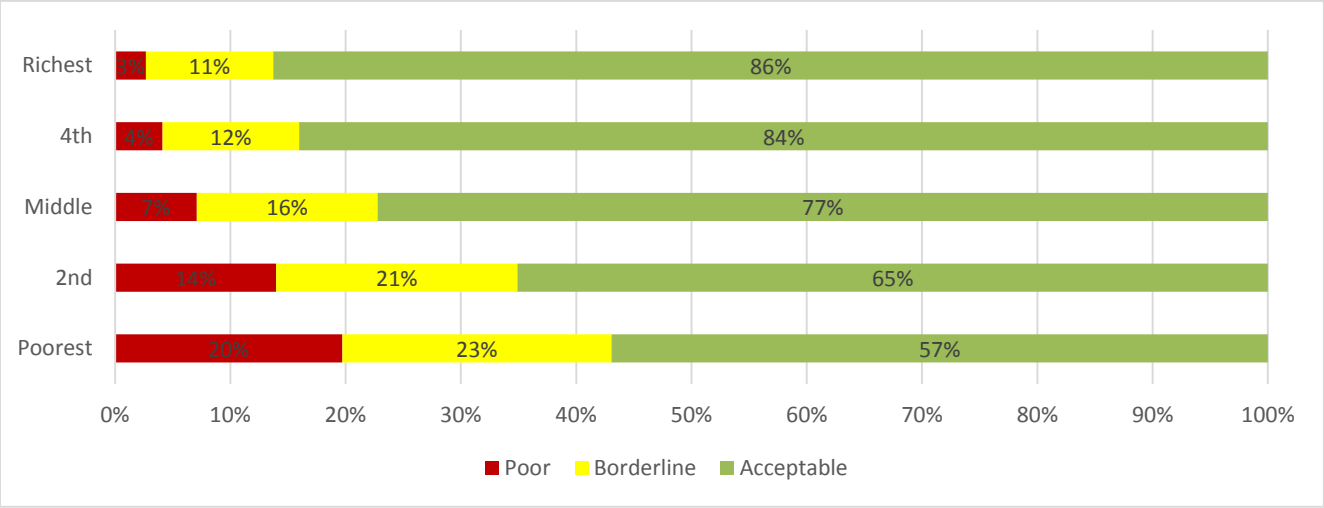
KEY FINDINGS

The wealth (asset) index is more strongly associated with food consumption than are the poverty indicators.	However, even among the most asset poor many households still achieve at least a basic acceptable food consumption
Poorer households are much more likely to source the majority of their calories from starchy staples, and to consume less diverse diets than wealthier households.	Nationally 50% of households source a very high portion of their calories from starchy staples (75% or greater). Among households in the poorest wealth (asset) index quintile, 66% have a high portion of kilocalories from starchy staple foods and 47% eat fewer than three food groups.

	Among households in the richest (wealth index quintile), only 21% consume high-starch diets and 6% less than three food groups.
Dairy consumption is more strongly linked to livelihood group than to wealth status.	Nationally, households report consuming dairy on average 1.5 times a week and 1.6 times in rural areas. Among households that rely on livestock as their main occupation, milk is consumed on average 5 times a week. The other main livelihood groups consume dairy on average between 0.6 and 1.8 times per week. Households relying on livestock may be classified as better off in terms of certain diet indicators (such as food consumption score), but are still relatively poor in general compared with most other livelihood groups by other measures.
Meat consumption is linked to wealth in general (wealth index), as is the consumption of oil, sugar, and to a lesser extent fruit and pulses.	The richest households (as classified by the wealth index) consume meat on average 2.1 days per week, whereas those in the poorest quintile eat meat an average of only 0.5 days per week. Increased frequency of consumption of oil, sugar, and to a lesser extent fruit and pulses, is also associated with increased wealth (wealth index).

If a household has poor food consumption, it is likely to be in a poorer wealth (asset) quintile. Indeed, of all households with poor food consumption, 71% are in the bottom two wealth index quintiles. 43% of household in the poorest wealth quintile have unacceptable food consumption vs just 14% in the richest and 27% overall as shown in Figure 19.

Figure 19: Food consumption groups and wealth (asset) index quintiles



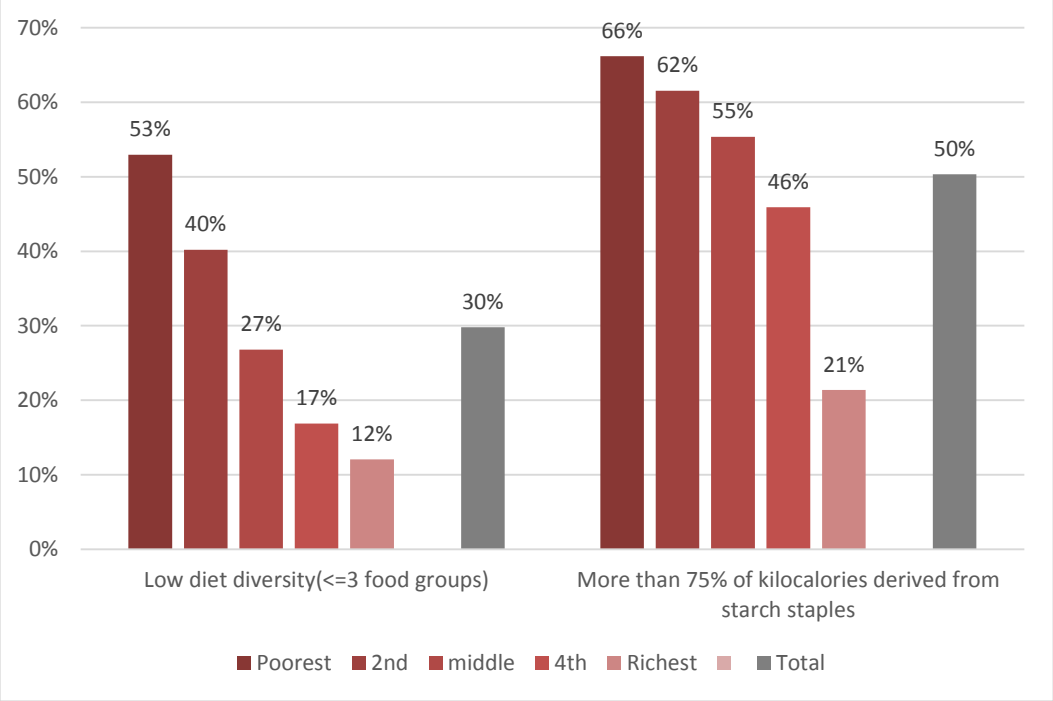
Source: WMS 2011

However, poor households (as defined by being in a poorer wealth index quintile) do not necessarily have poor food consumption: 57% of the poorest wealth index quintile households have acceptable food consumption (compared with 74% overall), meaning that despite being (asset) poor, these households are still able to achieve acceptable food consumption.

Diet quality

Poorer households are much more likely to source the majority of their calories from starchy staples, and to consume less diverse diets than richer households. Nationally 50% of households source a very high portion (75% or more) of their calories from starchy staples and 30% have low dietary diversity (i.e., consume three or less food groups). Among households in the poorest wealth (asset) index quintile, 66% derive a high portion of kilocalories from starchy staple foods and 53% have low dietary diversity, whereas only 21% of the richest (wealth index quintile) consume high-starch diets and 12% three or less food groups.

Figure 20: Percent of households with high share of calories from starchy staples and with low diversity by wealth index quintile



Source: WMS and HCE 2011

Consumption of dairy, meat and other food groups

When interpreting the food consumption score and food consumption groups, it is important to note that this standardized indicator weighs meat and dairy consumption heavily. These calorie and nutrient-dense foods are typically added to diets only once other, cheaper sources of calories and nutrients are fully incorporated into the diet. However, certain populations rely much more heavily on milk. This is found

in certain areas of Ethiopia, particularly among pastoralists[20]. In 'typical' diets, milk consumption is usually found among households who already have a certain degree of diversity/adequacy in their diet. However, in pastoralist communities, milk is often consumed even in households that have otherwise poor diets or that may be considered food insecure by other measures. As such, comparing the diet using the food consumption score of rural populations that rely on plant-sources of food to a greater extent and populations that rely much more on milk and meat is challenging and should be interpreted with some caution, particularly in the context of pastoralist communities.

Nationally, households report consuming dairy on average 1.5 times per week and 1.6 times in rural areas. However, among households that rely on livestock as their main occupation, milk is consumed on average five times a week, compared with 1.8 times for households relying on crops and livestock, the next most milk-consuming livelihood group. The other main livelihood groups consume dairy on average between 0.6 and 1.4 times a week.

Table 14: Mean number of days of consumption (out of 7) of all food groups by main occupation

Main occupation of household	Starch	Pulses	Veg.	Fruit	Meat	Oil	Sugar	Dairy
Other	6.9	4.7	4.3	.3	1.2	4.5	2.7	.7
Salary	7.0	4.3	4.1	1.0	2.3	6.5	4.9	1.5
Casual labor / daily labourer	6.8	4.4	4.4	.5	1.0	5.3	2.9	.6
Crop production	6.5	4.3	5.2	.5	1.0	4.1	1.2	1.4
Livestock	6.9	1.5	2.4	.2	.7	4.3	3.9	5.0
Crop and livestock	6.3	3.7	4.9	.4	.9	4.4	1.5	1.8
Manufacturing, construction and mining	6.8	4.2	4.7	.5	1.4	5.0	2.9	.8
Wholesale & retail trade - formal sector	7.0	4.3	4.2	1.0	2.2	6.5	4.7	1.5
Wholesale & retail trade - informal sector	6.8	4.5	4.3	.7	1.1	5.6	3.1	1.1
Service trade	6.9	4.2	4.5	.9	1.9	6.0	4.3	1.3
Remittances	6.9	4.1	4.4	.7	1.1	5.5	3.6	1.1
Total	**6.6**	**4.1**	**4.8**	**.5**	**1.1**	**4.6**	**2.0**	**1.5**

Source: HCE 2011 and WMS 2011

Meat consumption does not show a relationship to livelihood group, but rather to wealth in general. Livestock and crop/livestock households consume meat 0.7 and 0.9 days a week on average respectively. Livelihood groups that tend to be found among richer households, such as salaried jobs, formal wholesale retail and trade, on the other hand, consume meat more frequently than other livelihood groups i.e., more than twice a week. This difference in the frequency of meat consumption is likely due to their improved economic status. When looking at meat (and some other food group consumption) by wealth index quintiles, a stronger pattern emerges. The richest households (as classified by the wealth index) consume meat on average 2.1 days per week, whereas the poorest quintile eats meat an average of only

[20] Households that rely primarily on livestock as their main occupation are found more frequently in rural areas of Afar (60%) and Somali (38%). Households relying on a combination of crops and livestock (at comparable levels) are found most commonly in rural areas of SNNP (44%), Benishangul (38%), Somali (34%), Amhara (27%) and Tigray (24%).

0.5 days a week. Increased frequency of consumption of oil, sugar, and to a lesser extent fruit and pulses, is also associated with increased wealth (wealth index).

Table 15: Mean number of days of household consumption (out of 7) for all food groups by wealth index quintiles

Wealth index quintiles	Starches	Pulses	Vegetables	Fruit	Meat	Oil	Sugar	Dairy
Poorest	6.2	3.1	4.9	0.3	0.5	2.8	0.8	1.6
2nd	6.4	3.7	4.7	0.4	0.8	3.8	1.3	1.6
Middle	6.6	4.3	5.0	0.5	1.1	4.6	1.5	1.6
4th	6.8	4.8	5.2	0.5	1.3	5.6	2.1	1.4
Richest	6.9	4.4	4.3	1.0	2.1	6.6	4.6	1.5
Total	**6.6**	**4.1**	**4.8**	**0.5**	**1.2**	**4.7**	**2.1**	**1.5**

Source: WMS 2011

Interpreting this data is complicated. As animal milk is one of the most nutritionally complete foods, its impact on the food consumption score and food consumption groups may be correct when measuring food consumption. However, the FCS is often used also as a proxy for overall food access (and as such, food security), which may be biased by differing milk consumption patterns. This is most evident when looking at milk consumption between total expenditure quintiles and asset index quintiles – although we see that improved wealth (wealth index) is associated with increased food consumption score, higher caloric consumption, and other indicators of diet (and wealth), increased food consumption score is not associated with (nor due to) increased consumption of milk. Furthermore, households that rely on livestock as their main income source are much more likely to be poor (as measured by the asset index quintiles and total household expenditures per capita quintiles). Although dairy is a higher value commodity, and as such will place a household that produces and consumes high amounts of dairy higher up (richer) on the poverty measure used in the HCE, pastoralists generally remain classified as poor. 41% of households relying on livestock fall below the food poverty line, and 45% below the absolute poverty line, the highest of all livelihood groups.

Household food sources

KEY FINDINGS

In rural Ethiopia, almost half (45%) of food consumed was derived from households' own production

For urban households, an average of 90% of food is purchased from either shops, roadside vendors or subsidized Kebeli shops[21]

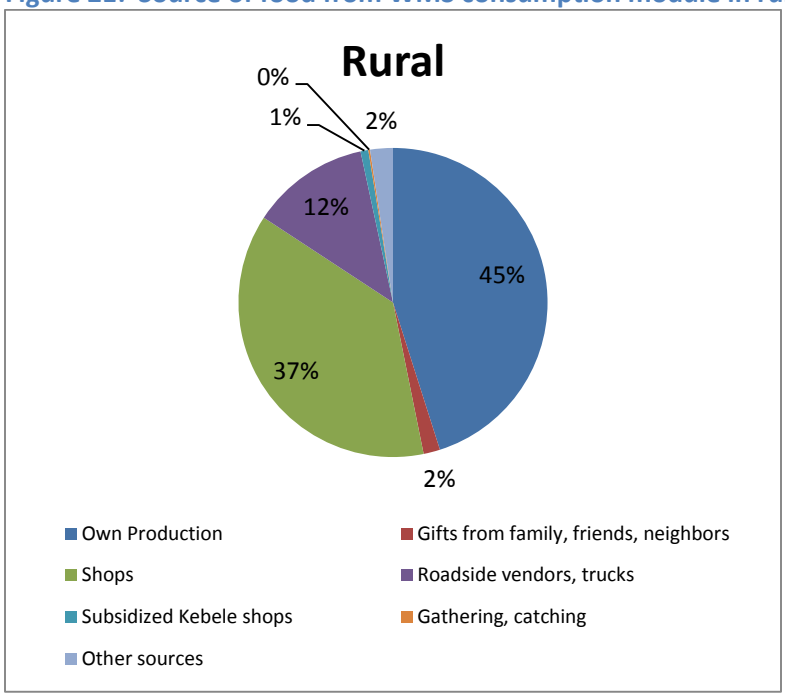
The analysis on sources of food is derived from the WMS, where households were asked the main source of foods eaten in the past week (following the question how many days in the past week did households consume each food item/group)[22]. This analysis therefore uses the past seven days as an indicator of

[21] Both of these figures are based upon days of consumption reported by food source
[22] See annex for a description of the construction of this indicator

where households source their food and findings are limited by this assumption. The source of food indicator is not reflective of quantities, but is useful for describing the relative importance of specific sources (such as own production, purchased in stores, gifts from friends, etc.) in the population.

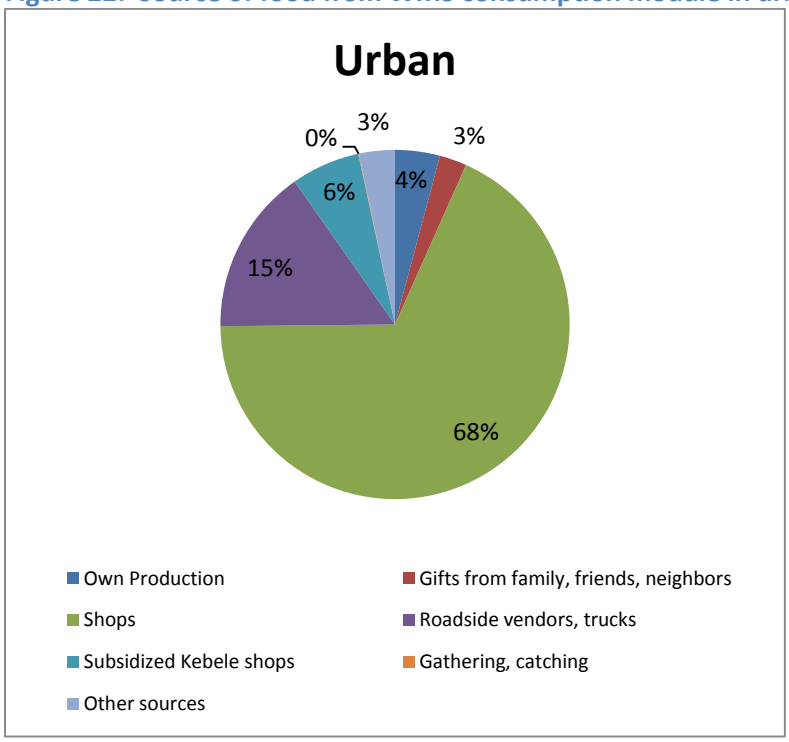
In rural areas, an average of 45% of food consumed is sourced through the household's own production, compared with 4% in urban areas. In urban areas, 68% of food consumed is sourced through purchases from shops. An additional 15% is sourced from roadside vendors and 6% from subsidized Kebeli shops meaning that in total, 90% of food in urban areas is purchased from one of these three sources. Yet more than half (51%) is bought in rural areas. Food prices in the market are therefore relevant food security issues in both rural and urban areas, particularly for the latter.

Figure 21: Source of food from WMS consumption module in rural households



Source: WMS 2011

Figure 22: Source of food from WMS consumption module in urban households

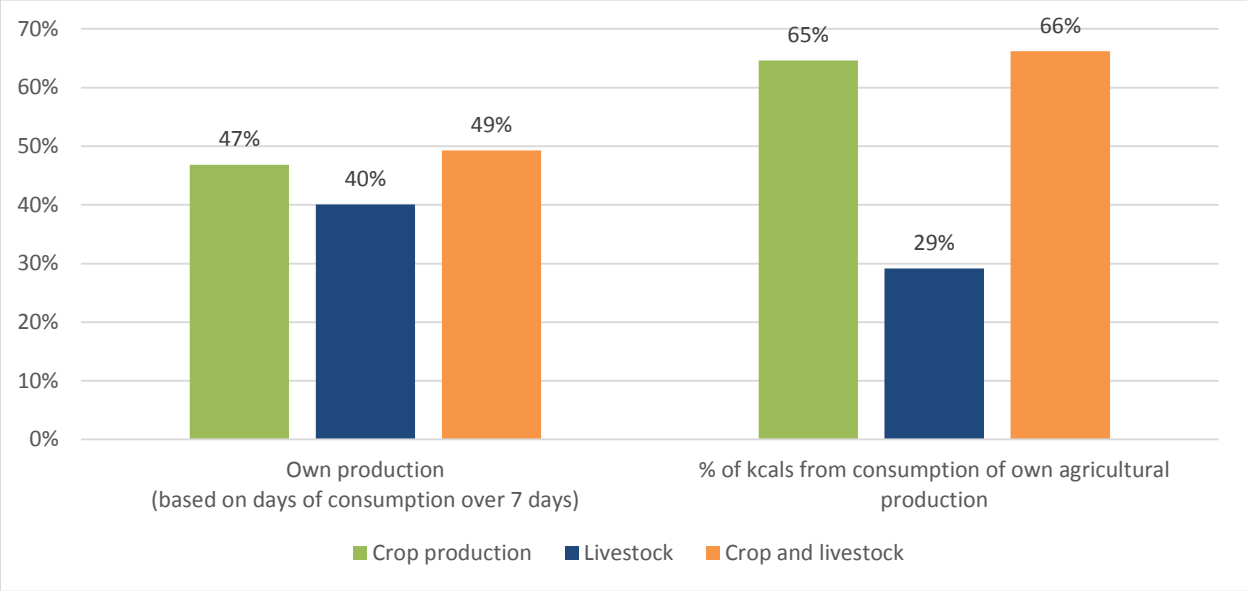


Source: WMS 2011

In addition to examining food sources through the days of consumption over seven days recorded in the WMS, the HCE asked households to indicate their primary income source to buy the food consumed. This approach differs in that it does not ask households to source where food was purchased for example, but rather, how was it purchased. From the HCE question, food energy in terms of kilocalories is able to be compared across how food was acquired. For the purpose of this analysis, what remains most relevant is an examination of the share of kilocalories derived from a household's own agricultural production.

Looking at households that rely on crop production, livestock, or a combination of the two as their main income source, there are some interesting differences to note, as seen in Figure 23. These three livelihoods report a similar percentage of consumption from their own production based on days of consumption, but when looking at the sources of total kilocalories, households relying on livestock source less than half the share of kilocalories from their own production than the other two livelihood groups. This suggests that livestock are much more dependent on purchases for kilocalories than households engaged in crop production.

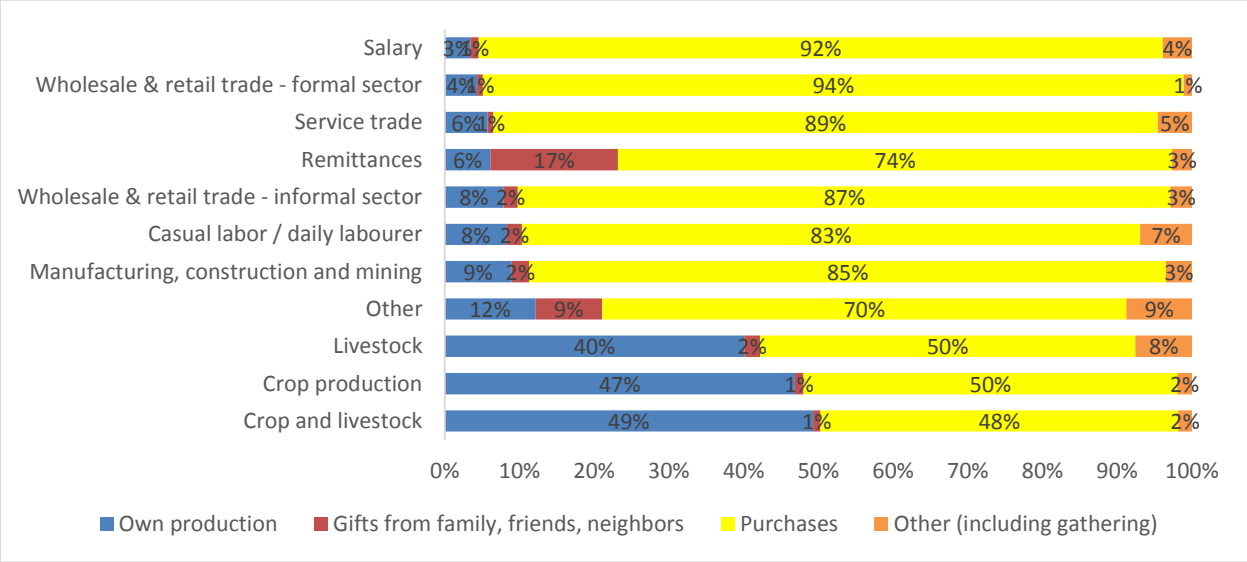
Figure 23: Food sourced from own production (by days of consumption and kilocalories) by select livelihood groups



Source: WMS 2011, HCE 2011

An analysis of sources of food by livelihoods using the WMS measure (days of consumption by source) shows a very clear urban-rural divide of livelihoods. The three primarily agriculture livelihoods (crop production, livestock, and crop and livestock) each sourced 47%, 40% and 49% respectively of their food consumed over seven days through their own production. The other livelihood groups in comparison all obtained 70% or more of their food through some form of purchase as would be expected in urban areas where these livelihoods are more common. Notably, 17% of food consumed by remittance receivers was sourced through gifts from friends, family or neighbours, highlighting their dependence on help for food. Casual labourers, households dependent on livestock and households whose primary livelihood was classified as 'other', acquired 7%, 8% and 9% of their food from some other source, respectively. While it is difficult to be certain what this source is, it is likely not a preferred nor sustainable source.

Figure 24: Source of food (condensed categories) by livelihood



Source: WMS 2011, HCE 2011

6.5 Economic vulnerability

Food insecurity and poverty go hand in hand. The WMS and HCE data provide several measures of poverty and wealth to explore food security in Ethiopia. These include the poverty and food poverty line, household expenditures on food and expenditure quintiles. These different indicators capture different aspects of poverty depending on their construct and thresholds.

By all indicators of wealth and poverty, the rural areas are poorer than urban areas. Those households relying primarily on livestock are the most likely to be poor, as measured by all indicators, and those relying primarily on salary, trade (service or wholesale) and remittances are the least likely to be poor.

Here is a summary of the main economic vulnerability indicators[23]:

Poverty line[24]	The poverty line measure includes not only the cost of the minimum calories required by the household, but also a specific allowance for non-food goods. 23% of households are below the absolute poverty line (24% rural vs 19% urban), peaking at 33% in rural Afar. Regional variations are not very pronounced, ranging between 21% and 28%, with the exception of Harari where only 9% of households fall below the poverty line, the lowest among all regions.

[23] For quintile based indicators, there will always be 20% of households in each quintile, so this is not indicative of any meaningful prevalence; rather, it is only among sub-strata that the quintile based indicators can be used as relative measures to compare these strata. However, as poverty and food poverty are only somewhat higher than 20%, the prevalences are easier to compare.

