Comprehensive Food Security and Vulnerability Analysis (CFSVA)

Ethiopia

EXECUTIVE SUMMARY

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A decade of economic growth and improved wellbeing

The Ethiopian economy has grown fast in the last eight years with real GDP growth - at about 11% per annum between 2004 and 2012[1] - outstripping that of Sub Saharan Africa and higher than the 7% annual growth needed to achieve the MDG goal of halving poverty by 2015.

Yet the country 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[2], less than a third of the USD 1258 average for sub Saharan African countries. Agriculture contributes 44% of GDP but productivity is hindered by population pressure which results in serious land degradation (close to 50% of agricultural land is highly degraded (UNDAF 2011-2015)); small farm size (average 0.93 hectare plots); recurrent drought and lack of farm technology. Less than 1% of agricultural land is equipped for irrigation (FAOSTAT). However, crop production has doubled in the last decade or so thanks to improved inputs, increased land under cultivation and favourable weather in some years.

The percentage of the population living below the poverty line (set at 3,781 birr/adult/year) declined from 46% in 1995/96 to 30% in 2010/11 with poverty more prevalent in rural areas than urban. (HCE 2010/11). However, looking at regional population figures, the number of poor Ethiopians increased over 15 years in seven out of 11 regions. In Somali, Gambela and Afar, the number of poor increased by over 50% between 1995/96 and 2010/11.

The state of food insecurity in Ethiopia

KEY FINDINGS

Nationally two in five households were food energy deficient with little difference between urban and rural areas. The other food security indicators showed a strong rural urban divide with rural households far more likely to consume less varied, starchy staple-heavy diets than urban.

These findings imply that rural households are likely to fill themselves up with cheap, energy giving staples but forego key nutrients and micronutrients. While 29% of rural households consumed 'less than acceptable' diets, the prevalence rose to a striking 68% in rural SNNPR, where some 34% had 'poor' food consumption, a diet consisting overwhelmingly of staples.

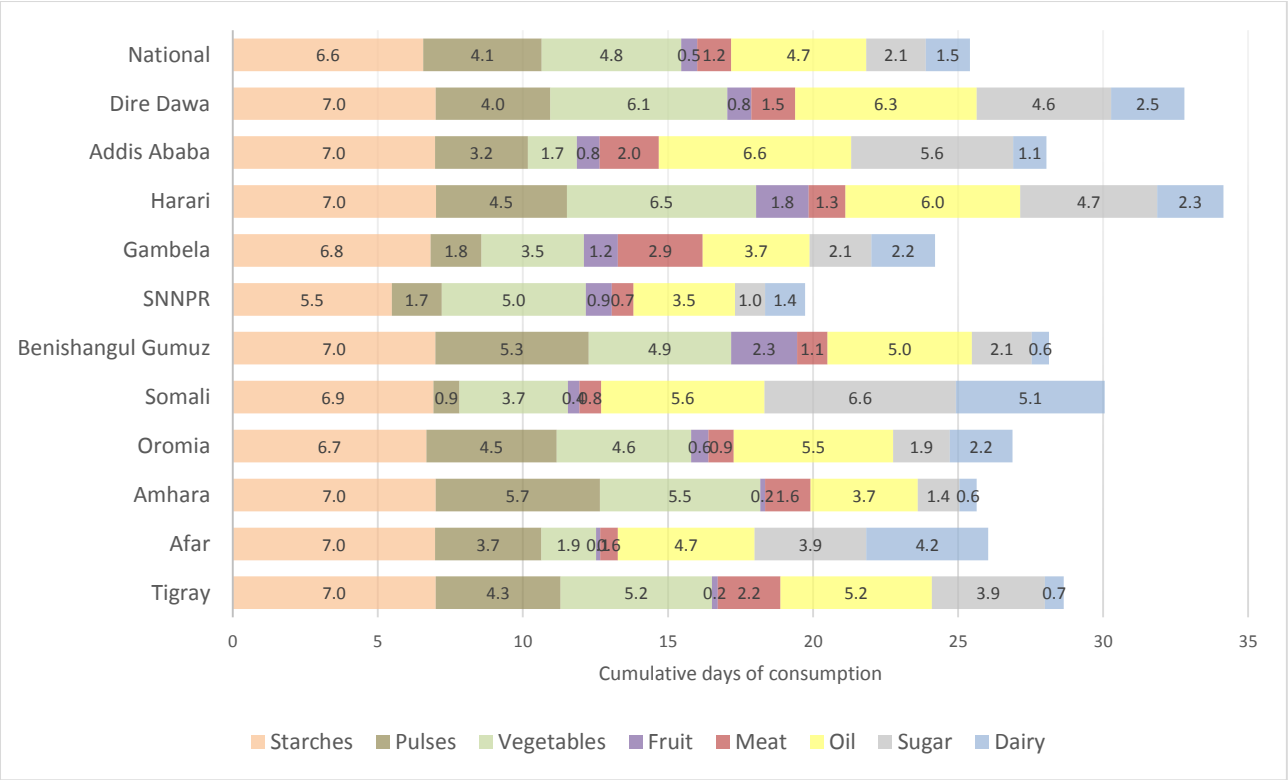
The Ethiopian diet chiefly consists of cereals (maize, sorghum, teff), tubers and root crops (ensete, potatoes, sweet potatoes), pulses and oil seeds. The national staple 'injera' is typically made from teff, which is grown in the highlands, or sometimes from millet or sorghum. Despite a large livestock population, dairy and meat supply is limited, with consumption of these products especially low in rural areas, except in nomadic pastoralist districts (Somali and Afar) where milk is a major component of the diet, consumed 4-5 days a week compared with 1.5 days on average nationally. Staples are usually accompanied by vegetables (5 days a week) except in Addis Ababa,