[24] The HCE report presents the percentage of the population under the poverty line. This is also called the poverty headcount.The WMS 2011 looks at household prevalence. There are differences in the prevalence when using household vs. headcount. For example, in 2010/11, 29.6% of the population falls under the poverty line, and 23% of households fall under the poverty line. While the HCE reports on poverty headcounts should be considered as the official numbers, the results used in the WMS are also valid.

	Households reliant on livestock are the most likely to be poor (45%) followed by casual/ daily labourers.
Food poverty line	The food poor are those who spend less on food than is required to consume the minimum level of calories for a healthy, active life (prices are based on local market prices, and on the cost of the minimum basic food basket in the areas where the household is located.) The poverty line for 2010/11 stands at 3,781 birr (Poverty Analysis Study, March 2012). 28% of households are below the food poverty line (29% rural vs 21% urban) peaking at 38% in rural Amhara, followed by 33% in rural Tigray and 30% in rural Benishangul. Households reliant on livestock are the most likely to be food poor (41%) followed by crop producers and casual/daily labourers.
Household expenditure	Households are also classified into five consumption/expenditure quintiles based on their total household consumption/expenditures per capita (i.e. number of people in household)[25]. Nationally 24% of rural households are in the poorest expenditure per capita quintile (see footnote) vs 4% of urban. The highest prevalence is in rural SNNPR (29%). Some 39% of livestock farmers are in the lowest expenditure quintile followed by 25% of crop producers and 22% of crop *and* livestock farmers.
Percent of total household expenditures on food	These expenditures include not only the money spent purchasing items, but a cash equivalent for items produced, manufactured and traded/bartered for. In general, richer/more food secure households spend a smaller percentage of their total expenditures on food, and poorer/more food insecure households spend a higher amount on food[26]. In sum, as the percentage of total expenditures on food increases, the household is considered more economically vulnerable. 12% of households spend more than 65% of total expenditures on food, again with a marked rural vs urban difference (14% vs 5%). The prevalence is much higher in rural Afar (40%), Gambela (35%) and Somali (25%). In rural parts of these regions, 13%, 10% and 6% (respectively) spend 75% or more of their total expenditure on food alone compared with 2% of households nationally.

Poverty

Using the standard methodology set forth by the CSA, households are classified as above or below the absolute poverty line[27] and food poverty line[28]. The food poor are those who spend less on food than is required to consume the minimum level of calories for a healthy, active life (based on the types of foods

[25] Consumption/expenditure is the cash value of the household cash expenditures plus the value of items produced and consumed by the household but not purchased with cash (such as trades, food grown by the household, etc).
[26] In extreme cases of poverty and economic vulnerability, this relationship becomes weaker or even reverses, as households have a minimum amount for non-food expenditures (i.e. water, transport, etc.) that they must purchase, even if this means decreasing the expenditures on food to compensate.
[27] This poverty line is locally determined based on the cost of basic foods, goods, and services, allowing for improved comparison between urban and rural areas, as well as different areas of the country.
[28] Food poverty can also be thought of as extreme poverty, as it looks at the minimum level of consumption to buy food.

purchased and consumed by the poor, calculated at local costs). Prices are based on local market prices, and on the cost of the minimum basic food basket in the areas where the household is located. Because this measure utilizes more quantifiable units of measure, it provides a more robust picture of food insecurity, particularly in urban areas where most food is purchased, compared with other measures. The food poverty line for 2010/11 stands at 1,985 birr (Poverty Analysis Study, March 2012).

Similar to food poverty, the poverty line measure includes not only the cost of the minimum calories required by the household, but also a specific allowance for non-food goods consistent with the spending of the poor. This measure is highly correlated with food poverty, as it is based on the same data with additional non-food expenditure data. The poverty line for 2010/11 stands at 3,781 birr (Poverty Analysis Study, March 2012).

NOTE

The HCE report presents the percentage of the population under the poverty line. This is also called the poverty headcount.

The WMS 2011 looks at household prevalence. There are differences in the prevalence when using household vs. headcount. For example, in 2010/11, 29.6% of the *population* falls under the poverty line, and 23% of *households* fall under the poverty line.

While the HCE report on poverty headcounts should be considered as the official numbers, the results used in the WMS are also valid.

More than one in four households (28%) in Ethiopia falls below the food poverty line. The highest prevalence can be found in Amhara (35%) and Tigray (30%). Harari (14%), Dire Dawa (17%) and Addis Ababa (19%) have the lowest percentage of food poor households. The patterns of food poverty are similar to those of (general) poverty when disaggregated by urban/rural strata, with a higher percentage in rural (29%) than in urban areas (21%). The highest shares of rural households falling below the food poverty line can be found in Amhara (38%), Tigray (33%) and Beshangul (30%), while Harari (4%), Dire Dawa (12%) and Gambela (19%) have the lowest shares.

Nationally, 23% of households fall below the poverty line. Regional variations are not very pronounced, ranging between 21% and 28%, with the exception of Harari where only 9% of households fall below the poverty line, the lowest among all regions. Poverty is more prevalent in rural areas (24%) than in urban areas (19%) in all regions except Harari (where shares of poor households are equal in rural and urban areas) and Dire Dawa where poverty is more prevalent in urban than rural areas.

Table 16: Percent of households falling below the poverty line by rural/urban areas

	Rural	Urban	Rural & Urban (Total)
Tigray	29%	11%	24%
Afar	33%	17%	28%
Amhara	24%	21%	24%
Oromia	24%	17%	22%
Somali	27%	21%	25%
Benishangul Gumuz	24%	14%	23%
SNNPR	25%	18%	24%

Gambela	25%	23%	24%
Harari	9%	9%	9%
Addis Ababa	-	21%	21%
Dire Dawa	12%	24%	21%
Total	**24%**	**19%**	**23%**

Source: HCE 2011 data, calculated as percent of households

Table 17: Percent of households falling below the food poverty line by rural/urban areas

	Rural	Urban	Rural & Urban (Total)
Tigray	33%	19%	30%
Afar	27%	20%	25%
Amhara	38%	20%	35%
Oromia	28%	24%	27%
Somali	22%	16%	21%
Benishangul Gumuz	30%	18%	28%
SNNPR	22%	20%	22%
Gambela	19%	22%	20%
Harari	4%	3%	4%
Addis Ababa	-	19%	19%
Dire Dawa	12%	19%	17%
Total	**29%**	**21%**	**28%**

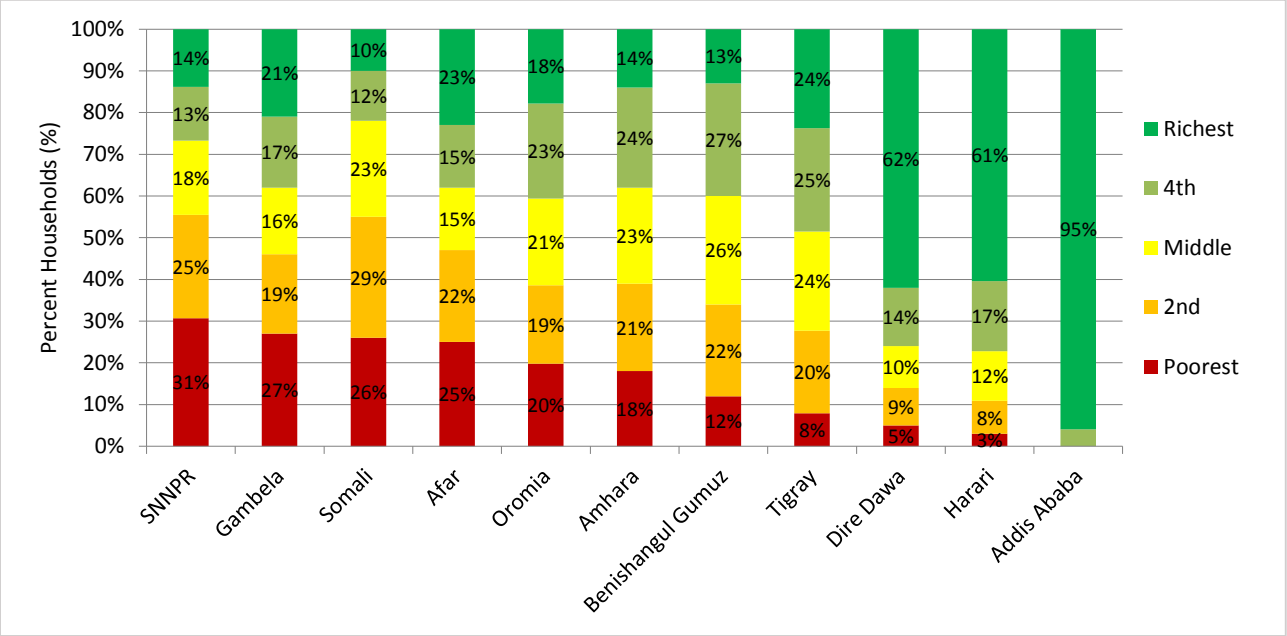
Source: HCE 2011 data, calculated as percent of households

Wealth index

The WMS gathered extensive data on a variety of household assets, both productive and non-productive, as well as livelihood specific assets (such as land, cattle, etc.). These indicators are used individually to describe households, as well as to create a composite indicator called the *wealth index*. This index is then used to create a categorical indicator which splits households into five quintiles (each representing 20% of the population) based on their assets. The wealth index methodology and results are similar to the DHS 2005 and 2011 wealth index classifications.

At the regional level, SNNPR, Gambela, Somali, and Afar have the highest prevalence of households in the poorest wealth quintile with at least 25%. Harari, Dire Dawa and to a lesser extent, Tigray, generally characterized by more urban populations, have the lowest prevalence of households in the poorest quintile with 3%, 5% and 8% respectively. Addis Ababa does not have any households falling into the three lowest wealth quintiles.

Figure 25: Percent of households falling into each of the wealth quintiles by region



Source: WMS 2011

Households in rural areas are significantly more likely to be asset-poor than those living in urban areas. Half of Ethiopia's rural population falls into the two lowest wealth quintiles, compared with only 3% of urban households. Regions with the largest shares of asset-poor households include Afar, SNNPR, Gambela and Somali where more than 60% fall into the poorest and second poorest quintile. At urban level, Somali has the largest share of poor households with 26% in the two poorest quintiles, with the other urban areas varying between only 1% and 5%.

Table 18: Percent of households in each asset wealth quintile by region and rural/urban areas

	Rural					Urban				
	Poorest	2nd	Middle	4th	Richest	Poorest	2nd	Middle	4th	Richest
Tigray	10%	25%	30%	27%	8%	1%	4%	7%	20%	68%
Afar	36%	31%	16%	11%	6%	2%	4%	12%	23%	59%
Amhara	22%	24%	26%	22%	6%	1%	4%	11%	31%	53%
Oromia	24%	23%	24%	23%	6%	2%	2%	5%	23%	68%
Somali	28%	33%	25%	11%	2%	15%	11%	14%	17%	43%
Benishangul Gumuz	14%	25%	29%	26%	6%	3%	5%	11%	33%	48%
SNNPR	35%	28%	20%	12%	5%	3%	3%	5%	18%	71%
Gambela	38%	24%	18%	13%	7%	5%	8%	11%	27%	49%
Harari	6%	17%	22%	30%	25%	0%	0%	3%	7%	89%
Addis Ababa	-	-	-	-	-	0%	0%	0%	4%	95%
Dire Dawa	18%	31%	26%	14%	10%	1%	1%	4%	13%	81%
Total	**25%**	**25%**	**24%**	**20%**	**6%**	**1%**	**2%**	**6%**	**20%**	**71%**

Source: WMS 2011

Household total expenditure quintiles

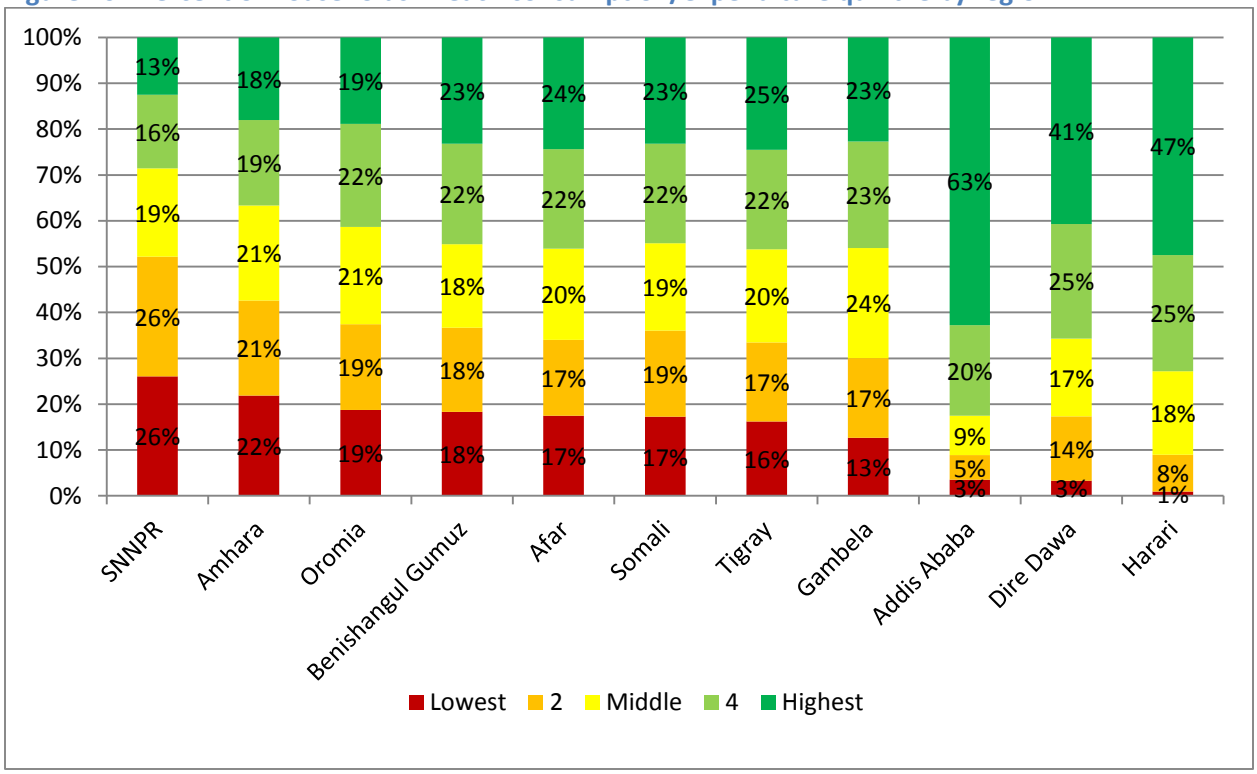
Households are also classified into five *consumption/expenditure quintiles* based on their total household consumption/expenditures per capita (i.e. number of people in household)[29]. This categorical indicator splits households into five quintiles (each representing 20% of the population) based on their total consumption/expenditure values. It does not take into account the different costs of living in different areas of the country, but it still provides an opportunity for relative comparisons of purchasing power among different household groups.

NOTE

Remember that the expenditure data account for both cash and non-cash ways of buying food and non-food items. So, for example, the value of a household's agricultural production they eat within the household is converted to an equivalent cash value, and considered part of household consumption/expenditures.

Consumption/expenditure on food and non-food essentials is lowest among households living in SNNPR and Amhara. In SNNPR more than half of households (52%) fall into the two lowest consumption/expenditure quintiles.

Figure 26: Percent of households in each consumption/expenditure quintile by region



Source: HCE 2011

Share of expenditures on food

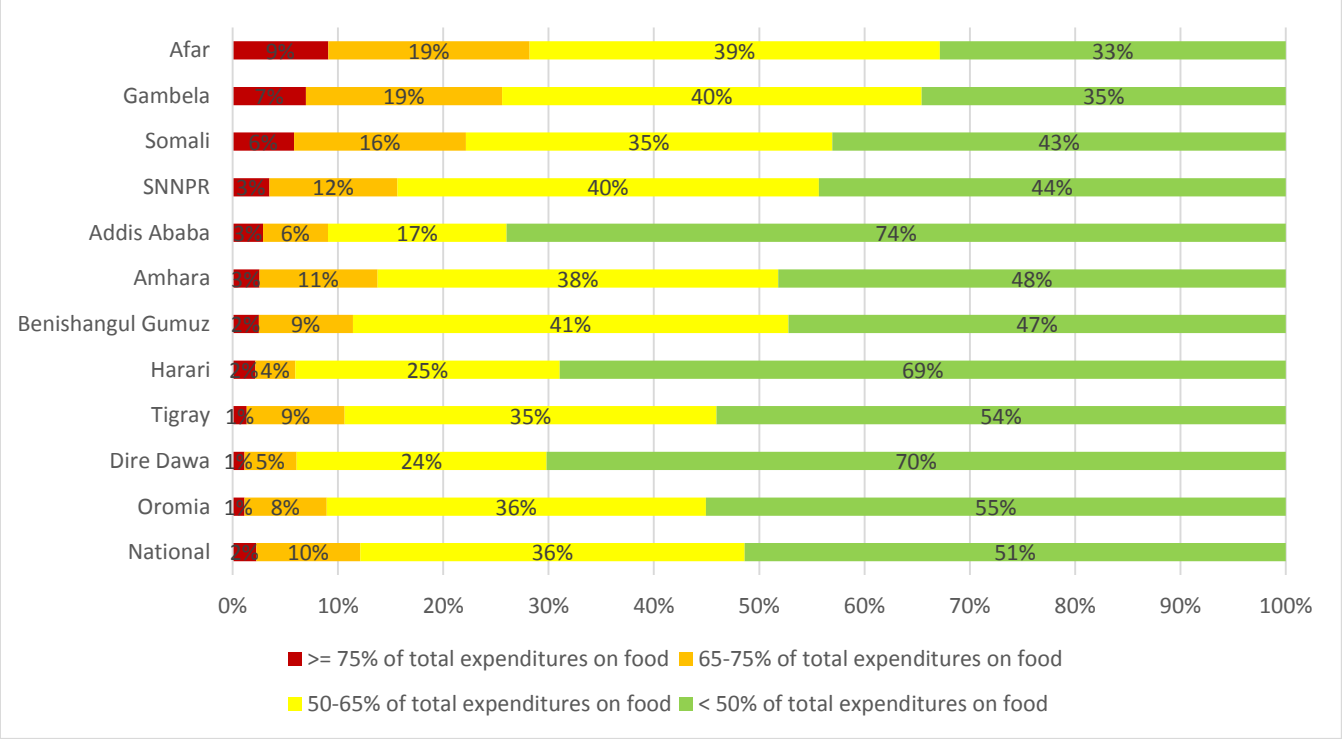
The HCE provides a wealth of data on specific household expenditures, which can be further analysed beyond the poverty and food poverty indicators. These expenditures include not only the money spent

[29] Consumption/expenditure is the cash value of the household cash expenditures plus the value of items produced and consumed by the household but not purchased with cash (such as trades, food grown by the household, etc).

purchasing items, but a cash equivalent for items produced, manufactured and traded/bartered for. This data is used to calculate the *percentage of total expenditures on food* and provides information on how much a household is spending on food compared with overall expenditures. In general, richer/more food secure households spend a smaller percentage of their total expenditures on food, and poorer/more food insecure households spend a higher amount on food[30]. In sum, as the percentage of total expenditures on food increases, the household is considered more economically vulnerable.

To better look at household differences in food expenditure, households were classified into groups of expenditures on food: spending less than half of their expenditures on food, spending 50-65% of their expenditures on food, spending 65-75% on food and spending 75% or more on food. Nationally, 12% of households spend more than 65% of total expenditures on food rising to 28% in Afar, 26% in Gambela and 22% in Somali. In these regions, 9%, 7% and 6% (respectively) spend 75% or more of their total expenditure on food alone.

Figure 27: Percent of households by food expenditure share by region



Source: HCE 2011

There are large urban/rural differences. In urban areas, 5% of households spend more than 65% of their total expenditures on food, whereas in rural areas 14% of households spend more than 65% of total expenditures on food.

30 In extreme cases of poverty and economic vulnerability, this relationship becomes weaker or even reverses, as households have a minimum amount for non-food expenditures (i.e. water, transport, etc.) that they must purchase, even if this means decreasing the expenditures on food to compensate.

6.6 Nutritional status of women and children

KEY FINDINGS

At the national level, there has been a notable decline in chronic malnutrition rates, but the rate is still 'critical' with 44% of children under 5 years stunted
The level of acute malnutrition (weight-for-height) is 'serious', with 10% or 1.1 million children wasted in 2011
There are marked regional differences in acute malnutrition with more than 20% of children wasted in the Afar and Somali regions
The prevalence of underweight children has seen a stark drop, falling from 41% in 2000 to 29% in 2011, a prevalence that is still deemed 'serious' by WHO cut-offs.

Anthropometric measurements were not taken in the WMS or HCE, so the following section is based on data from the 2011 Ethiopia Demographic Health Survey. It provides recent national data of the nutritional status of children aged 6-59 months and women through the following anthropometric measures: *stunting* (i.e. low height for age), *wasting* (i.e. low weight for height), *underweight* (i.e. low weight for age), and *Body Mass Index.*

Similar to poverty and food poverty, the nutritional status of women and children has greatly improved between 2000 and 2011. More than half (58%) of Ethiopia's children below five years of age, suffered from chronic malnutrition in 2000 and by 2011 this share had dropped to 44% of children stunted. However, on the basis of WHO's classification of severity[31] this stunting prevalence is 'critical'. It is estimated that malnutrition contributes to the death of 270,000 children under 5 years of age every year[32]. Given that children under 5 years make up 14% of Ethiopia's population[33], the stunting rate of 44% translates to 5.1 million children. In addition, 21% of children are severely stunted[34].

There are marked regional variations. Amhara, Tigray, Afar and Benishangul Gumuz have by far the highest stunting rates at 52%, 51%, 50%, and 49% respectively compared with the national average at 44%. Lowest rates can be found in Addis Ababa (22%) and Gambela (27%).

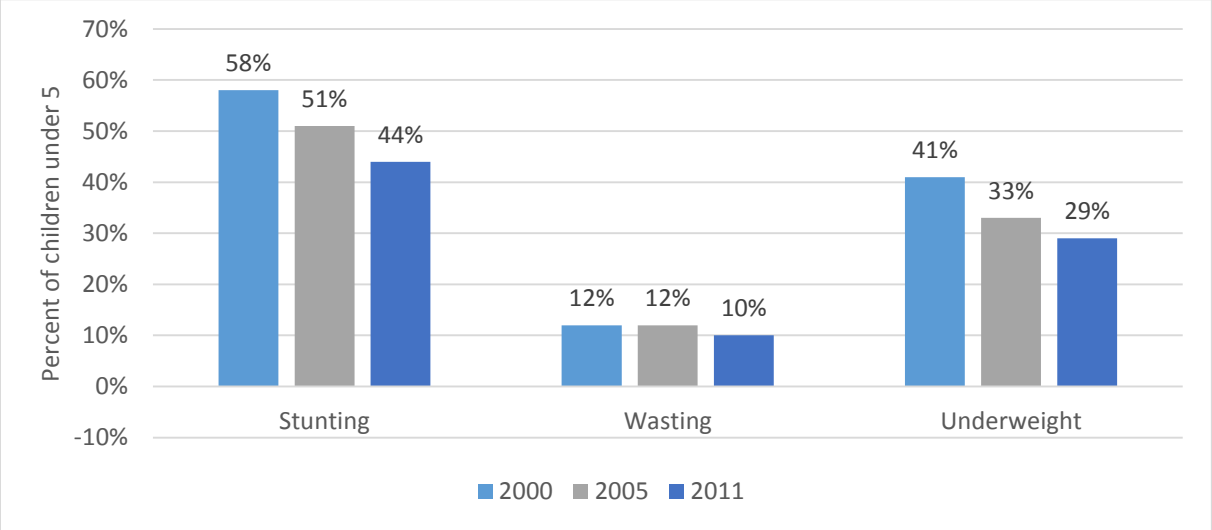
The populations in the regions of Amhara, Tigray, Afar and Benishangul Gumuz are mainly rural. In all four regions there are high rates of food poverty: over 30% of households in Tigray and Amhara are below the food poverty line and more than 25% of households in Afar and Benishangul Gumuz. A large proportion of households consume fewer than 2550 kilocalories per adult equivalent per day - particularly in Amhara

[31] WHO classification of severity of malnutrition in a community for children under 5 years of age from '*The management of nutrition in major emergencies'*, Geneva, 2000
[32] Profiles Ethiopia, Academic Educational Development, Washington, 2006
[33] Central Statistical Agency , 2007 Census
[34] Children who are more than three standard deviations below the normal height for their age are considered severely stunted

region (37%). Tigray and Afar also have high rates of undernourished women with 40% of women having a BMI lower than 18.5.

The prevalence of underweight children has seen an even starker drop than that of chronic malnutrition, falling from 41% in 2000 to 29% in 2011, a prevalence that is still deemed 'serious' by WHO cut-offs. Acute malnutrition (weight-for-height) currently stands at 10% or 1.1 million children wasted in 2011. This share is considered 'serious' by WHO classifications.

Figure 28: National trends in nutritional status of children (6-59 months) between 2000 and 2011



Source: EDHS 2011. Note: The 2000 and 2005 percentages have been recalculated based on the WHO standards to compare with 2011

Children living in rural areas are more likely to suffer from malnutrition than those living in urban areas. In rural areas 46% of children are stunted, compared with 32% of children in urban. Similarly, wasting rates are higher in rural areas (10%) than urban (6%) and rural areas are also significantly more affected by underweight children (30%) than urban areas (16%). This may be explained by urban populations having lower levels of poverty, better diets and better access to clean sanitation facilities and clean water (DHS 2011).

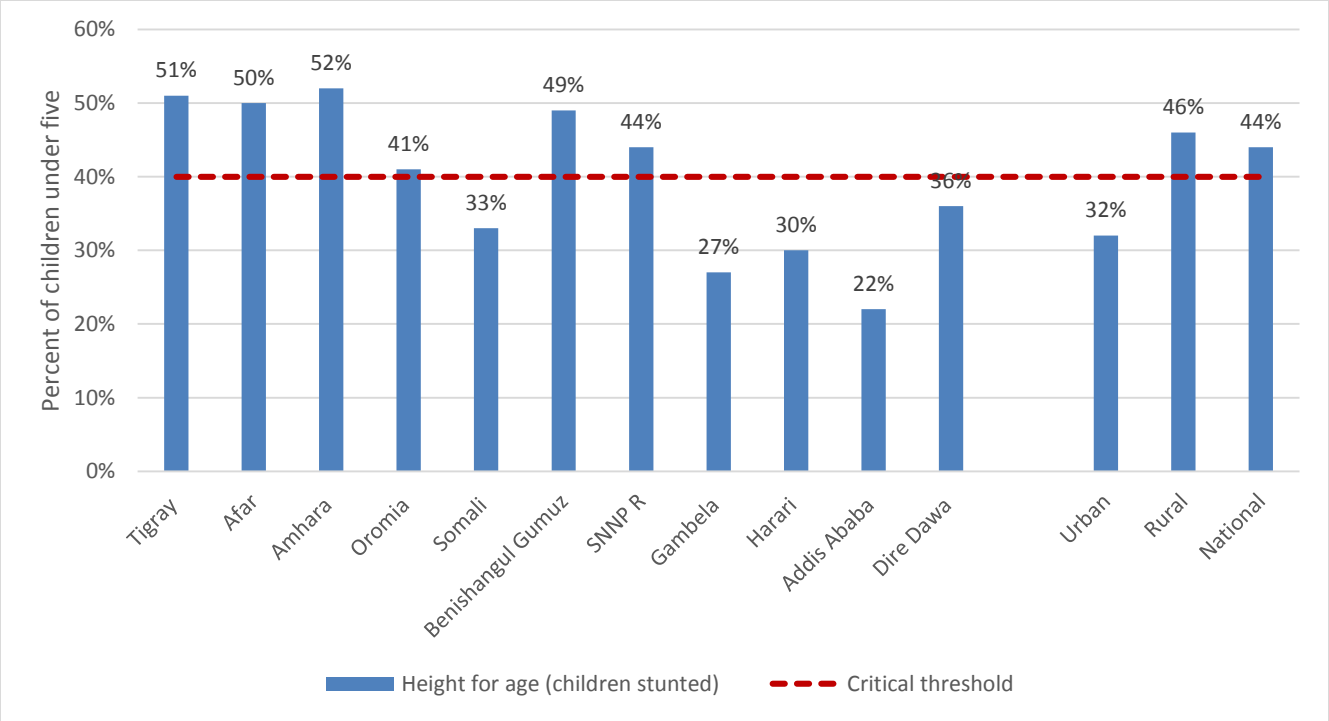
The rate at which malnutrition prevalence among children has decreased between 2000 and 2011 is particularly stark in urban areas with the exception of wasting rates, which have seen an increase among urban children, albeit minimal.

Table 19: Malnutrition among children (6 – 59 months) by rural/urban areas between 2000 and 2011

	Stunting			Wasting			Underweight		
	2000	**2005**	**2011**	**2000**	**2005**	**2011**	**2000**	**2005**	**2011**
Urban	42.3	29.8	31.5	5.5	6.3	5.7	33.7	22.9	16.3
Rural	52.6	47.9	46.2	11.1	10.9	10.2	48.7	39.	30.4
Total	**58**	**51**	**44.4**	**12**	**12**	**9.7**	**41**	**33**	**28.7**

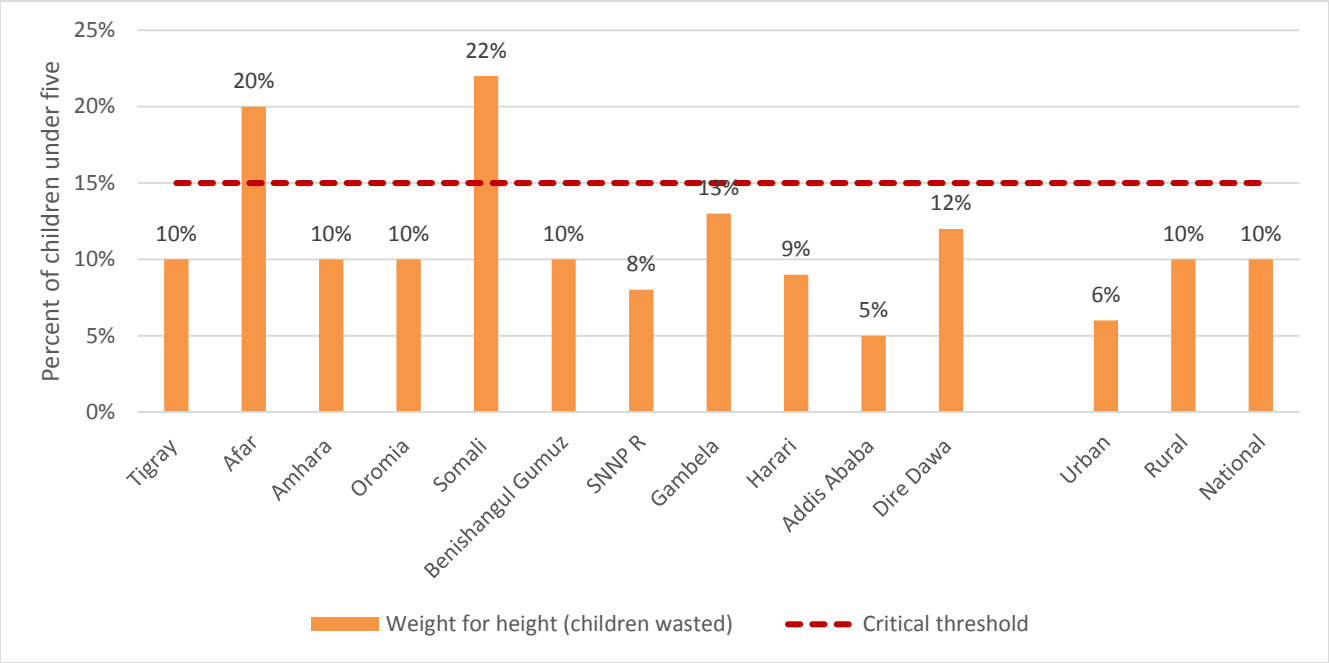
Source: DHS 2000, 2005 & 2011. For comparison purposes, the 2000 and 2005 anthropometric indicators are computed on the basis of the new WHO Standards. The values in the graph indicate percentage below -2 SD

Figure 29: Percentage of children under five years classified as stunted by region



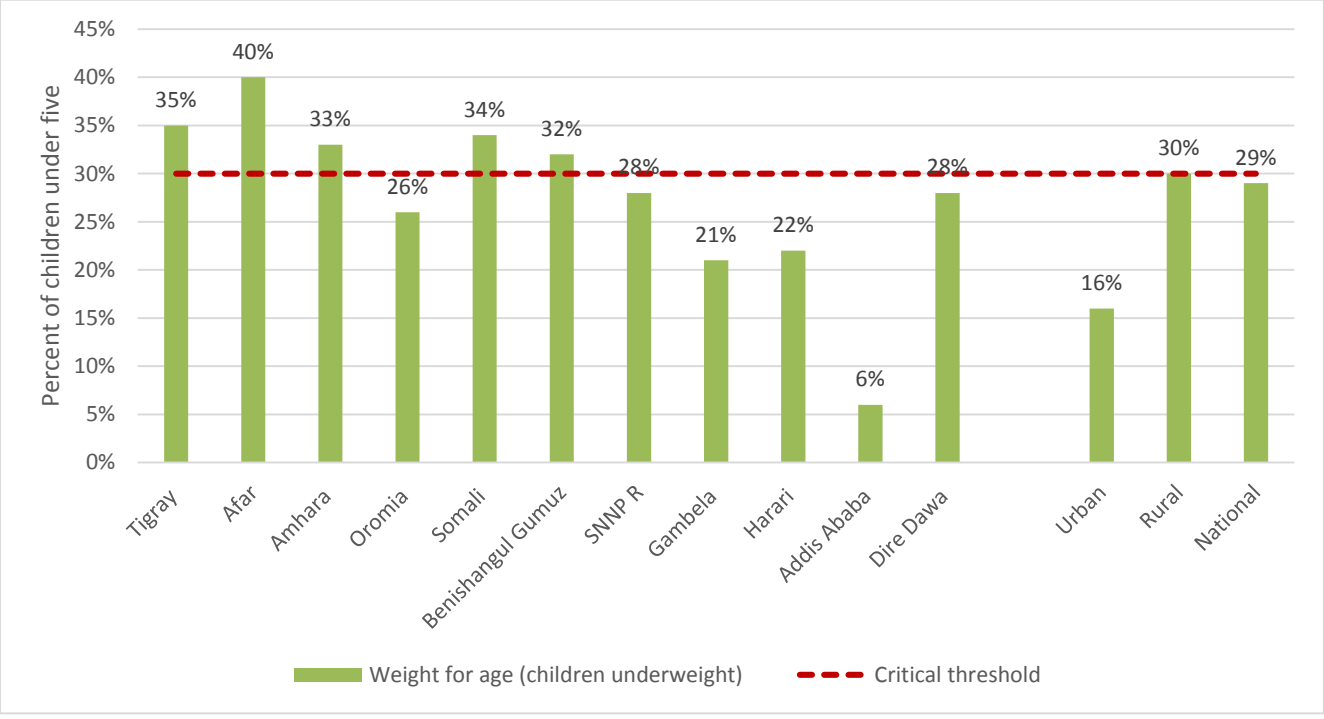
Source: Ethiopia Demographic and Health Survey, CSA, 2011

Figure 30: Percentage of children under five years classified as wasted by region



Source: Ethiopia Demographic and Health Survey, CSA, 2011

Figure 31: Percentage of children under five years classified as underweight by region



Source: Ethiopia Demographic and Health Survey, CSA, 2011

Somali and Afar are the regions with the highest childhood wasting rates (more than 20%), while lowest rates are found in Addis Ababa (5%). More than half (56%) of households in the Somali region reported that they had experienced shocks and the majority reported worse or much worse food access compared with the previous year. The Somali and Afar regions have in common that a large number of households rely on livestock as their main livelihood. Although rates of poor and borderline food consumption in Afar are quite low (6%) other indicators suggest a bleaker picture with 47% of households consuming three or fewer food groups, 50% of children under five stunted and 40% of children under five underweight.

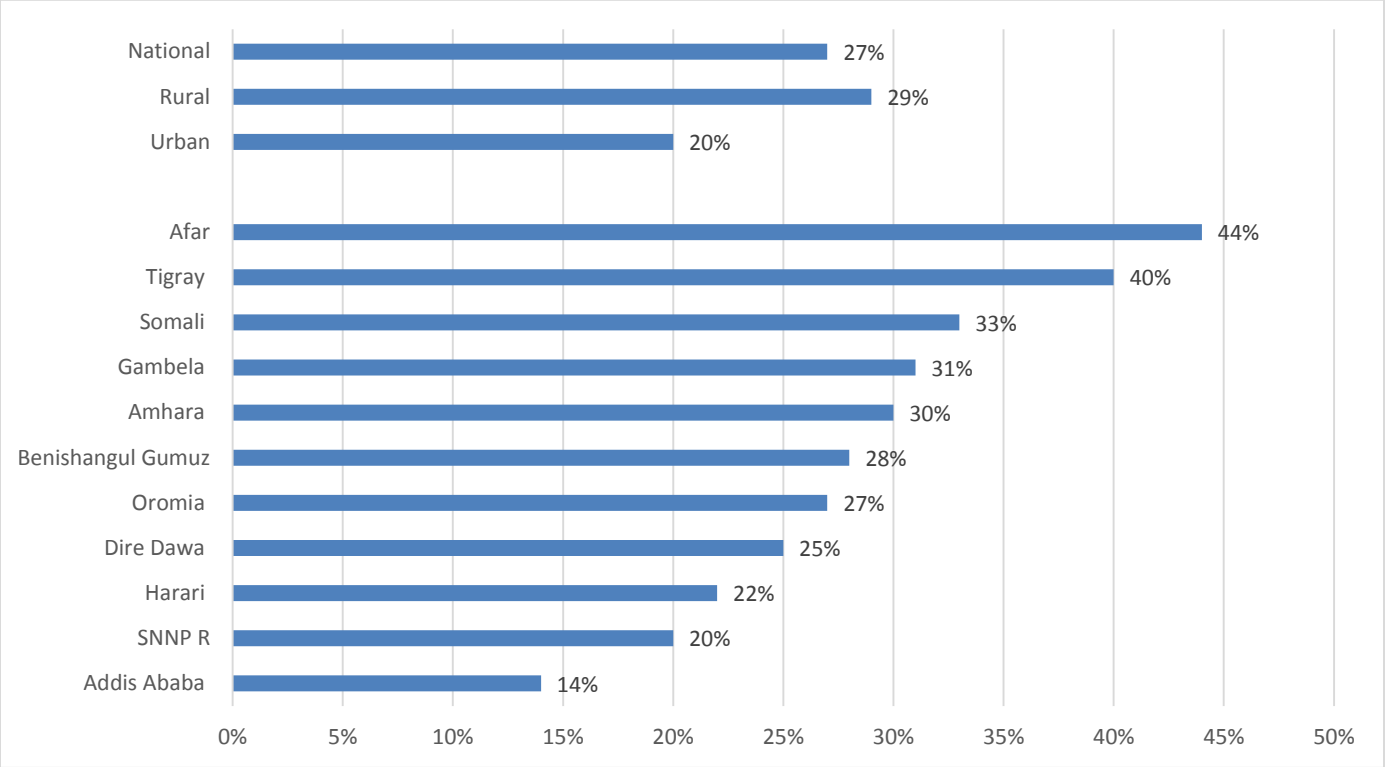
Indeed both Afar and the Somali region perform poorly on a number of indicators. According to the 2011 DHS, infant and young child feeding practices were worse in the Somali region than any other with just 22% of children age 6-23 months meeting their minimum meal frequency[35]. In Afar, that figure stood at 29%, the second worst regionally, compared to 49% nationally. As noted in earlier sections, dietary diversity is an issue in Somali and Afar where 38% and 47% respectively consume three or fewer food groups in a week. The 2011 DHS also highlights this issue among children. The two regions had the lowest percent of children (6-23) months who consumed vitamin A rich foods; 11% in Afar and 12% in Somali compared to 26% nationally. The issue of poor micronutrient intake in these two regions is further exemplified by the high rates of anaemia in children 6-59 months with 75% in Afar and 69% in Somali (DHS 2011).The prevalence of underweight is highest in the Afar region (40%). Amhara, Benishangul Gumuz, Somali and Tigray follow with more than a third of children in each region weighing too little for their age. Least affected are children living in Addis Ababa (6%).

Indicators measuring current food consumption alone fail to explain malnutrition at the regional level in Ethiopia. For example, the two regions with the highest proportion of households with poor and borderline food consumption also have relatively low levels of malnutrition. It has to be taken into account that non-food factors are a major cause of high malnutrition rates in Ethiopia and stunting is found in both regions that are food deficit and regions that have a food surplus (Rajkumar, Gaukler, & Tilahun, 2012). Many other factors influence the nutritional status of children, such as mothers' nutritional status, mothers' education, micronutrient deficiencies, access to care and safe water and hygiene, and at a lower level the wealth of the household. Finally, a regional comparison between malnutrition and underlying causes cannot determine the household and individual factors/causes, as the data come from different surveys.

Undernourishment of women (Body mass index, BMI less than 18) in Ethiopia is common; 27% of Ethiopian women of reproductive age (15 to 49 years old) are undernourished. Among the regions, Afar and Tigray are by far the most affected by women undernourishment (44% and 40% respectively), followed by Somali (33%), Gambela (31%) and Amhara (30%). Not surprisingly Addis Ababa has the lowest proportion of women with BMI below 18.5. Similarly, women living in urban areas are less likely to be undernourished (20%) than those living in rural areas (29%).

[35] For breastfed children

Figure 32: Percentage of women between 15 and 49 years with a BMI < 18



Source: Ethiopia Demographic and Health Survey, CSA, 2011

7. A profile of the food insecure

This section highlights the most prominent factors that have been found to be significantly associated with households challenged by food insecurity. The list of characteristics is not exhaustive but they serve as stepping stones towards the development of more refined geography-and situation-specific targeting tools. Additionally, they point towards potential response options that could reduce people's vulnerability to food insecurity. This section looks at the food access (diet, poverty) indicators and attempts to address the question of who is food insecure, and begins to address the question of why they are food insecure.

7.1 Poverty

KEY FINDINGS

Poverty and wealth indicators may measure different aspects of poverty and vulnerability.

Simpler measures of wealth/poverty, such as the wealth (asset) index, show a stronger relationship with food consumption indicators.

By all indicators of wealth and poverty, the rural areas are poorer than urban areas.

Those households relying primarily on livestock are the most likely to be poor, as measured by all indicators, and those relying primarily on salary, trade (service or wholesale) and remittances are the least likely to be poor.

As discussed above, this report utilizes five measures of poverty and wealth to explore food security in Ethiopia. These different indicators capture different aspects of poverty depending on their construct and thresholds. Just to recap – at a national level they show somewhat similar prevalences[36]:

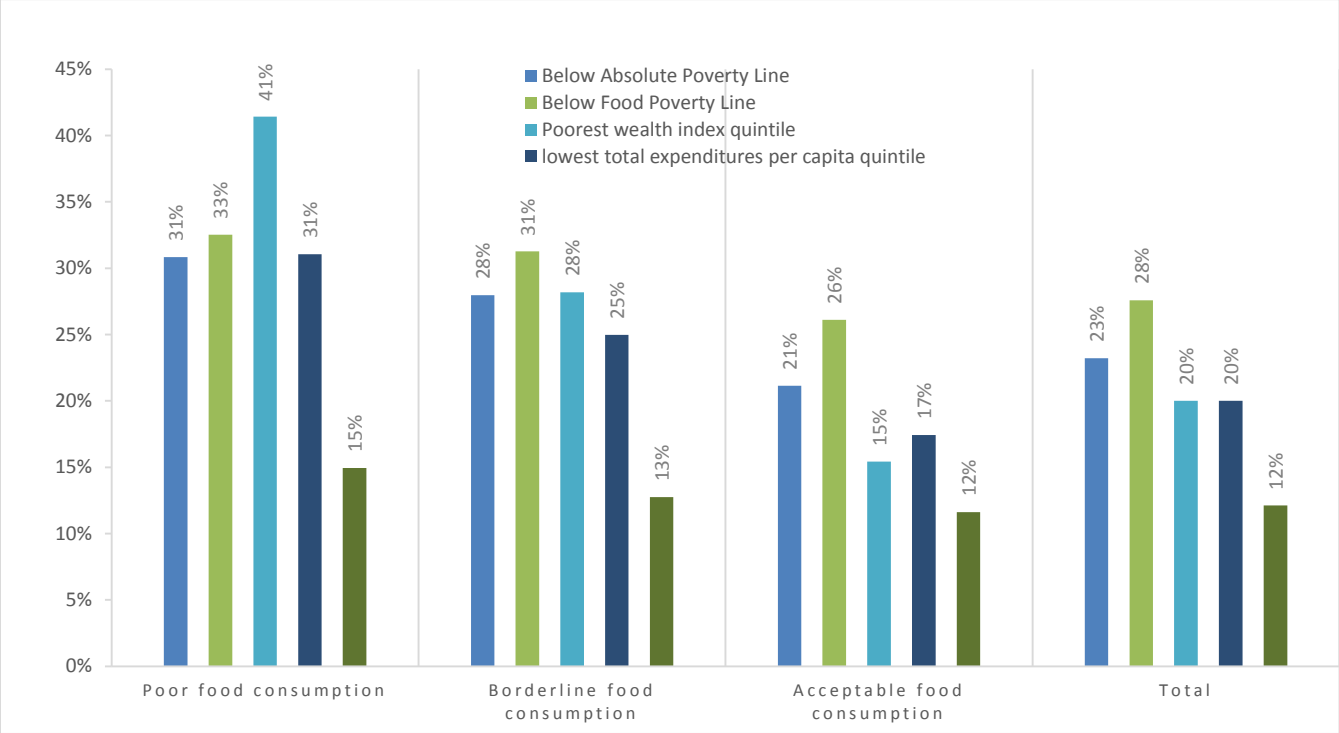
Poverty line	23% of households below the poverty line
Food poverty line	28% of households below the food poverty line
Wealth/asset index	20% of households in the poorest wealth index quintile (see footnote)
Total household expenditures/consumption	20% of households in the poorest expenditure/consumption quintile (see footnote)
Percent of total household expenditures on food	12% of households spend more than 65% of total expenditures on food

It is interesting to observe that while all five poverty indicators are linked to food consumption (as measured by the FCS) the wealth index and consumption/expenditure quintiles are more closely

[36] For quintile based indicators, there will always be 20% of households in each quintile, so this is not indicative of any meaningful prevalence; rather, it is only among sub-strata that the quintile based indicators can be used as relative measures to compare these strata. However, as poverty and food poverty are only somewhat higher than 20%, the prevalences are easier to compare.

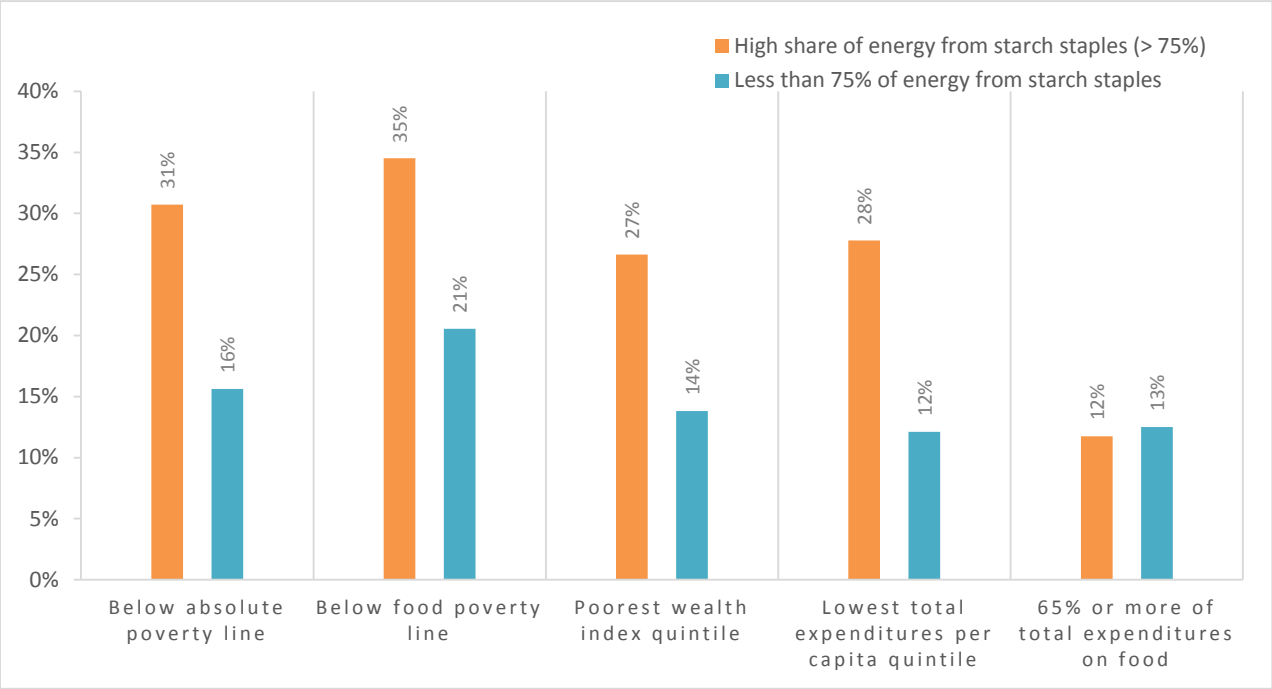
associated with food consumption than are the poverty line indicators. And the wealth index in particular shows the most variation between food consumption groups. When looking at percentage of total calories from starchy staples and caloric insufficiency, the indicators of poverty tend to show similar relationships with these indicators.