[1] Source: Ministry of Finance and Economic Development, Growth and Transformation Plan, Annual Progress Report 2011/12, Addis Ababa

[2] Source: World Bank, National Accounts Data

Gambela, Somali and Afar where they are consumed far less frequently. Fruit consumption is low across all districts.

Figure 1: Mean number of days of consumption (out of 7) of all food groups by region



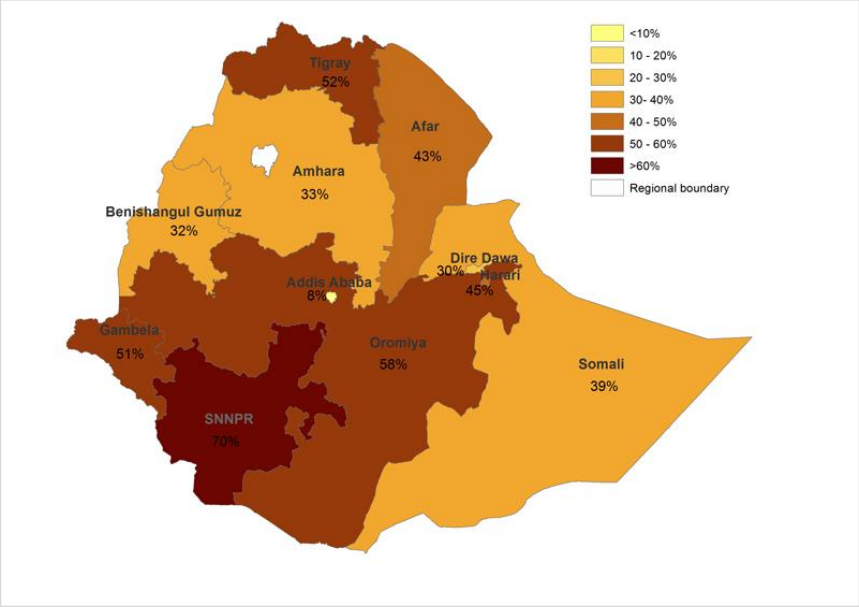
This report utilizes several measures to explore food security in Ethiopia. These different indicators capture different aspects of food insecurity depending on their construct and thresholds.

Nationally, 40% of households were food energy deficient, using the threshold of 2,550 kcal 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 kcal.

As income/expenditure decreases, households tend to spend a larger share, if not all, of their food budget on stomach-filling staples, which provide "cheap" sources of calories. In doing so, they forfeit more nutritious items and may lack adequate consumption of proteins and micro-nutrients.

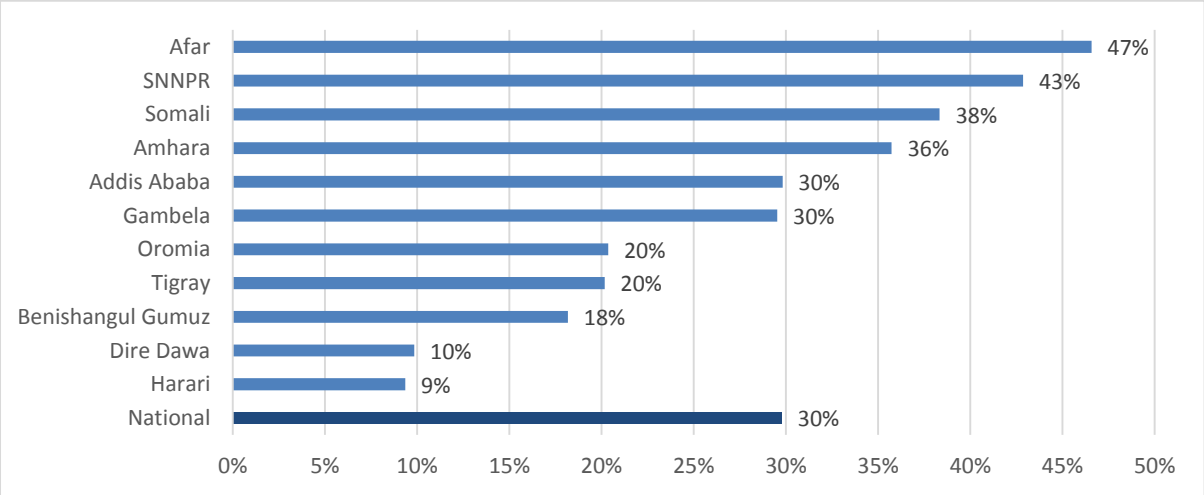
Half of households sourced a very high portion (>75%) of their total calories from starchy staples, i.e. a highly unvaried diet. There was a marked difference between urban and rural areas in terms of starch-heavy diets. 58% of rural households derived a very high portion of their total calories from starchy staples, vs. 20% of urban. The highest prevalence of starch-heavy diets characterized households in SNNPR (70%), Oromia (58%), Tigray (52%), Gambela (51%) and Harari (45%).

Figure 2: Percent of households consuming a high starch diet (greater than 75% of total household kcals from starchy staples) by region



Nationally, 30% of households had low dietary diversity i.e., consumed three or less 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%). Again rural households were more likely to have less diverse diets (34% consumed three or less food groups) than urban households (16%).

Figure 3: Percent of households with low dietary diversity (consumed 3 or less food groups over a week)