Figure 33: Poverty and wealth indicators by food consumption group



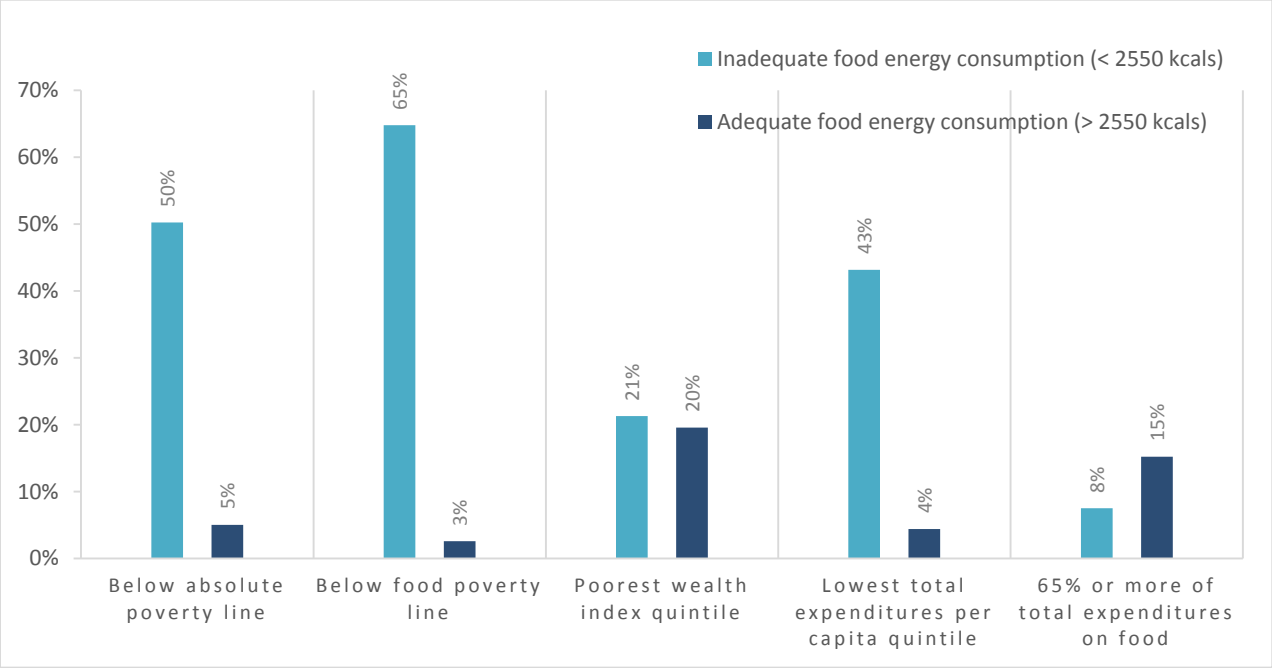
Source: WMS and HCE 2011

Figure 34: Poverty and wealth indicators by share of energy from starch staples



Source: HCE and WMS 2011

Figure 35: Poverty and wealth indicators by food energy efficiency



Source: HCE and WMS 2011

Households living below the poverty line, below the food poverty line, in the lowest wealth index quintile and those in lowest expenditure quintile are more likely to derive 75% or more of their kilocalories from starchy staples. With the exception of those in the lowest wealth index quintile, these households are also more likely to be energy deficient. However these indicators of food insecurity are not associated with high (>65%) expenditure on food.

It should be noted that all of the indicators in Figure 34 and Figure 35, with the exception of the wealth index, are derived from the same (or a subset of the same) data gathered in the consumption expenditure module of the HCE.

7.2 Livelihoods

KEY FINDINGS

Four livelihoods are found to be particularly vulnerable to food insecurity by a variety of indicators	Crop production (main occupation of 44% of all households) Livestock (main occupation of 2% of all households)[37] An equal combination of crop production and livestock (main occupation of 28% of all households) Casual/day labour (main occupation of 4% of all households)
The survey indicates that nationally, 74% of households rely on livestock, crop production, or a combination of the two as their main occupation (livelihood).	In rural areas, these livelihoods are practised by 90% of households.
Fifty-five percent of households that are engaged in livestock and 54% of those engaged in casual/daily labour consume less than the minimum daily energy requirement of 2,550 kilocalories per adult equivalent per day.	
Starchy staple heavy diets (more than 75% of calories coming from starch staple foods) are particularly common among households making a living from livestock (52%), crop production (57%), and crop production and livestock combined (64%).	

[37] As the non-sedentary areas of Afar and Somali were excluded from the survey, this prevalence is likely to be lower than the true value nationally.

In the HCE, households were asked about the main occupation of the household head. This indicator is used as a proxy for the main livelihood of the household. Certain rare livelihoods were merged or classified as 'other' as their numbers were too few to be able to make specific statements about them[38].

Nationally, the agricultural and livestock sector is the most frequently cited income source. Forty-four percent (44%) of households report crop production as their main livelihood. An additional 28% of households cited crop and livestock (in equal measure) and 2% reported livestock as their main occupation. Together, the data indicate that 74% of households in Ethiopia rely on livestock, crop production, or a combination of the two as the main occupation of their household head.

Table 20: Percent of households practising each main occupation by region and urban/rural

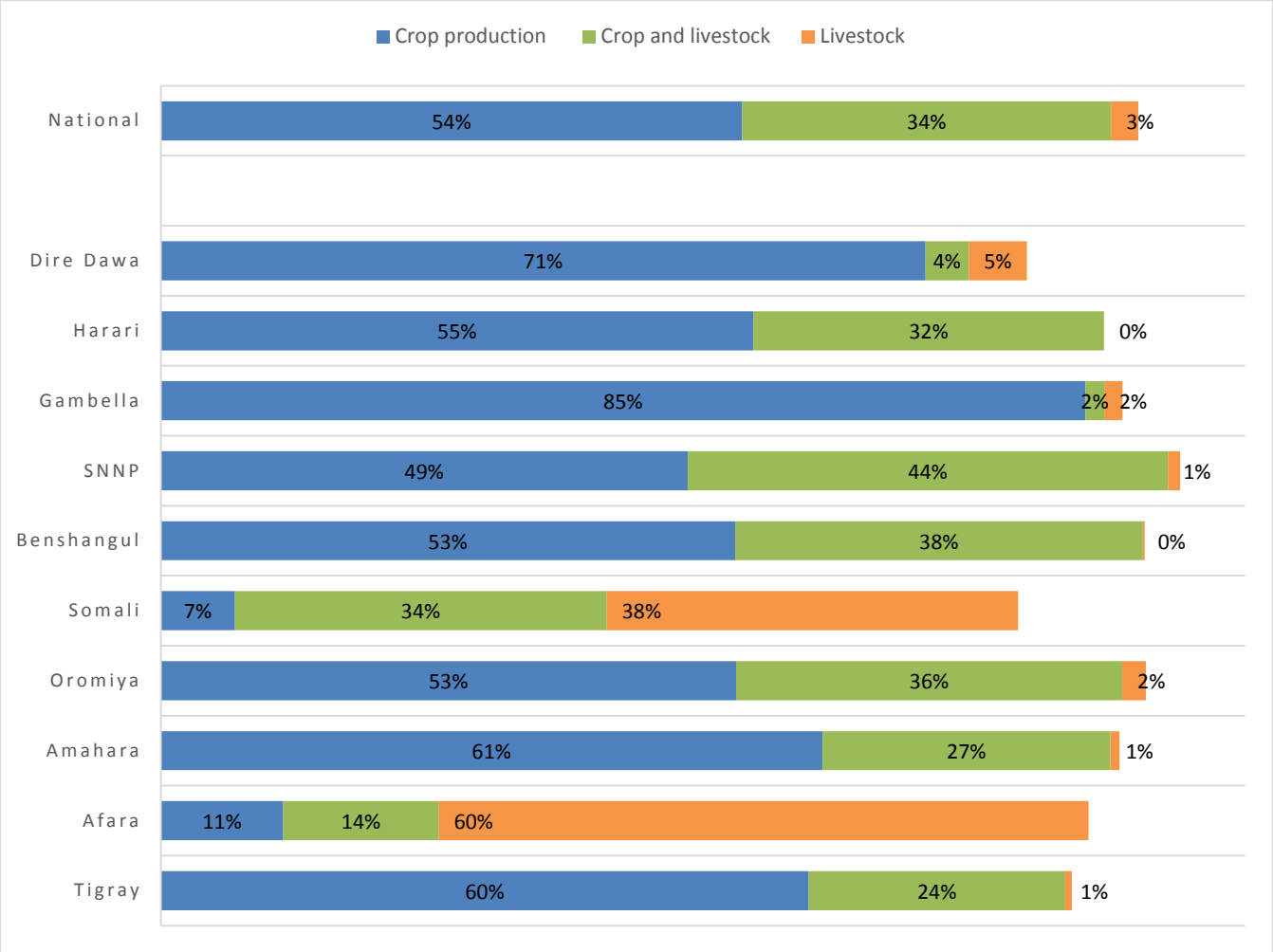
Region	Other (not otherwise classified)	Salary	Casual labor / daily laborer	Crop production	Livestock	Crop and Livestock	Manufacturing, construction and mining	Wholesale & retail trade (formal sector)	Wholesale & retail trade (informal sector)	Service trade	Remittances
Tigray	6%	9%	5%	47%	1%	18%	2%	2%	3%	3%	3%
Afar	2%	16%	8%	9%	43%	10%	1%	2%	3%	3%	2%
Amhara	6%	5%	3%	53%	1%	23%	2%	1%	3%	2%	2%
Oromia	2%	7%	4%	45%	2%	30%	1%	2%	3%	1%	3%
Somali	2%	6%	5%	7%	32%	28%	0%	1%	9%	2%	7%
Benishangul Gumuz	1%	8%	3%	47%	0%	33%	2%	1%	2%	1%	2%
SNNPR	1%	6%	2%	43%	1%	39%	1%	1%	2%	1%	1%
Gambela	2%	17%	6%	61%	2%	1%	2%	2%	2%	2%	4%
Harari	6%	20%	8%	25%	0%	16%	2%	3%	12%	2%	6%
Addis Ababa	13%	49%	8%	1%	0%	0%	4%	8%	6%	5%	7%
Dire Dawa	9%	28%	11%	20%	1%	1%	1%	4%	10%	4%	11%
Rural	2%	2%	2%	54%	3%	34%	1%	0%	2%	1%	1%
Urban	9%	35%	10%	7%	1%	3%	4%	7%	9%	6%	9%
Total	**3%**	**9%**	**4%**	**44%**	**2%**	**28%**	**1%**	**2%**	**3%**	**2%**	**3%**

Source: HCE 2011

[38] Unclassified 'other' was the most frequent response in this category. Other very rare activities coded as other include renting of land/house, social security, donation from the government/NGOs, begging, and prostitution.

This pattern is similar but more pronounced in rural areas, where 54% of households report crop production, 34% crop production *and* livestock, and 3% livestock only. Overall, 90% of households residing in rural areas rely on livestock, crop production, or a combination of the two as their main household head occupation. Livestock is the most common occupation of household heads in rural Afar and Somali (60% and 38%[39]). This compares with 5% of households or less in all the other rural regions.

Figure 36: Percent of rural households relying on crop production, livestock, or both as main occupation of household head



Source: HCE 2011

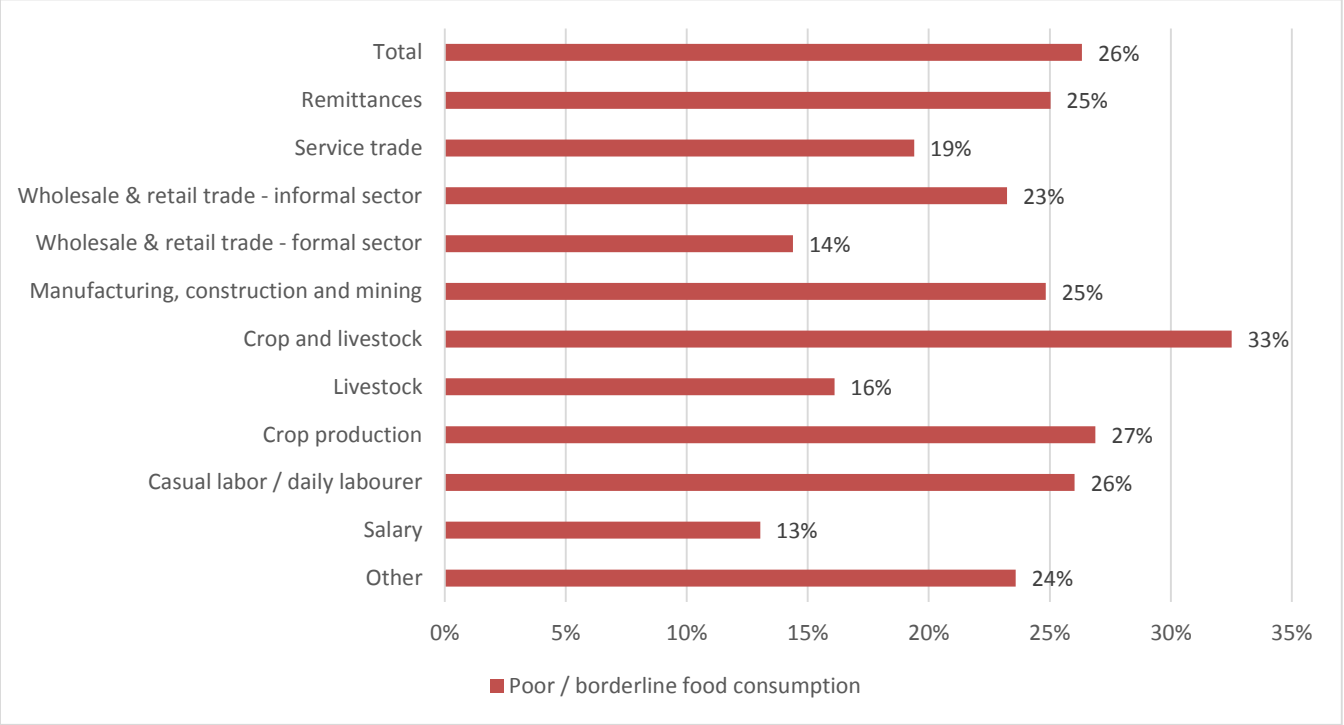
In urban areas, 35% of households report a salaried job as the main occupation of the household head. Other common occupations in urban areas include casual/daily labour (10%), informal wholesale and retail (9%) and remittances (9%). Though some variation between the urban areas in different regions is observed, this general pattern holds.

[39] This survey did not cover all areas of Somali and Afar (three non-sedentary zones of Afar and six non-sedentary zones of Somali were not included). The figures for households relying on livestock are likely to underestimate the values for the entire Regions.

Diet quantity and diet quality of livelihood groups

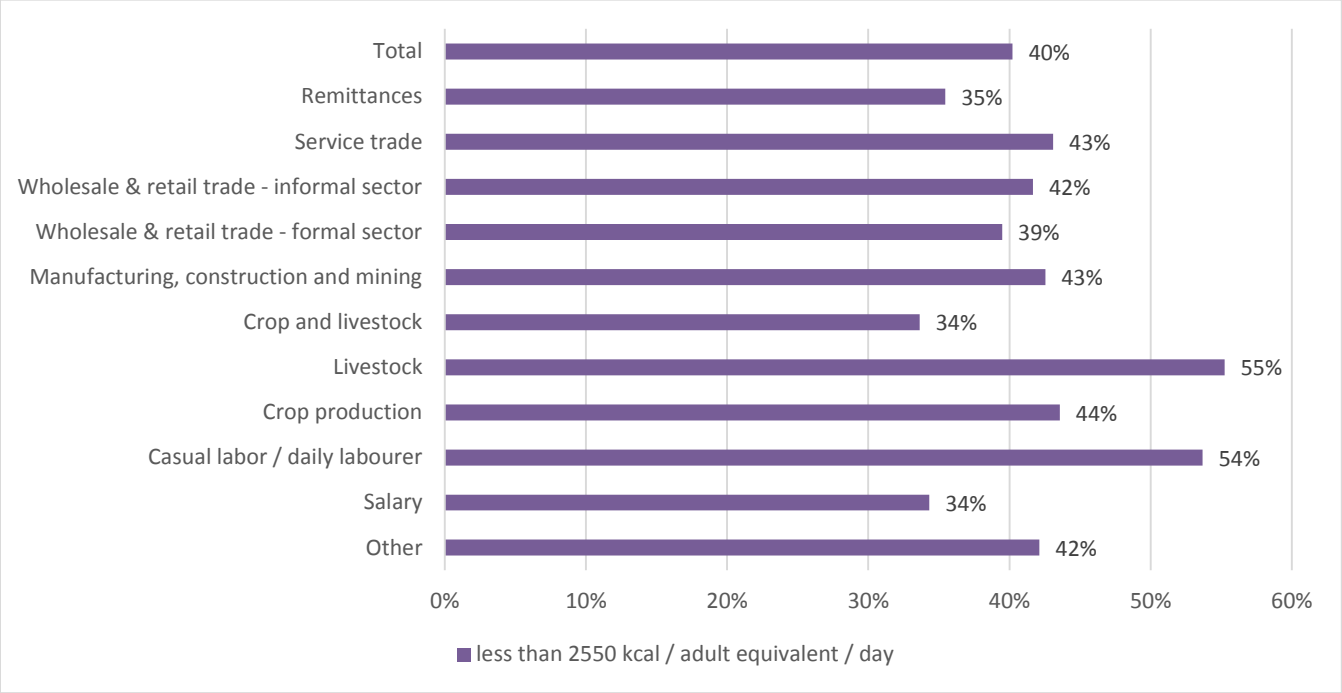
As can be seen in the graph below, livelihoods such as combined crop production/ livestock, crop production only, and casual/daily labour have the highest share of households with unacceptable (poor/borderline) food consumption, ranging between 26% and 33%. Households relying on livestock as their main occupation have been found to have a comparatively low prevalence of households with poor/borderline food consumption patterns (16%), due in large part to their much higher consumption of dairy, though they are worse off by other measures of diet. Generally better-off livelihood groups include those relying on wholesale and retail trade and those receiving regular salaries.

Figure 37: Percent of households with poor/borderline food consumption by livelihood



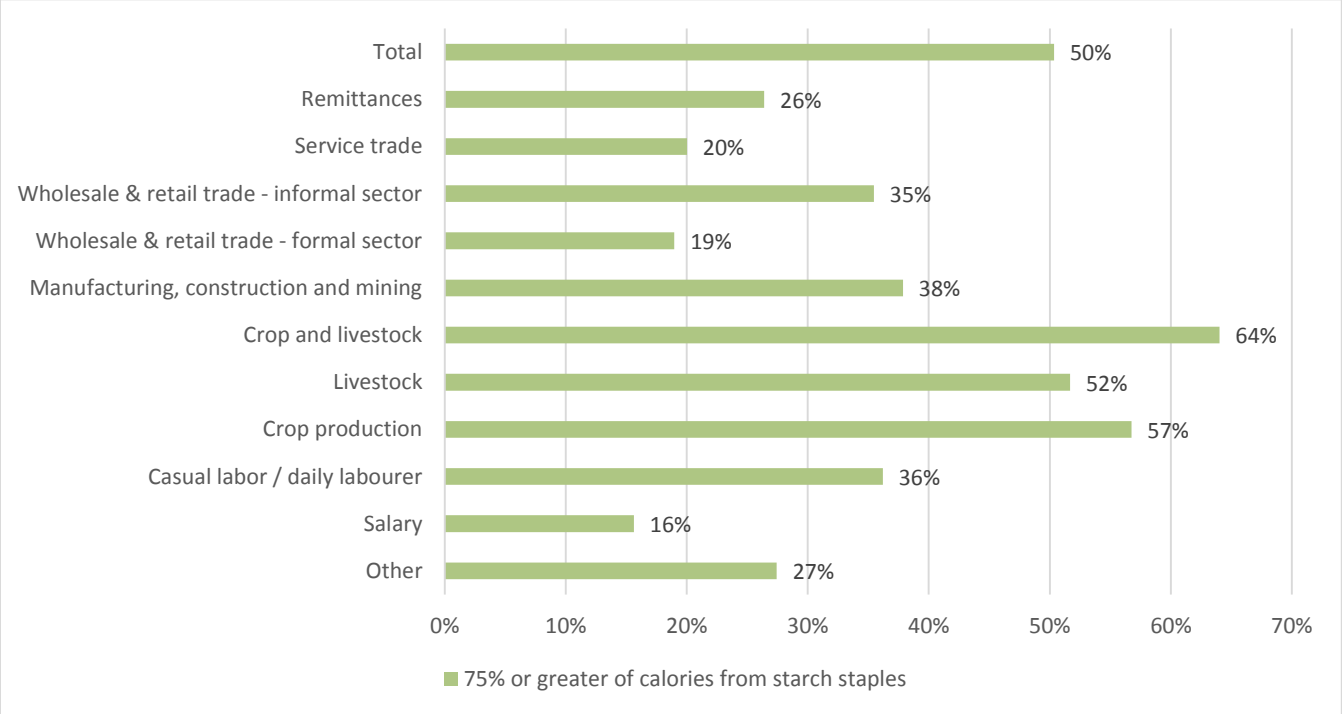
Source: HCE and WMS 2011

Figure 38: Percent of households consuming fewer than 2,550 kilocalories/adult equivalent/day by livelihood



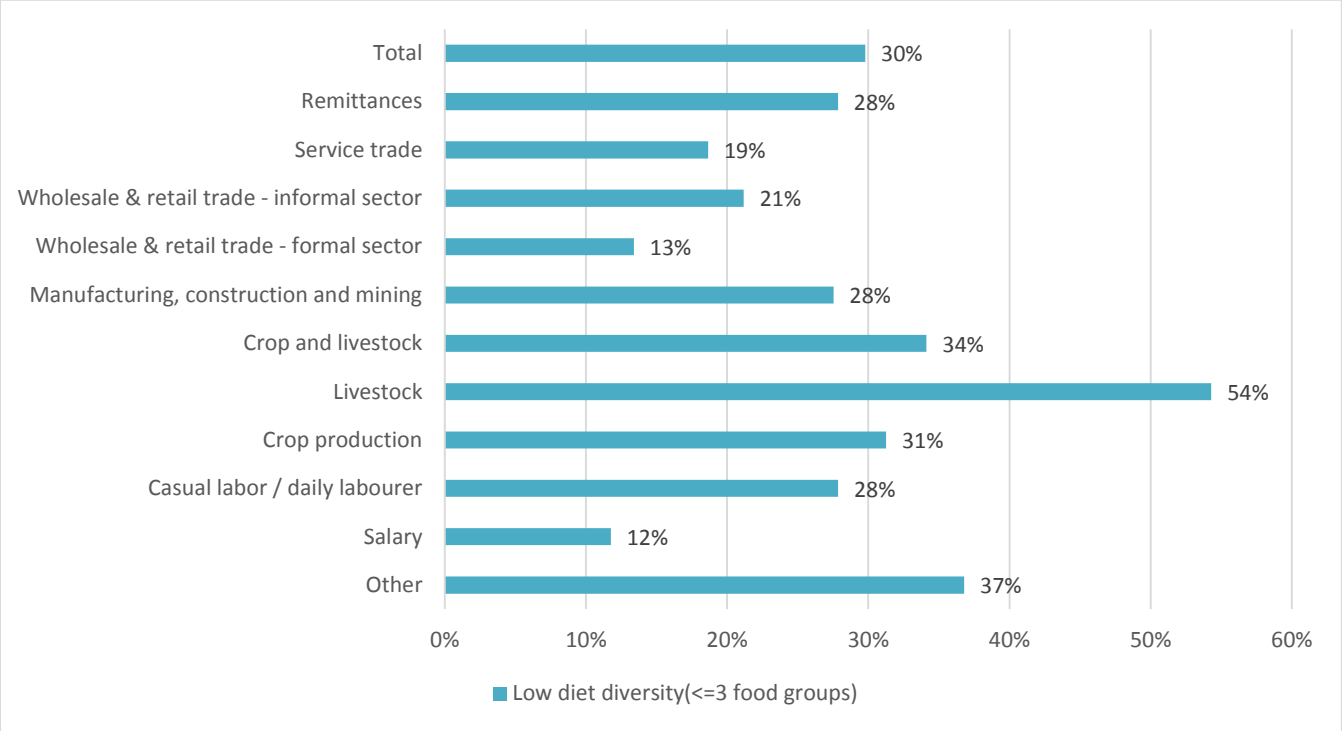
Source: HCE and WMS 2011

Figure 39: Percent of households consuming more than 75% of calories from starch staples by livelihood



Source: HCE and WMS 2011

Figure 40: Percent of households with low dietary diversity by livelihood



Source: HCE and WMS 2011

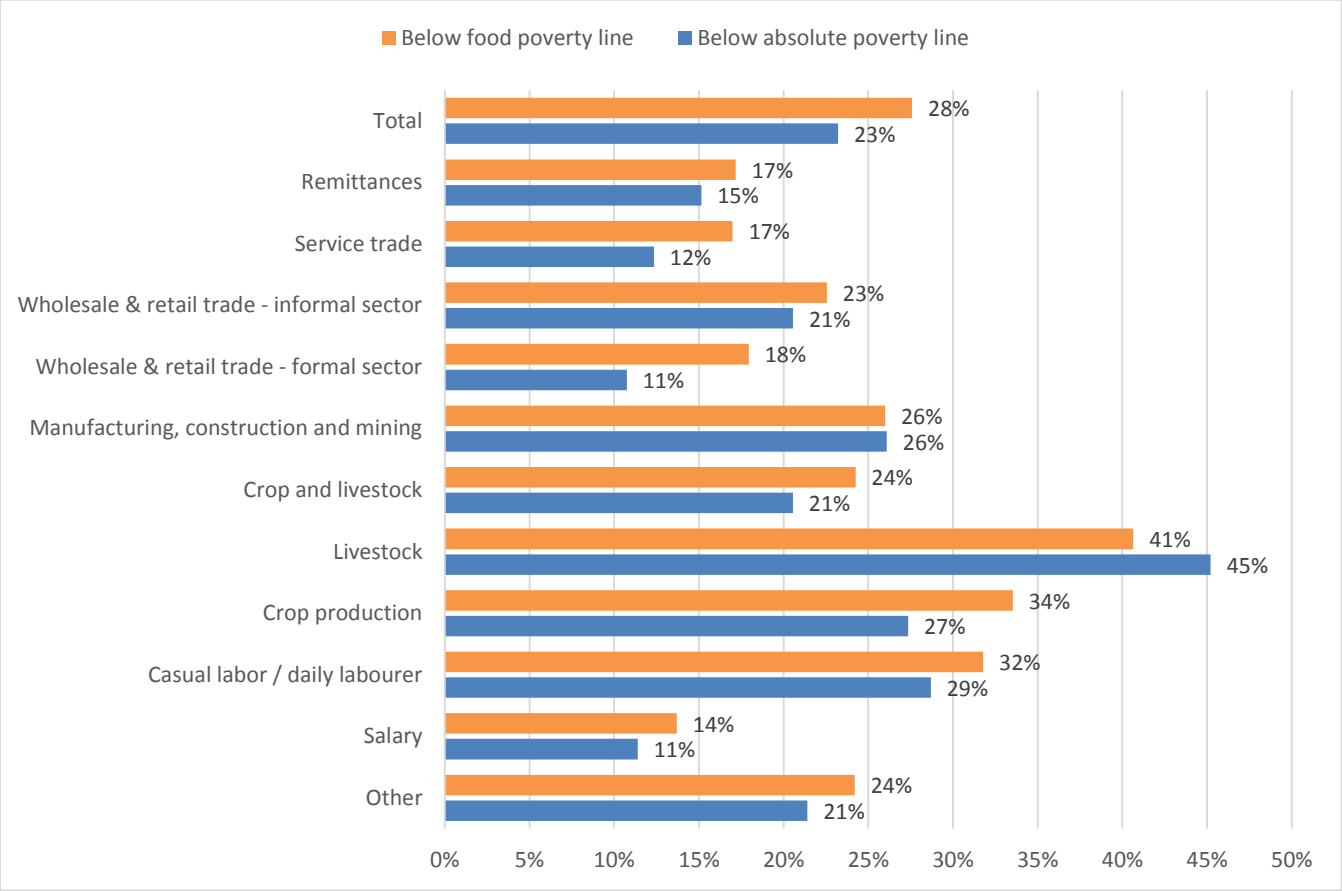
With regards to daily food energy consumption, 55% of households engaged in livestock consume less than the minimum daily energy requirement of 2,550 kilocalories per adult equivalent per day, the highest food energy deficient prevalence among all livelihoods. They are followed by households engaged in casual/daily labour with 54% eating fewer calories than the daily requirements. This stands in contrast to salaried households, of whom 34% consume less than the minimum, as well as crop and livestock (34%), and remittances (35%).