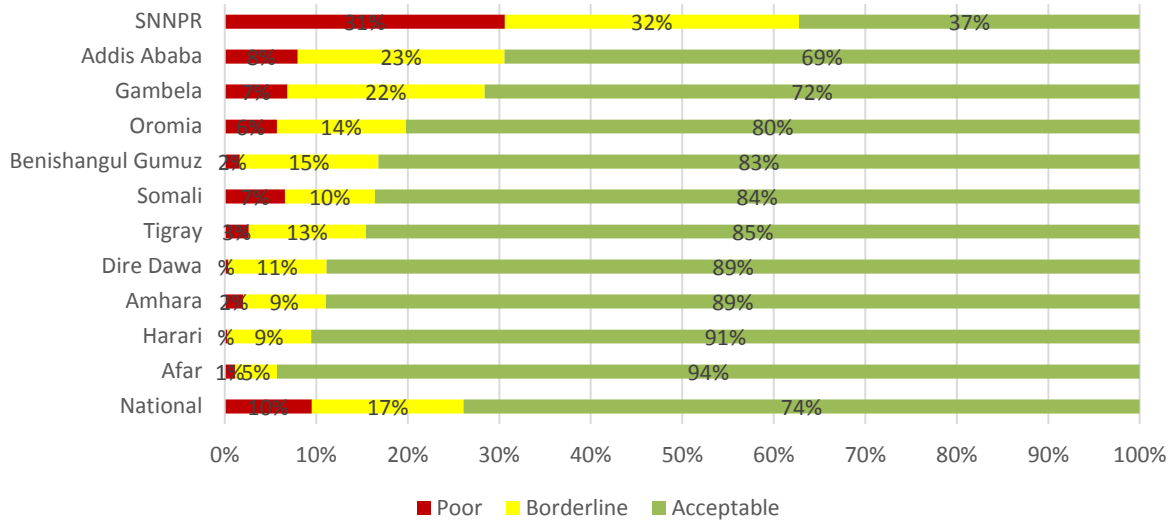


The Food Consumption Score (FCS) combines the elements of 'quantity' and 'quality' of food. It measures food diversity (the types of food consumed), food frequency (the number of days each food group is consumed) and the relative nutritional importance of different food groups. The FCS uses standardized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

Nationally, **more than one in four households (27%) consumed less than acceptable diets** according to the FCS. Ten percent (10%) 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%).

And again unacceptable food consumption was more prevalent in rural areas where 29% of households had poor/borderline food consumption, compared with 17% in urban.

Figure 4: Percent of households with poor, borderline and acceptable food consumption by region

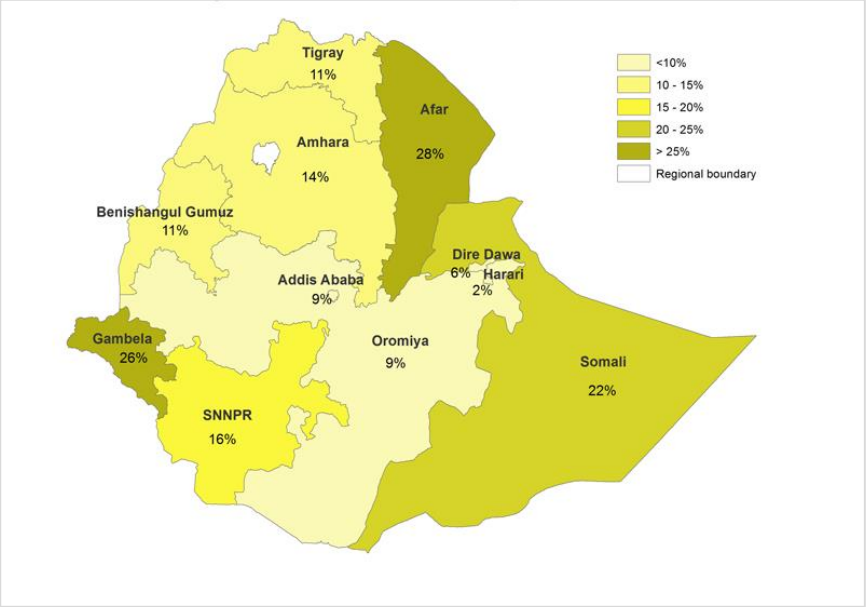


The 'food poor' are those who spend less on food than is required to consume the minimum level of calories for a healthy, active life (based on the types of foods purchased and consumed by the poor, calculated at local costs). Prices are based on local market prices, and on the cost of the minimum basic 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 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)** with the highest regional prevalence in Amhara (35%) and Tigray (30%).

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 percentage. In sum, as the percentage of total expenditures on food increases, the household is considered to be more economically vulnerable.