Similarly, starchy staple heavy diets (more than 75% of calories coming from starchy staple foods) are particularly common among households making a living from livestock (52%), crop production (57%), and crop production and livestock combined (64%).

Poverty and wealth of livelihood groups

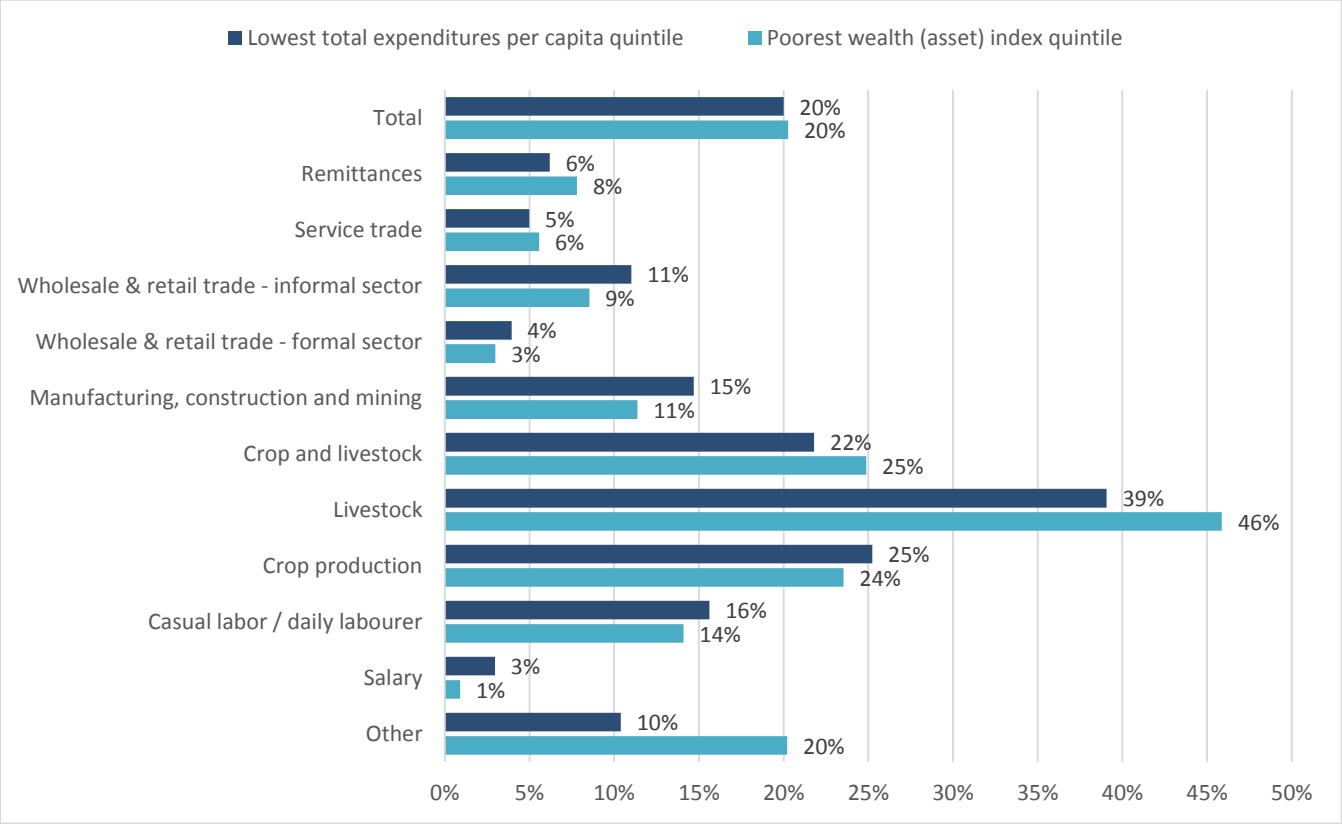
Indicators of poverty tend to be most prevalent among households relying on livestock, crop and livestock, and crop production, as well as casual/day labour. However, different indictors show different patterns. For example, casual/day labour have a higher prevalence of poverty and food poverty, but relatively low prevalence of high expenditure shares on food, low total expenditure per capita quintile, and wealth/asset index.

Figure 41: Percent of households below poverty and food poverty line by livelihoods



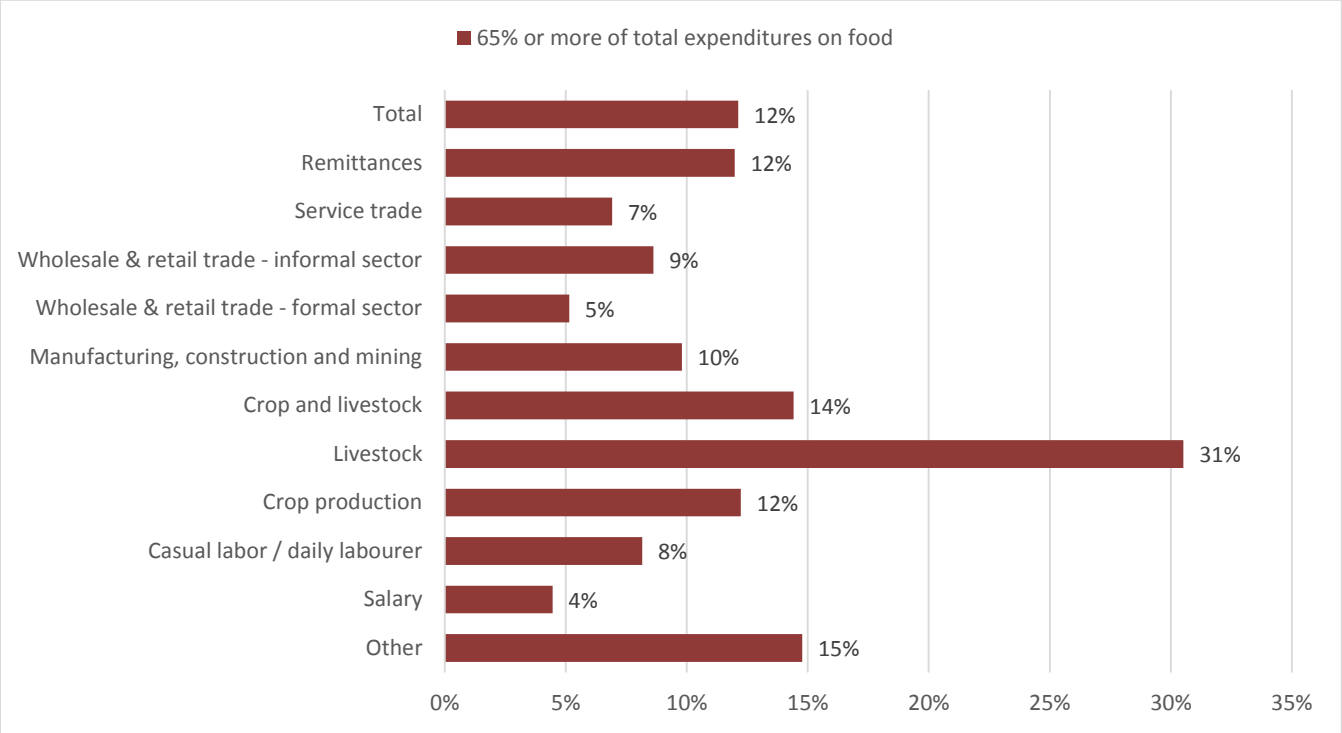
Source: HCE 2011

Figure 42: Percent of poor households (wealth index and expenditure quintiles) by livelihoods



Source: HCE 2011

Figure 43: Percent of households with high share of expenditure on food (> 65%) by livelihoods



Source: HCE 2011

7.3 Access to services

KEY FINDINGS

Access to services such as schools, health posts, hospitals, food markets, and transport is most strongly linked to urban/rural differences. Food market access is also associated with indicators of wealth and food consumption.

54% of the poorest expenditure quintile households live further than 5km from the nearest food market vs 22% of the richest.

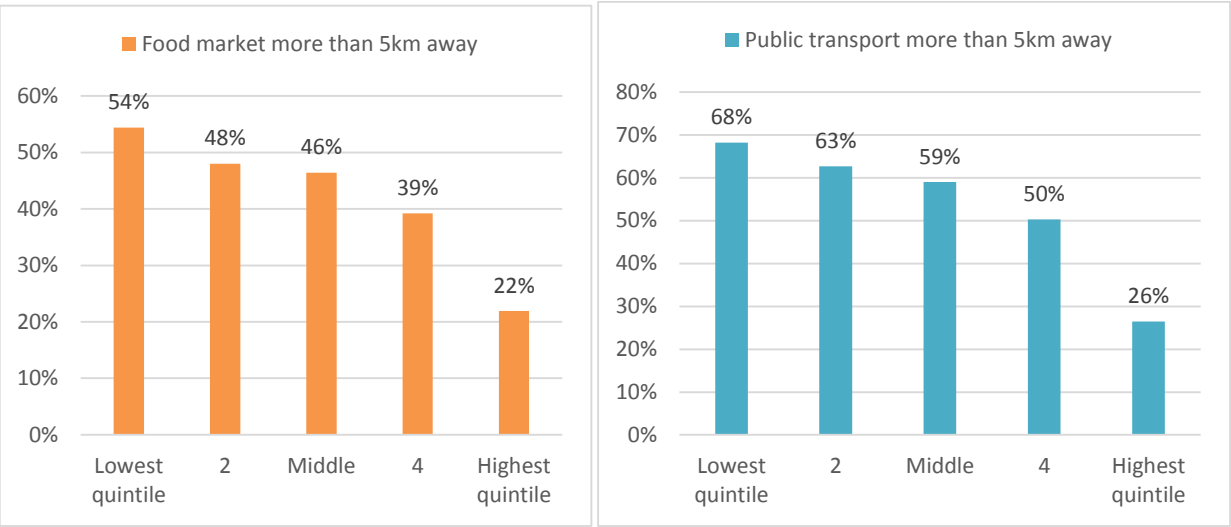
49% of households consuming starch-heavy diets (>75% of kilocalories) are further than 5km from the nearest food market, compared with 35% among those with less starch-heavy diets (<75% of kilocalories).

50% of households in food poverty live more than 5km from the nearest food market compared to 39% of households not in food poverty.

Households were asked the distance to a number of facilities such as primary schools, health posts, hospitals, food markets etc. More than half (51%) of rural households are further than 5km from the nearest food market compared with only 6% of urban households. Rural households also have much worse access to transport, with 65% living more than 5km from the nearest local transport, and 86% more than 5km from the closest cross country transport, vs. 7% and 34% of urban households respectively.

Access to markets shows a relatively strong relationship between expenditure-wealth, with only 22% of the richest expenditure quintile households living more than 5km from the nearest market, compared to 54% of the poorest quintile households. Market access is also associated with starch heavy diets. Among households consuming starch-heavy diets (>75% of kilocalories), 49% are further than 5km from the nearest food market, but among households with less starch-heavy diets (<75% of kilocalories), only 35% are further than 5km from the nearest food market. Households in food poverty are also more likely to live more than 5 km from the nearest food market (50%) compared with households not in food poverty (39%).

Figure 44: Percentage of households further than 5km from food market and public transport by total per capita expenditure quintile



Source: WMS 2011 and HCE 2011

8. Shocks, coping strategies and perceptions of food insecurity

In addition to the quantitative measures of food security presented throughout this report, the WMS also includes several questions related to the perceptions of food security. These data are subjective on the part of the respondent, and must be interpreted as such, but they help further address the question of who is food insecure and why. However, as this data is subjective, it is not useful to provide quantitative answers of how many are food insecure and vulnerable.

8.1 Shocks

KEY MESSAGES

Of all households, 35% reported having experienced one or more shocks in the past year and these households were more likely to have poor food consumption

Food price increases and food shortages were the most common shocks, experienced by 18% and 14% of households

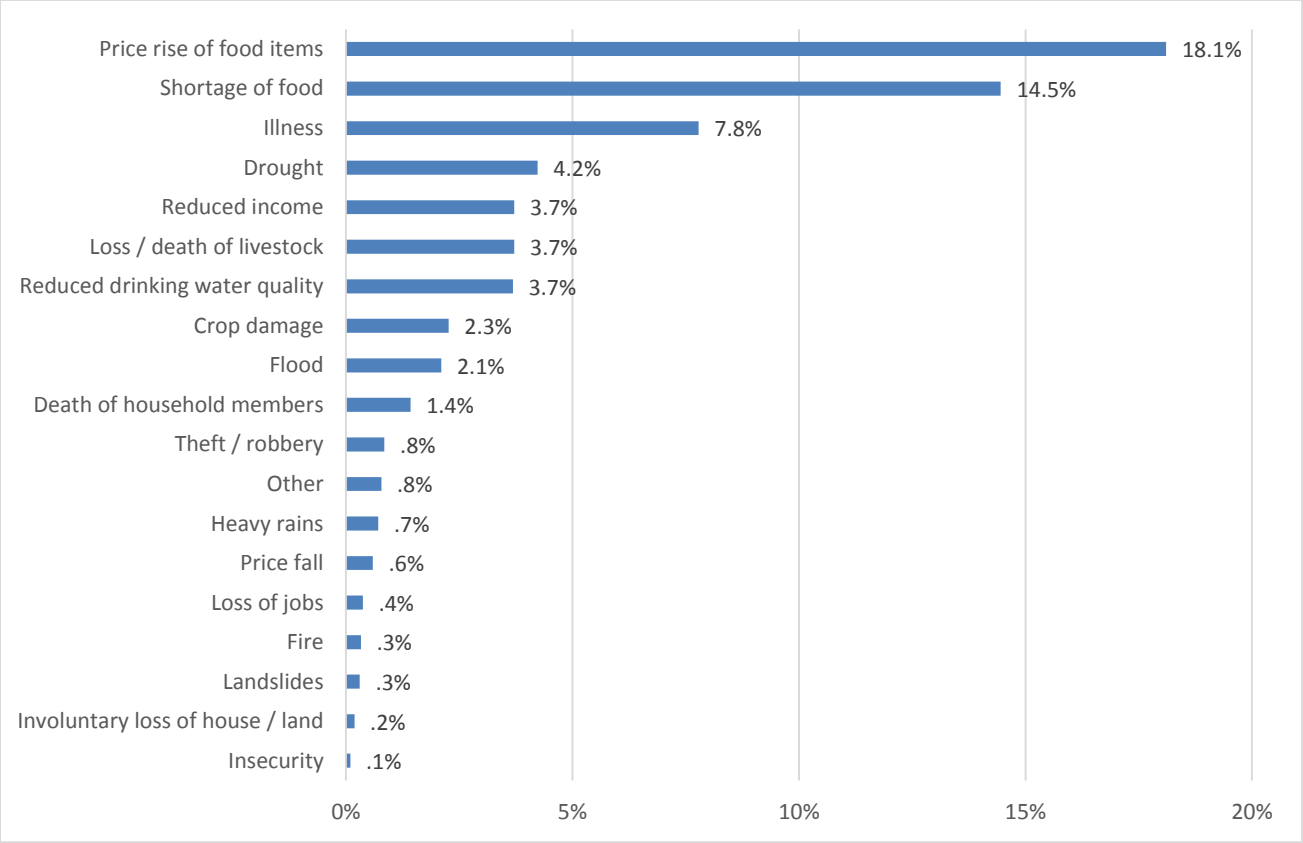
In the Somali region, the majority (56%) of households experienced one or more shocks

A high percentage (62%) of households with livestock as main occupation experienced one or more shocks

For vulnerable households that are currently food secure, a negative event (shock) can have a major impact on their food security status. For example, for households that rely on rain-fed agriculture as the main source of livelihood, unfavourable climate conditions such as drought can be experienced as a major shock and may well lead to food insecurity.

Households were asked in the WMS survey if they had experienced each of a variety of shocks in the past 12 months. Nineteen different shocks were surveyed, including a variety of livelihood specific shocks (such as crop damage) as well as non-livelihood specific (illness, for example). These shocks can also be divided into idiosyncratic (those affecting individual households but not necessarily whole communities), and covariate (those that are more likely to affect several/all households in a community, area, or region). Food related shocks (food price increases, food shortages) were the most frequently cited.

Figure 45: Percent of households reporting having experienced key shocks in the last 12 months



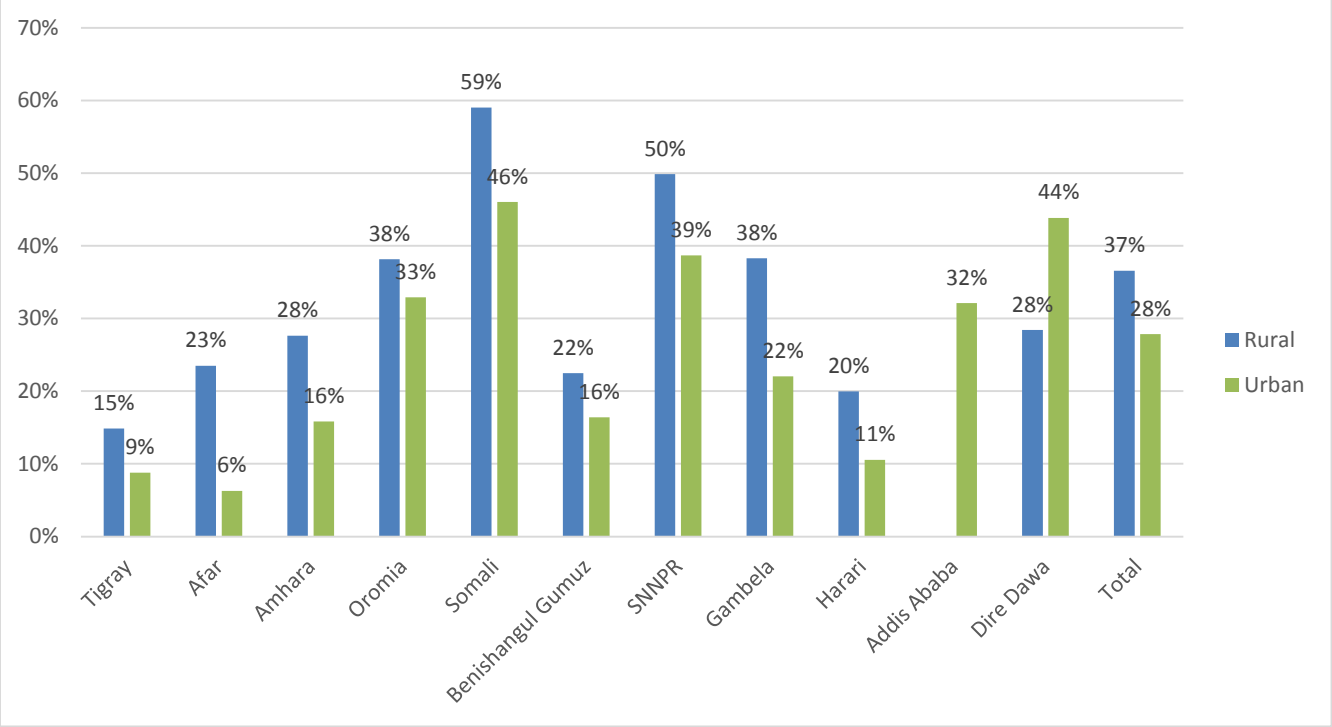
Source: WMS 2011

Although disaggregated in the question, some shocks are highly interrelated with an overall covariate shock. For example, shortage of food, loss/death of livestock, and reduced drinking water were very often all linked to drought. Households may experience and report the impacts of drought as one or several of these shocks.

Of all households, 35% reported having experienced one or more shocks in the past year. Rural households were more likely to report having experienced one or more shocks than urban households (37% and 28% respectively). However, many shocks were specific to livelihoods more often found in rural areas, so this may bias rural households towards a greater likelihood of identifying one or more shock. For example, loss/death of livestock was commonly experienced by households with livestock as the main livelihood.

Among the households that experienced shocks, the majority mentioned one shock (18% of all households), but in the areas where households experienced more frequent shocks, they also experienced a larger number of them. For instance, in the Somali and SNNPR region, overall 56% and 48% respectively experienced one or more shocks. In the rural areas of these regions 17% and 20% respectively experienced **three or more** shocks.

Figure 46: Households in urban and rural areas that have experienced one or more shocks

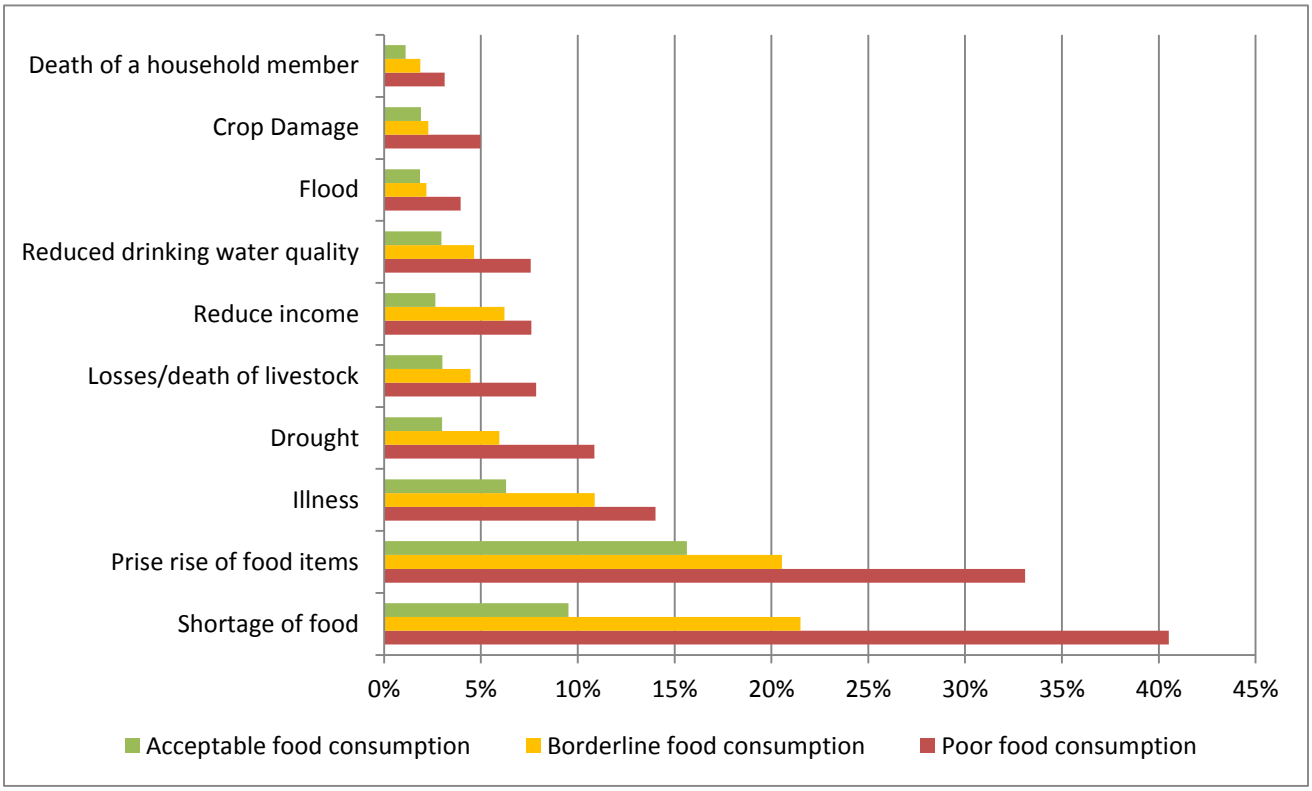


Source: WMS 2011

Households with poorer food consumption (according to the FCS) reported that they had experienced more shocks than households with acceptable food consumption. Almost 60% of households with poor food consumption had experienced one or more shock, vs. 30% of those with acceptable food consumption. The four most common shocks (shortage of food, food price rises, illness and drought)

showed large differences in prevalence between households with poor, borderline or acceptable food consumption (see Figure 47). However, the association between other food security indicators (calories and food poverty) and shocks are less clear. This may be due to the fact that the calories/poverty data were not collected simultaneously with the food consumption data, and because these indicators (poverty, calorie consumption) reflect a longer recall period, whereas the FCS reflects a much shorter period of time.

Figure 47: Prevalence of the most common ten shocks by food consumption groups



Source: WMS 2011

There are several possible explanations for the association between food insecurity and the occurrence of shocks: households may be food insecure because they have experienced a shock or the shock may be related to specific livelihoods that are more often food insecure; or the households that experience shocks and food insecurity are poorer and therefore more vulnerable to both food insecurity and shocks.

Some shocks are more prevalent in certain regions. For instance 34% of households in Somali reported food price rises vs 18% nationally and 29% of households in SNNPR reported food shortages vs 14% nationally.

Table 21: Percent of households reporting having experienced a specific shock in the past 12 months

Region		Illness	Food shortage	Drought	Loss / death of livestock	Food price increase	Reduced income	Reduced drinking water quality
Rural	**Tigray**	4%	8%	2%	1%	4%	1%	1%
	Afar	4%	6%	1%	8%	5%	5%	2%
	Amhara	5%	13%	3%	3%	9%	2%	2%
	Oromia	8%	14%	5%	5%	22%	3%	3%
	Somali	5%	23%	15%	16%	34%	5%	28%
	Benishangul Gumuz	8%	4%	0%	6%	2%	2%	2%
	SNNPR	14%	29%	9%	7%	26%	8%	7%
	Gambela	2%	20%	3%	2%	24%	3%	2%
	Harari	6%	9%	4%	1%	3%	2%	0%
	Addis Ababa							
	Dire Dawa	5%	4%	0%	4%	15%	1%	3%
Urban	**Tigray**	2%	2%	0%	0%	4%	0%	0%
	Afar	0%	2%	0%	0%	3%	1%	0%
	Amhara	3%	5%	0%	0%	8%	2%	0%
	Oromia	6%	7%	0%	1%	23%	3%	3%
	Somali	7%	23%	7%	6%	36%	10%	19%
	Benishangul Gumuz	7%	2%	0%	2%	7%	1%	1%
	SNNPR	12%	10%	4%	1%	25%	4%	6%
	Gambela	4%	7%	1%	0%	11%	2%	6%
	Harari	3%	2%	0%	0%	1%	1%	3%
	Addis Ababa	5%	4%	0%	0%	23%	5%	2%
	Dire Dawa	10%	14%	0%	1%	22%	10%	10%

Source: WMS 2011 (only those that have an urban or rural region where it is cited by more than 10% of households)

Food price increases were more commonly cited in urban areas, though frequent in rural areas too. Water quality was a significant shock in rural Somali, where 28% of households reported it.

More than 60% of livestock households experienced one or more shocks and more than 40% of households in crop cultivation and livestock combined and casual labour/daily labour experienced the same, while fewer than 25% of households with a salary income experienced any shock. A high percentage of agricultural households (engaged in livestock or a combination of crop and livestock) experienced one or more shocks.

The most common shocks among livestock households were food price rises (39.9%), food shortages (31.1%), losses/death of livestock (30.3%), drought (25.2%), reduced drinking water quality (19.8%) and illness (11.6%). The coping strategies that the livestock households used for the various shocks were similar and most commonly: to rely on less preferred and less expensive food, sell more animals than usual, borrow food, rely on help from friends or relatives or borrow money to buy food.

The most common shocks among households with a combination of livestock *and* crops were: food price rises (22.5%), food shortages (17.2%) and illness (10.9%). In this group, the common strategies were to

rely on less preferred and less expensive food and to sell more livestock than usual. In addition, households limited portion size at meals and reduced the number of meals eaten in a day.

Table 22: Prevalence of the most common shocks by livelihood

Livelihood	Price rise of food items	Shortage of food	Illness	Drought	Losses / death of livestock	Reduced drinking water quality
Other	16%	19%	12%	2%	1%	3%
Salary	18%	4%	4%	1%	0%	3%
Casual labor / daily labourer	26%	19%	9%	3%	2%	3%
Crop production	14%	15%	7%	4%	3%	3%
Livestock	40%	31%	12%	25%	30%	20%
Crop and livestock	23%	17%	11%	6%	5%	5%
Manufacturing, construction and mining	18%	14%	5%	5%	3%	6%
Wholesale & retail trade - formal sector	18%	3%	5%	1%	1%	3%
Wholesale & retail trade - informal sector	23%	15%	6%	3%	2%	4%
Service trade	14%	8%	5%	2%	1%	3%
Remittances	18%	8%	6%	1%	2%	3%

Source: HCE and WMS 2011

In the pastoralist areas (Somali, Afar and southern Oromia), rainfall is both scarce and highly variable. So it is unsurprising that 25% of livestock households across all regions experienced drought as a shock in the preceding 12 months.

Here we look more closely at the shocks and livelihoods in the drought prone regions in most of Somali and Afar and parts of Southern and Eastern Oromia[40].

Somali	More than 60% of households in livestock or a combination of crop and livestock and manufacturing (although a very small number of households) experienced one or more shocks. The most common shocks among livestock households in the region were: food price rises (41%); food shortages (34.6%); losses/death of livestock (30.2%); and drought (27.1%). Most common shocks among crop and livestock households were: reduced drinking water quality (51.3%) and food price rises (30%).
Afar	A high percentage (29%) of livestock households experienced one or more shocks, but the prevalence was below that of livestock households in other regions. The most common shock among the livestock households in Afar was loss/death of livestock (12.2%).
Oromia	Some 81% of livestock households experienced one or more shocks (although only 1.9% of the households in Oromia are livestock households). In addition, almost half of all crop/livestock households had one or more shocks. Among the livestock households the most common shocks were: food price rises (64%); drought (49.7%); food shortages (46.1%); losses/death of livestock (37.3%); and

[40] Northern and eastern highlands of Amhara and Tigray are also considered to be drought prone, but not covered in further detail here.

reduced drinking water quality (31.1%). Over 25% of crop and livestock households in Oromia experienced food price rises.

Table 23: Percentage of households that have experienced one or more shocks, by livelihood and region

	Other	Salary	Casual labor / daily labourer	Crop production	Livestock	Crop and livestock	Manufacturing , construction and mining	Wholesale & retail trade - formal sector	Wholesale & retail trade - informal	Service trade	Remittances	All livelihoods
Tigray	27%	9%	17%	12%	44%	17%	9%	1%	12%	11%	6%	**13%**
Afar	13%	3%	5%	23%	29%	15%			10%		16%	**18%**
Amhara	38%	11%	29%	26%	33%	27%	30%	16%	22%	19%	18%	**26%**
Oromia	48%	28%	48%	29%	81%	49%	20%	34%	42%	24%	28%	**37%**
Somali	29%	36%	56%	27%	64%	64%	76%	36%	52%	43%	50%	**56%**
Benishangul Gumuz	26%	12%	29%	21%		27%	18%	15%	23%	7%	5%	**22%**
SNNPR	62%	32%	60%	51%	75%	49%	59%	28%	61%	45%	37%	**48%**
Gambela	39%	22%	24%	40%	6%	27%	27%	12%	36%	45%	17%	**33%**
Harari	24%	2%	15%	21%		14%	11%	4%	18%	8%	25%	**15%**
Addis Ababa	33%	32%	37%	22%	18%	8%	36%	32%	32%	29%	33%	**32%**
Dire Dawa	59%	38%	62%	30%	37%	47%	11%	30%	33%	29%	34%	**40%**

Source: HCE and WMS 2011

8.2 Coping strategies

Households were also asked about the strategies they used to cope with the shocks they had experienced. For each specific shock they could mention up to three different coping strategies. The following analysis looks at the main coping strategies for the top four shocks experienced nationally.

Households that experienced food price rises (18%)	The most common coping strategies were to rely on less preferred and less expensive food (37%); limit portion size of meals (18%); reduce number of meals eaten in a day (9%); borrow money to buy food (7%) and sell more animals than usual (7%).
Households that experienced food shortages (15%)	The most common coping strategies were to limit portion size at meals (21%); rely on less preferred and less expensive food (19%); borrow money to buy food (11%); sell more animals than usual (10%); borrow food or rely on help from friends or relatives (10%); and reduce number of meals in a day (9%).

Households that experienced illness (8%)	Their most common coping strategies were to sell more animals than usual (22%); others/not specified (13%); borrow food, or rely on help from friends or relatives (12%)
Households that experienced drought (4%)	Their most common coping strategies were to sell more animals than usual (19%); rely on less preferred and less expensive food (13%) and reduce number of meals eaten in a day (11%).

8.3 Ability to raise cash in case of emergency

Separate from the section on shocks and coping strategies, the WMS survey asked households if they thought they could raise 200 Birr within a week in the case of an emergency. For the households that responded they could, they were asked how they would obtain this 200 Birr.[41] Nationally, 79% of households responded they were capable of raising 200 birr in a week in case of an emergency. There is only mild variation between the regions, and little difference between rural (79%) and urban (77%) areas. It is interesting to note, however, that in Addis Ababa, 67% of households reported that they could raise this money, the lowest of all regions.

Looking at the different classifications of food consumption and wealth, there are some patterns that emerge. Ability to raise money in the event of an emergency is associated with:

- Food consumption groups (68% among poor/borderline, 83% among acceptable)
- Wealth index quintiles (69% among the poorest quintile, 85% among the richest)
- Dietary diversity (67% among households with poorer diversity (3 or less food groups), 84% among households with better diversity)

However, when comparing poverty groups (absolute, food), expenditure quintiles, share of expenditure on food, the differences are smaller or non-existent.

Among households that stated they could raise the money, the main way they cited they would do so included:

- Sale of animal products (29%)
- Own cash/savings (22%)
- Loans/gifts from relatives (21%)
- Sale of crops (16%)
- Loan from non-relatives (6%)
- Equb, Edir, gifts from non-relatives (4%)

[41] This question is somewhat subject to the perception of the household. The perception of emergency is not absolute; a respondent may answer no to the question on ability to raise the money, though they may in fact have the resources to do so using extreme coping mechanisms to face an extreme situation. However, the general relative patterns of responses can still show how households may handle a future shock and the potential impacts such a shock may have on the household.

- Other[42] (2%)

Unsurprisingly sale of animal products was most commonly cited by households relying on livestock, as well as those relying on crops *and* livestock, and those mainly relying on crop production. Cash resources in the form of own savings or cash or loans from relatives were more common in other livelihoods. Sale of crops was most common among households relying on crop or crops *and* livestock, though not much more so than for other livelihoods, possibly linked to the fact that households can only rely on crop sales during certain times of the year when these crops are available.

Table 24: Strategies households can employ (among those capable of raising 200 birr in a week's time) in case of emergency, by livelihood group.

Livelihood group	Sale of animal product	Savings	Loan / gifts from relatives	Sale of crops	Loan from non-relatives	Equb, Edir, gifts from non-relatives	Other
Other	10%	28%	41%	6%	7%	3%	4%
Salary	3%	67%	17%	1%	7%	1%	4%
Casual labor / daily labourer	7%	30%	35%	4%	17%	3%	3%
Crop production	35%	13%	20%	21%	6%	5%	1%
Livestock	73%	9%	12%	4%	2%	1%	0%
Crop and livestock	38%	10%	19%	22%	4%	6%	1%
Manufacturing, construction and mining	8%	44%	23%	8%	7%	8%	3%
Wholesale & retail trade - formal sector	3%	72%	16%	1%	4%	2%	1%
Wholesale & retail trade - informal sector	12%	44%	25%	1%	8%	6%	4%
Service trade	4%	58%	21%	2%	9%	3%	3%
Remittances	8%	29%	53%	3%	5%	1%	1%
Total	**29%**	**22%**	**21%**	**16%**	**6%**	**4%**	**2%**

Source: WMS 2011 and HCE 2011

8.4 Perceptions of food insecurity- food shortages

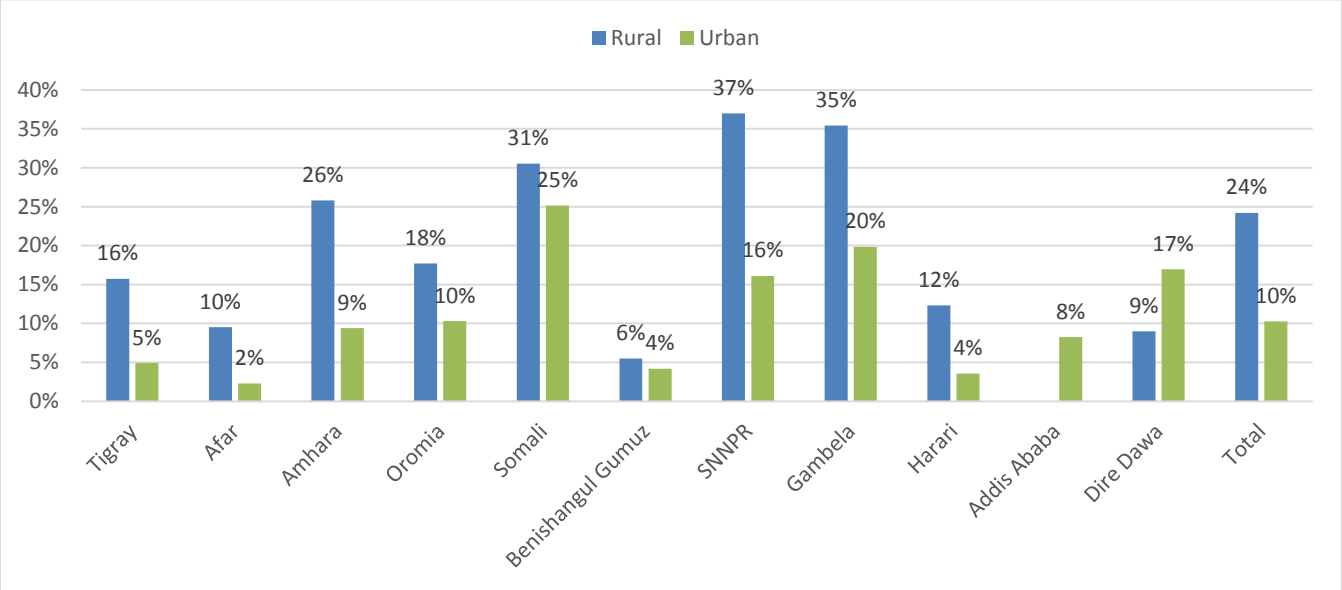
Households were asked if they had suffered from food shortages in the past year, and, if so, for how long. While the responses are subjective, the results provide additional valid insight into how households perceive their own food security status.

Nationally, 21% of households report that they suffered from a food shortage in the past year. The majority (71%) of these households said they suffered shortages for one to four months, 18% for five to eight months, and only 3% for nine to 12 months. Households in rural areas were more likely to report

[42] Other includes bank loans, sale of assets, sale of forest products, other (not specified) or not stated.

having suffered food shortages than urban areas (24% and 10%, respectively). There are meaningful differences between regions, displayed in Figure 48 below.

Figure 48: Percentage of households that reported a food shortage at some point during the previous 12 months



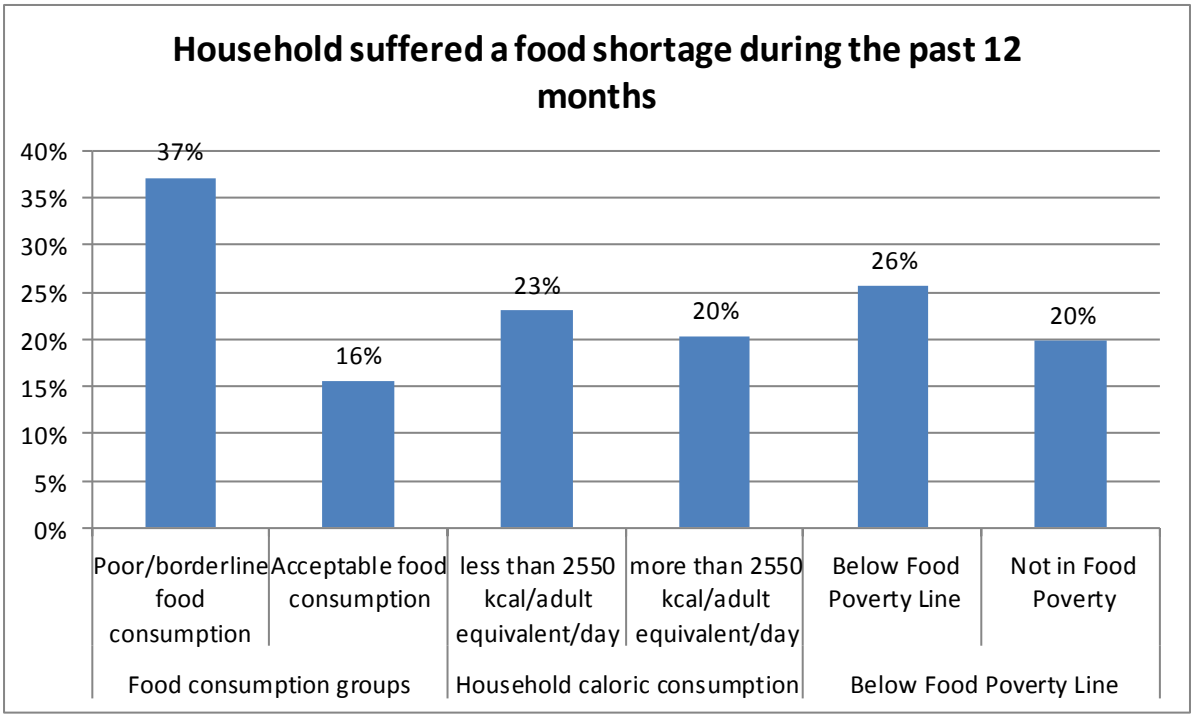
Source: WMS 2011

In all regions, rural households were more likely to report food shortages than urban areas, with the exception of Dire Dawa. The highest prevalence of perceived food shortages was found in Somali (25% of urban, 31% of rural), SNNPR (mainly rural at 37%), Gambela (mainly rural at 35%), and Amhara (mainly rural at 26%).

Though food shortages are a subjective concept, it aligns to some degree with other more quantitative measures of food access, consumption and poverty, even when these indicators use data and recall from different time-frames.

Among households that have poor/borderline food consumption (one week recall), 37% reported having had food shortages, compared with 16% of households with acceptable food consumption. Looking at measures of poverty and caloric consumption, there are slight differences. 23% of households consuming inadequate kilocalories reported a food shortage in the past year, vs. 20% of households consuming adequate kilocalories. 27% of households below the absolute poverty line, and 16% of those below the food poverty line reported food shortages, compared with 26% of households above the food poverty line and 20% above the absolute poverty line.

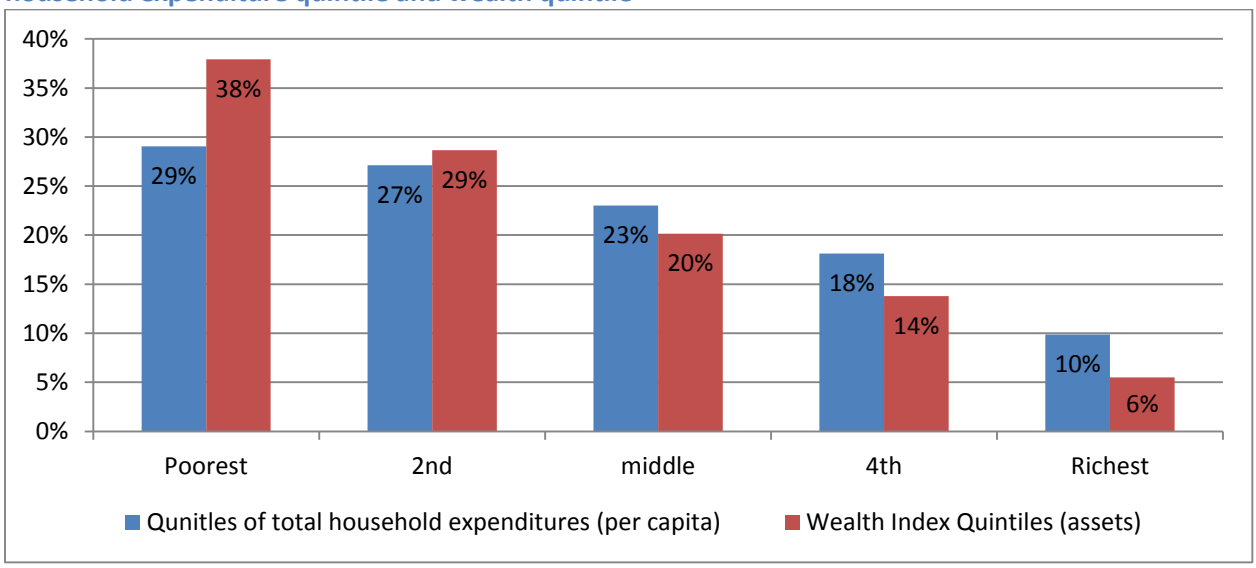
Figure 49: Percent of households that have suffered food shortage during the last 12 months



Source: HCE and WMS 2011

Some 38% of households in the lowest quintile reported a food shortage, vs. only 6% of those in the highest wealth (asset) index quintile.

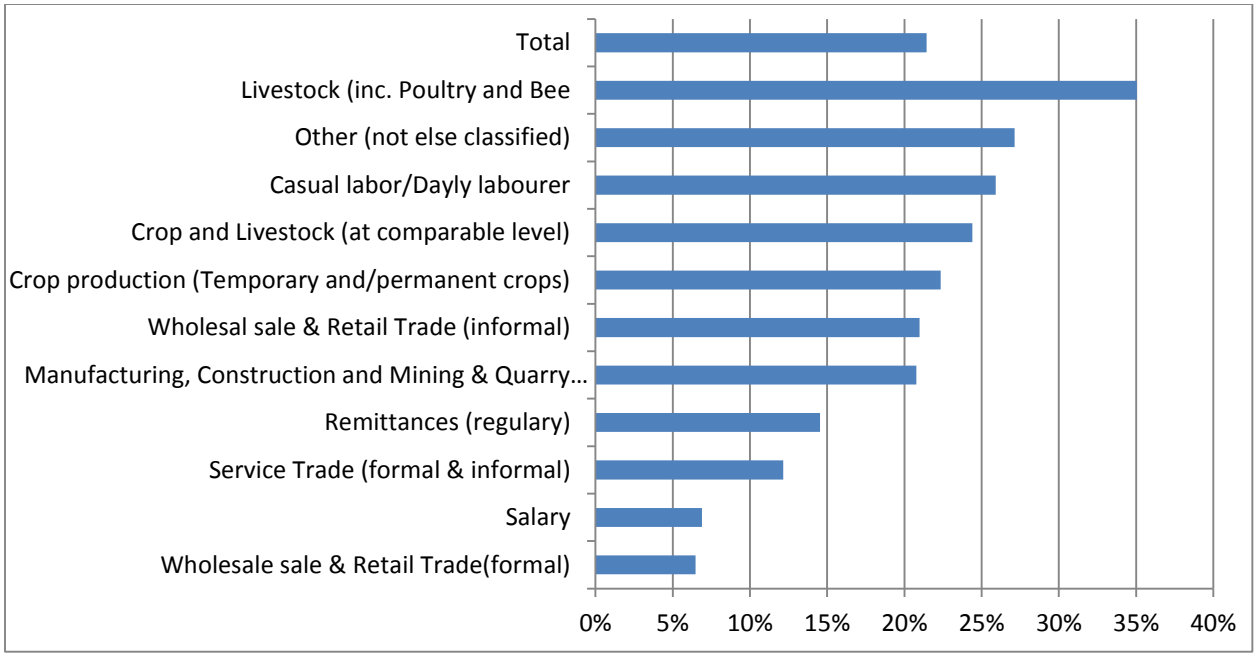
Figure 50: Percent of households that have suffered food shortages during the last 12 months by household expenditure quintile and wealth quintile



Source: WMS 2011

Finally, the perception of having experienced food shortages in the past year was highest among the occupation groups identified as the most food insecure by other more quantitative measures. Specifically, these include livestock (35%), casual labour (26%), crop and livestock (24%), crop production (22%) as well as informal sector wholesale and retail (21%).

Figure 51: Percent of households that have suffered food shortages during the last 12 months by livelihood



Source: WMS 2011

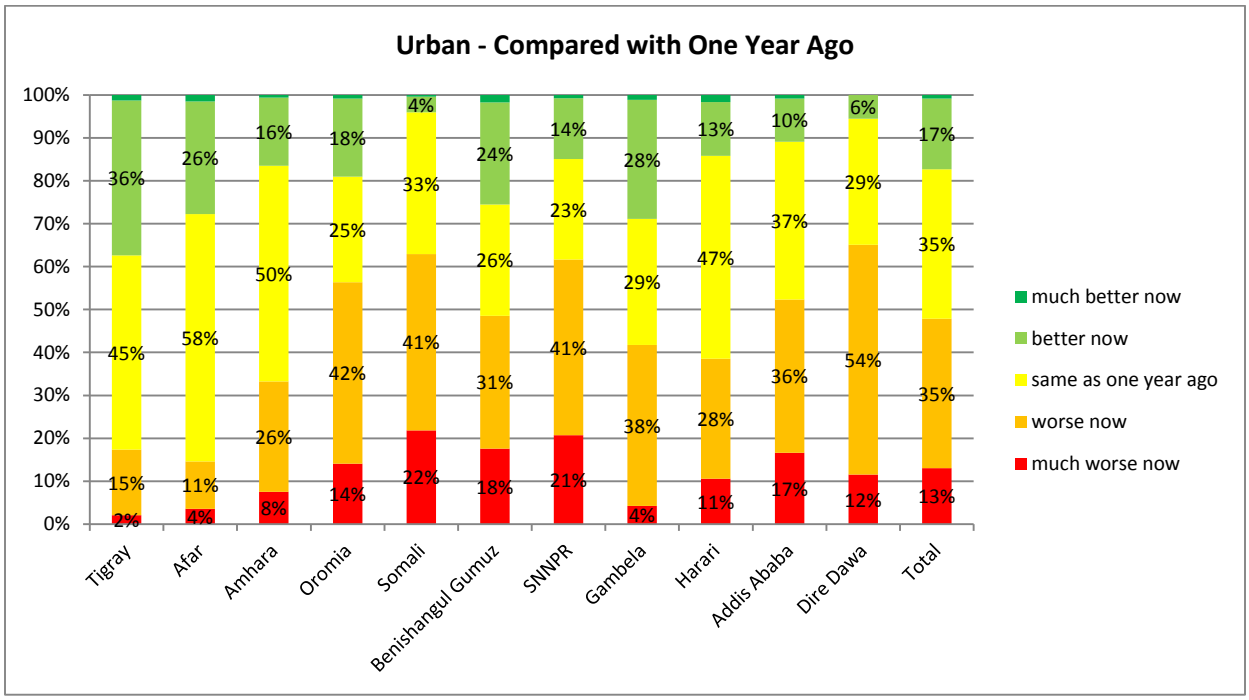
8.5 Perceptions of food insecurity- change over time

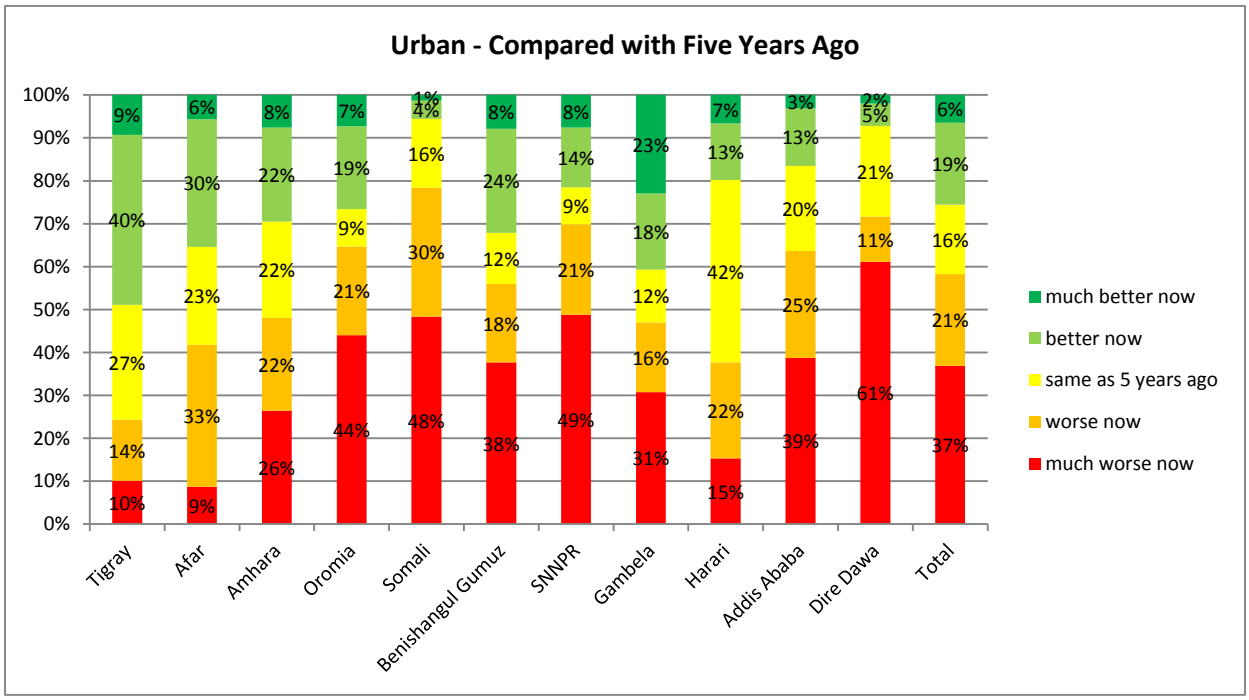
The WMS survey asked households how their living standards with respect to food had changed between the last year and five years ago. As with food shortages, these data are subjective and must be interpreted as such. Additionally, as is observed globally when asking these types of questions, there tends to be a pessimistic view of change over time even when the situation has remained stable. From a non-statistical point of view, households that have consistently experienced difficulty in accessing sufficient food may well indicate their perception of a worsening situation, when in fact the situation remains stable at this difficult level. On the other hand, negative change is not synonymous with poverty and food insecurity; rich households may suffer more loss than poor households but remain rich, for example.

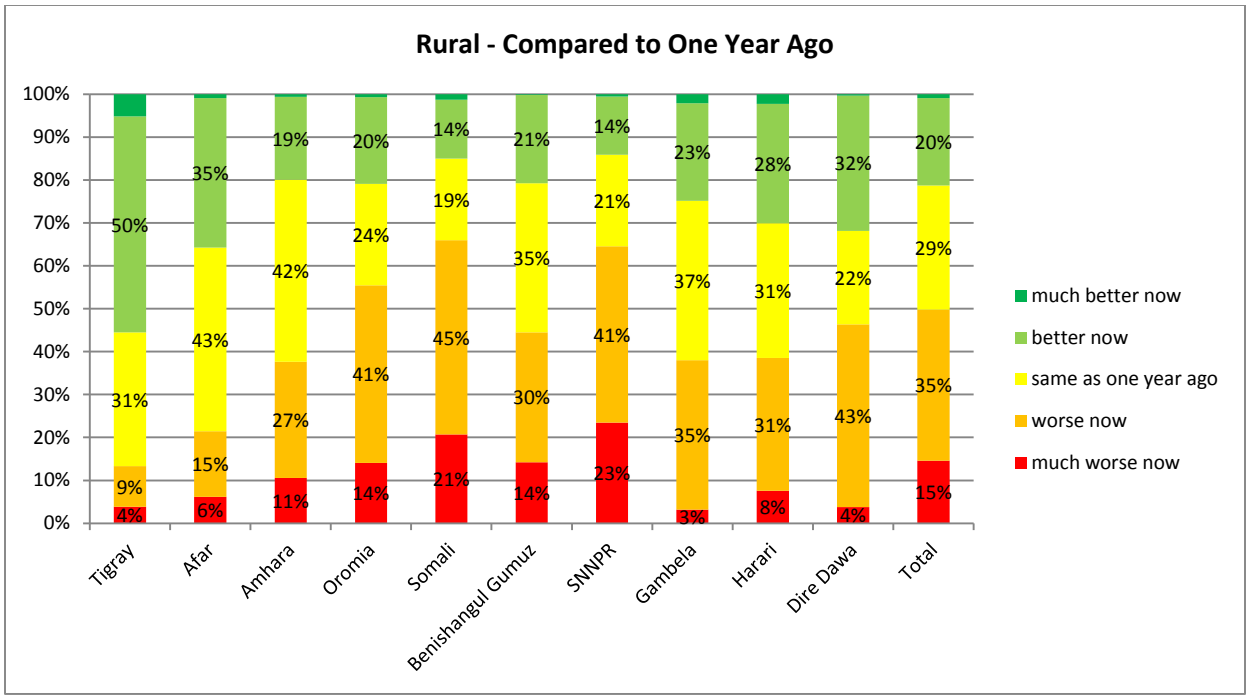
Nationally, 14% reported a much worse situation at the time of the survey compared with a year ago, 35% reported worse, 30% the same, 20% better and 1% much better. In effect, this means that 49% of households reported that their living standards with respect to food were worse now than a year ago, and 51% reported it was the same or better.

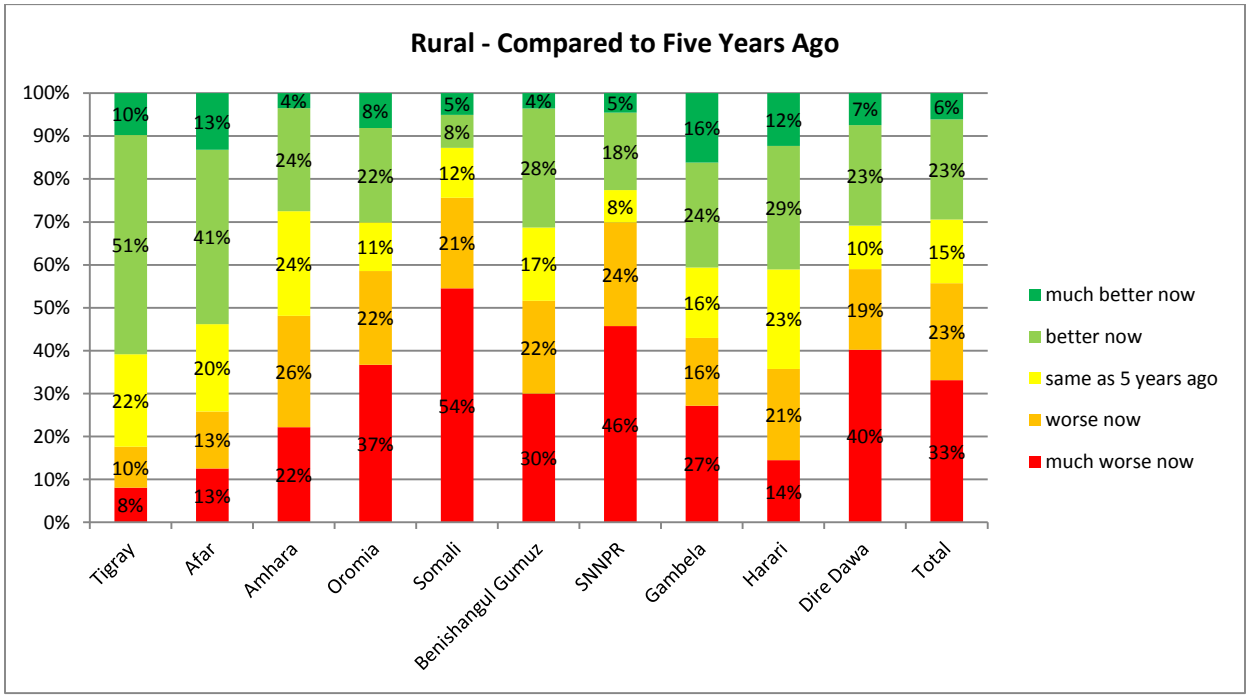
Certain regions reported greater negative changes in the past year. In particular, SNNPR, Somali, Oromia and Dire Dawa (particularly urban) reported the most negative change. Urban Gambela and rural Tigray and Afar reported the most positive change.

Figure 52: Change in living standards with respect to food compared with one year and five years previously









Source: WMS 2011

As with perceptions of food shortages, the perceptions of change over time showed similar patterns to other more quantitative indicators. Sixty-two percent of households with poor/borderline food consumption indicated their situation was worse or much worse than a year ago, compared with 45% of households with acceptable food consumption.

Households in poorer wealth (asset) quintiles were more likely to report negative change over time, and households in richer quintiles were more likely to report positive changes, although the relationship was not strong.

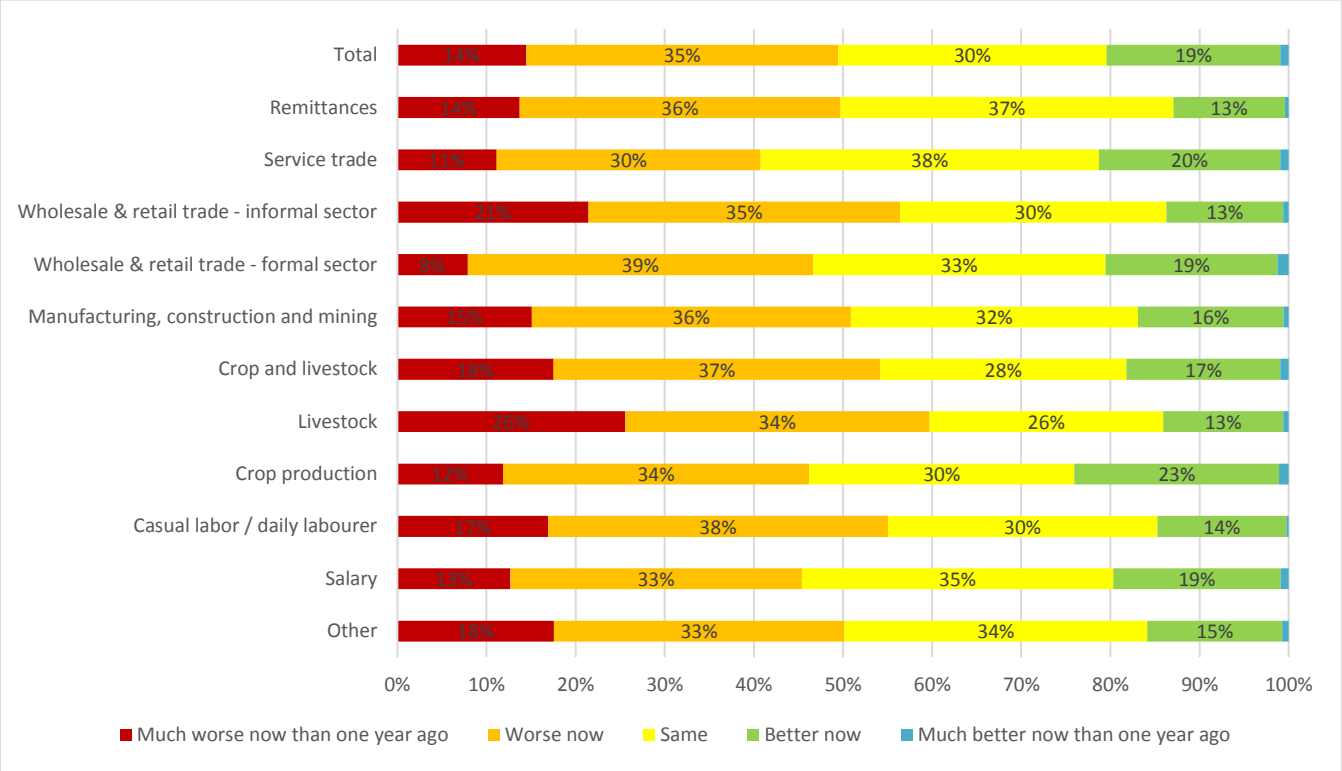
Figure 53: Perceived change in living standards with respect to food (one year recall) by wealth index (asset) quintile

Source: WMS 2011

One possibility for the stronger relationship between the food consumption score and perception of change is that the FCS is a very time-specific indicator, so households with poor/borderline food consumption are eating poorly at the time of the survey, and so they may be more likely to report a negative change over time. Other indicators, such as wealth index, caloric consumption, and the poverty indicators show a weak correlation with perception of change, perhaps because they are not as time bound (poverty indicators are based on a longer recall period, and asset wealth is slower to change over time), and may be linked to a chronic problem rather than a change at the current time.

Overall, households relying on livestock as their main occupation reported the most negative change, with 60% of these households reporting it worse or much worse. They were closely followed by households relying on crop and livestock (55%), and informal wholesale and retail (56%), and casual labour (55%).

Figure 54: Perceived change in living standards with respect to food (one year recall) by main livelihood group



Source: WMS 2011 and HCE 2011

9. Seasonality, vulnerability, risks and hazards

KEY FINDINGS

Rainfall is one of the main climatic determinants of food production in Ethiopia. Wetter years are generally associated with higher food production

Across most of Ethiopia, households report lack of/erratic rainfall as the main risk contributing to their food insecurity and overall vulnerability

Overall there have been declines in rainfall between March and September from 1980 to the present

The following climate sections are based primarily on the report 'Climate risk and food security in Ethiopia: Analysis of climate impacts on food security and livelihoods'[43] linked with findings from the HCE and WMS surveys. This data helps further identify who is food insecure and why. Additionally, aspects of stability of food security are addressed through analysis of seasonality and of the risk and recurrence of certain shocks.

9.1 Seasonality of food insecurity

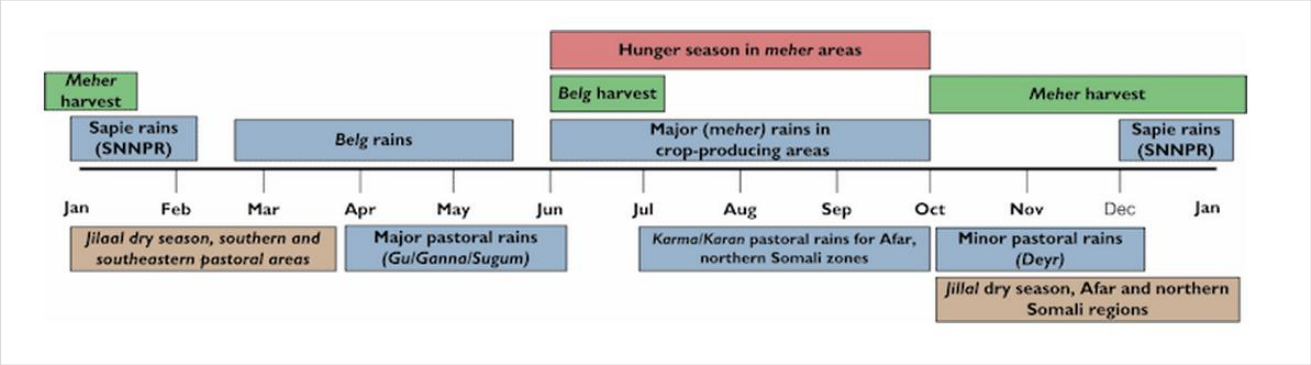
The key food security indicators in this report cover, in some cases, different time-frames. Some, such as kilocalorie consumption from the HCE survey were collected year-round across the country, and so aggregate results should be independent of seasonal effects. Other indicators, particularly those collected in the WMS survey, reflect a specific point in time. This is particularly true for the food consumption score/groups, as well as dietary diversity.

Food insecurity in Ethiopia is seasonal, and linked to rainfall patterns. There are two main rainy seasons, the shorter belg season between February and May and the main rainy season, meher, from June to October (see Figure 55). Hunger trends decline after the rainy seasons.

Almost all agricultural areas receive more rain in the meher (major) season, while pastoral and agro-pastoral areas (Somali, Afar and southern Oromia) are more dependent on belg rains. The belg rains are more unpredictable than the meher rains and since they form the main rains in some parts of the country they are considered a major determinant of hunger periods.

[43] This analysis has been undertaken and published by the Disaster Risk Management and Food Security Sector (DRMFSS) of the Ministry of Agriculture of the Government of Ethiopia with the support of WFP's Office for Climate Change, Environment and Disaster Risk Reduction, WFP's Food Security Analysis Service, and the WFP Country Office in Ethiopia. This analysis has benefited from inputs from a number of people including Professor Degefa Tolossa as well as DRMFSS and WFP staff.

Figure 55: Seasonal calendar

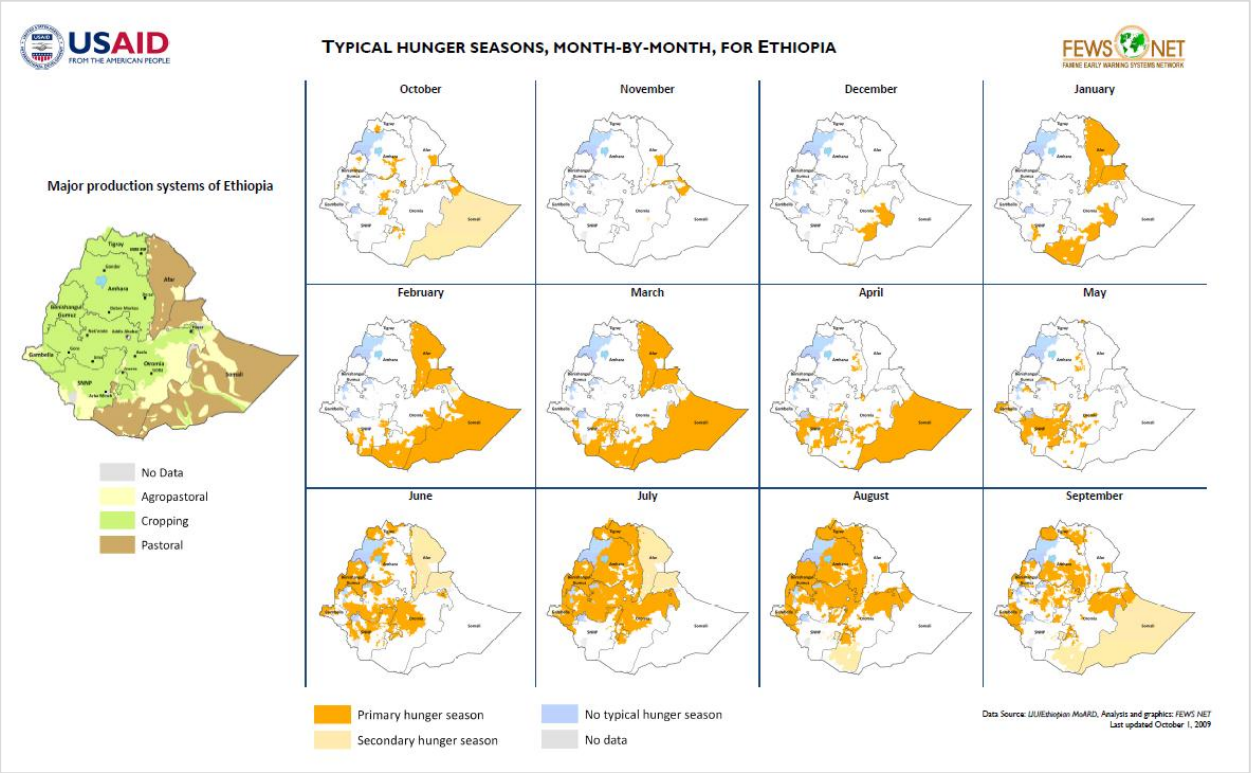


Source: FEWS NET

The greatest seasonal complexity is in the south and southeastern parts of the country – a condition that is linked to the diversity in rainfall patterns in these areas. This also highlights some of the ways in which populations that are vulnerable to rainfall variability have adapted their livelihood activities to manage risks. Common livelihoods in these areas according to the WMS survey are a combination of crop production and livestock or livestock only.

The WMS data was collected in August/September. According to the FEWS-Net analysis of the geography of the hunger season, the areas that typically experience a hunger season at this time are found primarily in the centre, north, and west parts of the country, mainly in the regions of Gambela, Benishangul Gumuz, Amhara, Tigray, as well as part of Oromia. Areas that typically experience a hunger season are also found in smaller areas of Afar, Somali, and SNNPR during these months. These areas are primarily cropping or agro-pastoral areas (as opposed to pastoralist areas). The pastoralist areas of southern Oromia, and most of the region of Somali experience a secondary hunger season during this time (primarily September).

Figure 56: Typical hunger seasons, month-by-month

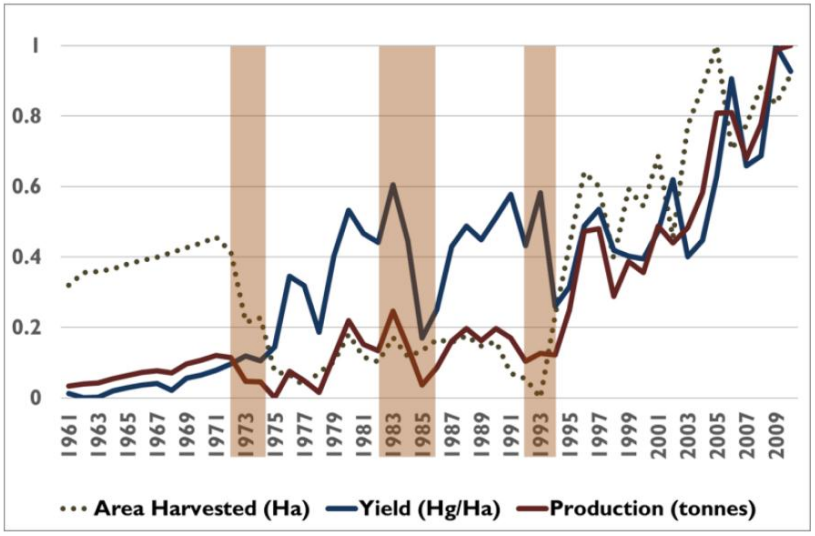


Source: FEWS NET

9.2 Climate impacts on food production

With a predominantly rain-fed agricultural system, rainfall is one of the main climatic determinants of food production in Ethiopia. Less than 1% of agricultural land is equipped for irrigation (FAOSTAT). Wetter years are generally associated with higher food production; conversely dry years are linked to lower production. For instance, cereal production in Ethiopia (teff, wheat, barley, and maize) has almost quadrupled between 1961 and 2010: the production increase was steady with some declines between 1973 and 1975, and again in 1984/1985 when major droughts hit the country. Yields have also increased steadily in this period with a relatively stable yield between 1975 and 1993, followed by a rapid increase thereafter. Area under production decreased steadily between 1973 and 1993, again suggesting that the frequency and magnitude of droughts in this period might have affected the viability of agriculture in addition to population pressures on existing land.

Figure 57: Cereal crop production trends and key drought events 1961 - 2010



Source: FAOSTAT

9.3 Climate trends

Annual rainfall across the country has fluctuated significantly since the 1980s and recent rainfall data show trends of overall declines in rainfall between March and September from 1980 to the present. These declines have been most marked in belg-dependent areas leading to more intense and frequent droughts across different parts of the country. In addition, some analyses suggest that there has been a shift in the timing of rainfall, leading to more erratic and unpredictable precipitation patterns. Common livelihoods in belg-dependent areas are livestock or a combination of livestock and crop production. The frequency of drought in these areas is reflected in the fact that in the WMS survey, among livestock households, a quarter mentioned that they had experienced drought as a shock during the past 12 months.

9.4 Climate extremes

Both floods and droughts have occurred regularly over the past 20 years.

Table 25: Chronology of drought-related food security crises since 1950 in Ethiopia

Year	Major drought-related food insecurity events
1953	Food security crisis in Wollo and Tigray.
1957-58	Food security crisis in Tigray, Wollo, and south-central Shewa. About 1 million farmers in Tigray might have been affected, with about 100,000 being displaced.
1962-66	Many parts of northeastern Ethiopia suffered from droughts and food security crises. Tigray and Wollo were severely hit.
1973-74	This was one of the most significant food security crises which affected parts of eastern Harari, SNNPR and the Bale lowlands. About 100,000 to 200,000 people died as a result of this extensive crisis.

1977-78	Most parts of the Wollo were severely hit by food security crisis owing to erratic rainfall, pest damage and frost. About 500,000 farmers were affected.
1984-85	Most parts of Ethiopia including relatively food secure areas like Walaita, Kambata and Hadiya were affected by severe food insecurity. Drought and crop diseases were the main drivers of the food security crisis in this case. It is estimated that over 1,000,000 people died.
1987-88	Tigray, Wollo and Gonder were severely affected due to drought and civil wars.
1990-92	Rain failure and regional conflicts resulted in approximately 4,000,000 people being affected.
1993-94	Widespread food insecurity, but few deaths or cases of displacement were reported because of early responses by the government and international aid organisations.
2003-04	Over 13 million people affected, but the response mitigated the worst potential outcomes.
2008-09	Almost 3 million people were affected.
2011	Severe food security crisis occurred in the southeastern lowlands. This was linked to unprecedented drought.

Source: Climate risk and food security in Ethiopia[44]

Food security is highly sensitive to climate risks in Ethiopia. This is because 90% of rural households rely on agricultural activities (livestock, crop production, or a combination of the two) as the main occupation of their household head and irrigation coverage levels are very low. Historical and more recent climate-related events such as the 2008/2009 and 2011 food security crises in the Horn of Africa have highlighted the impact of droughts and floods on food production, access to markets, and income from agricultural activities. Both floods and droughts have occurred regularly over the past 20 years. Climate is one of the main factors affecting vulnerability; households across most of Ethiopia consider lack of (or erratic) rainfall to be the main risk they face, contributing to their food insecurity and overall vulnerability. This is especially the case in the southeastern, south-central, and eastern parts of the country, where rainfall is both decreasing and becoming more erratic.

Pastoralists are among the most vulnerable groups – but this vulnerability is not distributed equally among all pastoralists: for example, pastoralists with access to river basins are often able to cope with droughts better.

Table 26: Climate sensitivities of key livelihood systems

Livelihood systems and sensitivities to climate-related shocks	Major climate-induced hazards and impacts on livelihoods systems	
Crop cultivation Rainfall determines crop output and availability of animal feed. Scarcity, variability, and excess rainfall all affect agriculture.	Rainfall	Changes in rainfall patterns affect the quantity and quality of water available for cultivation. Erratic rainfall patterns could reduce the length of the growing season as well as yields, with negative impacts on incomes and food security.
	Temperature	Extremely low temperatures in the highlands result in frost damage. Frost affects crops and reduces

[44] Forthcoming publication from the World Food Programme, 2014

		yields. Extremely high temperatures in the lowlands affect agricultural productivity.
	Flooding and water logging	Unseasonal heavy rainfall in some parts of the country damages crops. Flooding also results in animal losses, which can adversely affect livelihood assets.
Pastoralism Rainfall affects the availability of animal feed and water for livestock rearing. Changes in rainfall patterns will likely affect the quantity and quality of water available for livestock consumption. This would affect livestock health, with potential impacts on the quality of meat and milk. Erratic weather patterns could also render livestock more vulnerable to diseases.	Rainfall	Changes in rainfall patterns will likely affect the quantity and quality of water available for livestock consumption. This would affect livestock health, with potential impacts on the quality of meat and milk. Erratic weather patterns could also render livestock more vulnerable to diseases.
	High temperatures	Extremely high temperature in pastoral parts of the country is a critical challenge to livestock productivity.

Source: Climate risk and food security in Ethiopia

Food sources are highly variable across livelihood zones and across wealth groups. According to the WMS survey, the agricultural livelihood groups obtain more than 40% of their food from own production (food consumption score module). There is a trend that wealthier households rely more on purchased food and less on own production. Similarly, households with poor food consumption rely more on food from own production compared with households with better food consumption.

This makes the poorer and farming households more vulnerable to food insecurity if the harvest fails because of unfavourable climatic conditions. Production of crops for own consumption could decrease due to lack of (or erratic rainfall), while climate trends may also affect food prices, and therefore the ability of poor households to purchase food.

Table 27: Climate sensitivities of food sources

Food source	Climate sensitivity
Own production	Erratic rainfall patterns could affect crop production, and therefore the availability of food. While wealthier households obtain more food from their own production, the very poor and poor households in the central and southern parts of the country also obtain a significant proportion of their food from their own production. If production of poorer households decreases, they are likely to depend increasingly on markets.
Purchase	Across the country, the poor are highly market-dependent and purchase most of their food. Changes in production due to climate-related phenomena are likely to increase food prices, thereby reducing the ability of households to buy food.
Milk and livestock products	Milk is mostly consumed in the pastoralist zones of Ethiopia, and is a key component of nutrition among pastoralists. Changes in seasonal patterns are likely to affect the quality and availability of water and food for livestock, thereby affecting livestock reproductive cycles and reducing the quality of milk and meat.

Source: Climate risk and food security in Ethiopia

10. Summary and conclusions

Analysis of the trends from the HCE and DHS show clearly that substantial progress has been made on reducing poverty and malnutrition in Ethiopia. However, key food security and nutrition issues still exist in the country, particularly when viewed at regional level.

Food insecurity is far more pronounced in rural Ethiopia than urban by all indicators (FCS, food diversity and staple dependency) except energy deficiency, which was roughly the same in urban and rural areas at around 40% of households.

The findings imply that rural households, 90% of which are reliant on livestock, crop production, or a combination of the two as the main occupation of their household head, were likely to fill themselves up with cheap, energy-giving staples (injera made from teff, millet or sorghum), but forewent diversity and therefore key nutrients and micronutrients.

Food insecurity and poverty are intrinsically linked. Rural households were poorer than urban with around one in four considered poor according to the poverty and food poverty indicators and household expenditure quintile. The poorest were more likely to have unacceptable food consumption, to source the majority of their calories from starchy staples, to consume less diverse diets than richer households and to consume insufficient kilocalories.

The report attempted to identify groups and geographic areas that were particularly vulnerable to food insecurity. SNNPR had the highest prevalence of households with starch-heavy diets and an extremely high 63% of households consumed 'less than acceptable' diets compared with 27% nationally. Some 43% consumed three or fewer food groups over a seven day recall compared with 30% nationally.

Just 5% of all households rely on livestock alone for their livelihood rising to 60% and 38% in pastoralist Afar and Somali. Livestock farmers were the poorest of the livelihood groups and particularly vulnerable to food insecurity. They had poor dietary diversity in spite of their relatively high consumption of milk, consumed 4-5 days a week compared with 1.5 days on average nationally and more than half consumed less than the minimum daily energy requirement of 2,550 kilocalories per adult equivalent per day.

Another group vulnerable to poverty and food insecurity was casual/day labourers, which made up 4% of all households and 10% of urban households. More than half of these households consumed less than the minimum daily energy requirement of 2,550 kilocalories per adult equivalent per day.

The report also sought to identify the key causes of food insecurity.

Due to the high dependence on farming and high reliance on home produced food coupled with lack of irrigation, rainfall is one of the key determinants of food security in Ethiopia. Around one in four rural households reported having suffered from food shortages in the past year, the majority (71%) of them for 1-4 months. In rural Somali, SNNPR and Gambela more than 30% reported shortages. Not only does lack of (or erratic rainfall) hit production of crops for own consumption but it also affects food prices, and therefore the ability of poor households to purchase food. Annual rainfall across the country has fluctuated significantly since the 1980s and recent rainfall data show trends of overall declines in rainfall

between March and September from 1980 to the present, especially in belg-dependent areas, leading to more intense and frequent droughts.

Along with food shortages, food price increases was one of the most common 'shocks', experienced by households. Inflation was felt more keenly in urban areas where households were less dependent on their own produce, though frequent in rural areas too, where households still sourced more than 20% of their energy requirements from the market. The price of staple cereals generally shows a seasonal pattern peaking in the lean season (May–August). Food inflation will remain a challenge in Ethiopia due to dependence on imported fuel.

Children living in rural areas were more likely to suffer from malnutrition than those living in urban. This may be explained by lower rates of poverty, better diets and better access to clean sanitation facilities and clean water in urban areas (DHS 2011).

At the national level, there has been a notable decline in chronic malnutrition rates, but the rate is still 'critical' with 44% of children under 5 years stunted, according to the 2011 Ethiopia Demographic Health Survey data. This translates to 5.1 million stunted Ethiopian children. Some 21% of children were severely stunted. By far the highest rates were in Amhara, Tigray, Afar and Benishangul Gamuz, rural regions with high rates of food poverty.

The level of acute malnutrition (weight-for-height) was 'serious', with 10% or 1.1 million children wasted in 2011. There were marked regional differences with more than 20% of children wasted in the pastoralist Afar and Somali regions, where poverty rates were high and dietary diversity low. Tigray and Afar also had high rates of undernourished women with 40% of women having a BMI lower than 18.5.

The prevalence of underweight children has seen a stark drop, falling from 41% in 2000 to 29% in 2011, a prevalence that is still deemed 'serious' by WHO cut-offs. The prevalence was highest in the Afar region (40%) followed by Amhara, Benishangul Gamuz, Somali and Tigray.

Food energy (kilocalories) shows one aspect of food security, but can mask important deficiencies in food consumption. Low dietary diversity and a high dependence on staples for kilocalories reveal a need for further investigation of access to diverse foods.

The CFSVA provides an overview of the indicators, highlighting key dietary issues by region. This information can be used to design more in-depth analysis in the future. The inclusion of the WFP modules in the WMS in combination with the highly detailed consumption / expenditure module of the HCE provided a number of indicators to describe food security in Ethiopia. By conducting this analysis in concert, there is groundwork for mainstreaming food security indicators into future CSA reporting and further improving conditions across all regions.

11. Summary tables of key indicators

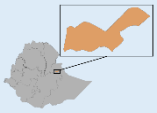
	Diet Quantity		Diet Quality		Food Consumption Adequacy		Economic Vulnerability				
	Mean kcals per adult equivalent per day	Consumption < 2550 kcal / adult equivalent / day (% of households)	>75% of total household calories coming from starch staples (% of	Low dietary diversity (<=3 food groups over 7 days) (% of households)	Poor food consumption (% of households)	Poor or borderline food consumption (% of households)	Below absolute poverty line (% of households)	Below food poverty line (% of households)	75% or more of total expenditures on food (% of households)	65% or more of total expenditures on food (% of households)	Lowest total expenditures per capita quintile (% of households)
Total (Ethiopia)	**3127**	**40%**	**50%**	**30%**	**10%**	**26%**	**23%**	**28%**	**2%**	**12%**	**20%**
REGIONS											
Tigray	3048	42%	52%	20%	3%	15%	24%	30%	1%	11%	16%
Afar	3091	38%	43%	47%	1%	6%	28%	25%	9%	28%	17%
Amhara	2794	49%	33%	36%	2%	11%	24%	35%	3%	14%	22%
Oromia	3181	40%	58%	20%	6%	20%	22%	27%	1%	9%	19%
Somali	3132	40%	39%	38%	7%	16%	25%	21%	6%	22%	17%
Benishangul Gumuz	3339	36%	32%	18%	2%	17%	23%	28%	2%	11%	18%
SNNPR	3529	27%	70%	43%	31%	63%	24%	22%	3%	16%	26%
Gambela	3319	35%	51%	30%	7%	28%	24%	20%	7%	26%	13%
Harari	3208	31%	45%	9%	0%	9%	9%	4%	2%	6%	1%
Addis Ababa	2834	50%	8%	30%	8%	31%	21%	19%	3%	9%	3%
Dire Dawa	2914	42%	30%	10%	0%	11%	21%	17%	1%	6%	3%
RURAL / URBAN											
Rural	3164	40%	58%	34%	11%	29%	24%	29%	2%	14%	24%
Urban	2985	42%	20%	16%	4%	17%	19%	21%	1%	5%	4%
REGIONS (RURAL ONLY)											
Tigray	3018	44%	61%	25%	3%	17%	29%	33%	2%	14%	21%
Afar	3077	38%	57%	65%	1%	5%	33%	27%	13%	40%	25%
Amhara	2758	51%	36%	41%	2%	12%	24%	38%	3%	15%	25%
Oromia	3227	39%	65%	22%	6%	22%	24%	28%	1%	10%	21%
Somali	3157	40%	46%	43%	7%	16%	27%	22%	6%	25%	20%
Benishangul Gumuz	3327	37%	35%	19%	2%	17%	24%	30%	3%	13%	21%
SNNPR	3575	27%	75%	47%	34%	68%	25%	22%	4%	17%	29%
Gambela	3473	30%	60%	35%	8%	29%	25%	19%	10%	35%	14%
Harari	3639	15%	86%	17%	0%	11%	9%	4%	0%	4%	1%
Addis Ababa											
Dire Dawa	3363	19%	80%	18%	1%	3%	12%	12%	1%	3%	6%

	Diet Quantity		Diet Quality		Food Consumption Adequacy		Economic Vulnerability				
	Mean kcals per adult equivalent per day	Consumption < 2550 kcal / adult equivalent / day (% of households)	>75% of total household calories coming from starch staples (% of	Low dietary diversity (<=3 food groups over 7 days) (% of households)	Poor food consumption (% of households)	Poor or borderline food consumption (% of households)	Below absolute poverty line (% of households)	Below food poverty line (% of households)	75% or more of total expenditures on food (% of households)	65% or more of total expenditures on food (% of households)	Lowest total expenditures per capita quintile (% of households)
REGIONS (URBAN ONLY)											
Tigray	3135	37%	26%	7%	1%	10%	11%	19%	0%	1%	3%
Afar	3119	39%	12%	10%	1%	8%	17%	20%	0%	2%	2%
Amhara	2987	40%	16%	12%	1%	6%	21%	20%	1%	5%	3%
Oromia	2958	42%	26%	13%	2%	12%	17%	24%	1%	4%	6%
Somali	3029	41%	13%	21%	5%	17%	21%	16%	4%	9%	8%
Benishangul Gumuz	3406	30%	13%	11%	0%	15%	14%	18%	0%	1%	3%
SNNPR	3207	33%	34%	14%	7%	29%	18%	20%	1%	4%	5%
Gambela	2966	46%	29%	19%	4%	28%	23%	22%	1%	3%	9%
Harari	2874	42%	14%	3%	0%	9%	9%	3%	3%	7%	1%
Addis Ababa	2834	50%	8%	30%	8%	31%	21%	19%	3%	9%	3%
Dire Dawa	2751	50%	12%	7%	0%	14%	24%	19%	1%	7%	2%
WEALTH QUINTILES (ASSET INDEX)											
Poorest	3148	42%	66%	53%	20%	43%	33%	34%	4%	17%	33%
2nd	3155	41%	62%	40%	14%	35%	27%	31%	3%	15%	26%
middle	3158	39%	55%	27%	7%	23%	23%	28%	2%	13%	21%
4th	3060	41%	46%	17%	4%	16%	21%	27%	1%	10%	16%
Richest	3112	38%	21%	12%	3%	14%	12%	17%	1%	5%	4%
LIVELIHOOD (MAIN OCCUPATION OF HOUSEHOLD)											
Other	3021	42%	27%	37%	7%	24%	21%	24%	5%	15%	10%
Salary	3251	34%	16%	12%	2%	13%	11%	14%	1%	4%	3%
Casual labor / daily labourer	2755	54%	36%	28%	8%	26%	29%	32%	1%	8%	16%
Crop production	3029	44%	57%	31%	10%	27%	27%	34%	2%	12%	25%
Livestock	2668	55%	52%	54%	5%	16%	45%	41%	9%	31%	39%
Crop and livestock	3370	34%	64%	34%	14%	33%	21%	24%	3%	14%	22%
Manufacturing, construction and mining	2946	43%	38%	28%	7%	25%	26%	26%	1%	10%	15%
Wholesale & retail trade - formal sector	3023	39%	19%	13%	3%	14%	11%	18%	2%	5%	4%
Wholesale & retail trade - informal sector	2977	42%	35%	21%	6%	23%	21%	23%	1%	9%	11%
Service trade	3010	43%	20%	19%	5%	19%	12%	17%	2%	7%	5%
Remittances	3234	35%	26%	28%	9%	25%	15%	17%	4%	12%	6%

	Diet Quantity		Diet Quality		Food Consumption Adequacy		Economic Vulnerability				
	Mean kcals per adult equivalent per day	Consumption < 2550 kcal / adult equivalent / day (% of households)	>75% of total household Calories coming from starch staples (% of	Low dietary diversity (<=3 food groups over 7 days) (% of households)	Poor food consumption (% of households)	Poor or borderline food consumption (% of households)	Below absolute poverty line (% of households)	Below food poverty line (% of households)	75% or more of total expenditures on food (% of households)	65% or more of total expenditures on food (% of households)	Lowest total expenditures per capita quintile (% of households)
SEX OF HOUSEHOLD HEAD											
Male head of household	3063	42%	51%	28%	9%	25%	24%	29%	2%	12%	21%
Female head of household	3318	36%	48%	35%	11%	30%	20%	23%	3%	12%	16%
EXPENDITURE QUINTILES											
Lowest total expenditures per capita quintile	2049	87%	70%	42%	15%	36%	85%	81%	3%	18%	100%
2nd	2839	50%	64%	36%	13%	32%	22%	32%	3%	15%	0%
Middle	3282	28%	55%	30%	10%	26%	6%	14%	2%	11%	0%
4th	3569	21%	43%	25%	7%	22%	3%	8%	2%	10%	0%
Highest total expenditures per capita quintile	3895	15%	19%	17%	4%	17%	1%	2%	2%	6%	0%

Table 28: Key indicators by region with summary analysis

	Summary analysis	Consumption < 2550 kcal / adult equivalent / day (% of households)	>75% of total household calories from staples	Low dietary diversity (<=3 food groups over 7 days)	Poor or borderline food consumption	Below absolute poverty line	65% or more of total expenditures on food)	Stunting	Wasting	Underweight
Tigray 	• Diet better than national average though more than half of households are highly dependent on staples • Relatively high meat consumption (2.2 days a week) • High rates of stunting and underweight	42%	52%	20%	15%	24%	11%	51%	10%	35%
Afar 	• Pastoralists (43% of households) with high dairy consumption, hence low unacceptable FC (6%) • Very low consumption of fruit and vegetables • Lowest diversity nationally • Very high share of expenditure on food • Very high wasting, underweight and stunting • High prevalence of households in the poorest wealth quintiles and highest percentage below absolute poverty line.	38%	43%	47%	6%	28%	28%	50%	20%	40%
Amhara 	• Second worst off in terms of diet quantity (49% eat fewer than 2550 kcals per day) • Diet is varied with near daily consumption of pulses and vegetables and meat 1.6 times a week • Low diversity still prevalent • 76% of households are crop producers or combine this with livestock • Worst in terms of stunting (52%) • Highest proportion of households below food poverty line (35%)	49%	33%	36%	11%	24%	14%	52%	10%	33%
Oromia 	• Largest region in terms of size and population • Fairs near the national average on most indicators though high share of kcals derived from staples (58%) • Stunting rates are high	40%	58%	20%	20%	22%	9%	41%	10%	26%
Somali 	• Large pastoralist area (32% of households). High dairy consumption leading to low prevalence of poor/borderline FC (16%) but masks poor dietary diversity (38%) • High consumption of oil and sugar, very little pulses, fruit or meat • Wasting is extremely high at 38% • High share of expenditure on food (22% spend 65% or more) • The number of poor increased by over 50% between 1995/96 and 2010/11. High prevalence of households in the poorest wealth quintiles • More than 30% reported food shortages in the last year	40%	39%	38%	16%	25%	22%	33%	22%	34%
Benishangul Gamuz 	• Food security indicators are good across the board • Diet is varied with staples balanced with regular consumption of vegetables, fruit, pulses while sugar consumption is lower than other regions • At 49% stunting is above the national average (44%)	36%	32%	18%	17%	23%	11%	49%	10%	32%
SNNPR 	• Worst FC nationally with 63% poor / borderline (31% poor). • Kcal consumption is adequate, but a very high share of kcals are derived from staples • Very low dietary diversity • Interestingly malnutrition indicators are not so bad with stunting equal to the national average • The diet consists largely of starches with vegetables and oil – very low consumption of protein rich groups • High prevalence of households in the poorest wealth quintiles • More than 30% reported food shortages in the last year	27%	70%	43%	63%	24%	16%	44%	8%	28%

	Summary analysis	Consumption < 2550 kcal / adult equivalent / day (% of households)	>75% of total household calories from staples	Low dietary diversity (<=3 food groups over 7 days)	Poor or borderline food consumption	Below absolute poverty line	65% or more of total expenditures on food)	Stunting	Wasting	Underweight
Gambela 	• Meat consumption is the highest in the country though more than half of households are highly staple dependent. • The percentage of households with high share of expenditure on food is 2nd highest nationally at 26% • The number of poor increased by over 50% between 1995/96. High prevalence of households in the poorest wealth quintiles. Gambela has the highest annual population growth rate (4.1% compared to the national 2.6%) as shown by the census of 2007. • More than 30% reported food shortages in the last year	35%	51%	30%	28%	24%	26%	27%	13%	21%
Harari 	• Urban area surrounded by Oromia • Dietary indicators are good across the board and all food groups are eaten regularly, including sugar (4.7 days) • Relatively wealthy area: 20% of households are salaried workers and 12% work in wholesale and retail	31%	45%	9%	9%	9%	6%	30%	9%	22%
Addis Ababa 	• Higher prevalence of poor/borderline FCS than national at 31%, the second worse in country • High share of households are food energy deficient (50%) • Vegetable and fruit consumption is low and oil and sugar high • Relatively wealthy with low share of expenditure on food and high percentage of salaried workers (49%) • Sizeable population classified as casual labourers or other livelihood groups with high rates of poverty and poor diets	50%	8%	30%	31%	21%	9%	22%	5%	6%
Dire Dawa 	• Good across all dietary indicators except food quantity (42% are energy deficient) • Households have diverse diets (likely good micronutrient value) with balanced consumption of vegetables, meat, pulses and dairy to accompany daily staple • Economic indicators are good; 28% are salaried workers.	42%	30%	10%	11%	21%	6%	36%	12%	28%

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