12% of households spent more than 65% of total expenditures on food, again with a marked rural vs. urban difference (14% vs. 5%). The prevalence was much higher in Afar (28%), Gambela (26%) and Somali (22%). In rural parts of these regions, 13%, 10% and 6% (respectively) spent ¾ or more of their total expenditure on food alone compared with 2% of households nationally.

Figure 5: Percent of households with 65% or more of total expenditure on food



Who are the food insecure?

KEY FINDINGS

Food insecurity and poverty go hand in hand. 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. Households in the pastoralist district of Afar were most likely to be below the poverty line. Those households relying primarily on livestock were the poorest and those relying primarily on salary, trade (service or wholesale) and remittances were the best off.

The poor

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, wealth index quintiles (based on household assets) and expenditure quintiles. These different indicators capture different aspects of poverty depending on their construct and thresholds.

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 were below the absolute poverty line (24% rural vs. 19% urban), peaking at 33% in rural Afar.

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)[3]. Nationally 24% of rural households were in the poorest expenditure per capita quintile vs. 4% of urban[4]. The

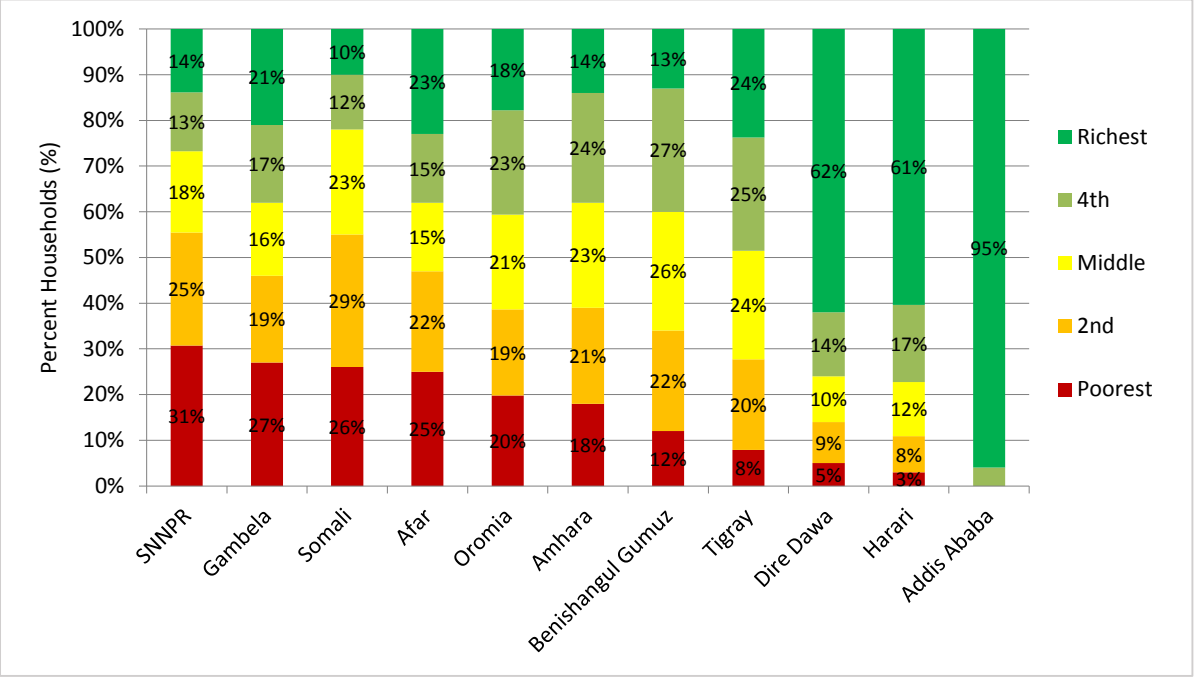
[3] Consumption/expenditure is the cash value of the household cash expenditures plus the value of items produced and consumed by the household but not purchased with cash (such as trades, food grown by the household, etc).

[4] 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.

highest prevalence was in rural SNNPR (29%). Some 39% of livestock farmers were in the lowest expenditure quintile followed by 25% of crop producers and 22% of crop *and* livestock farmers.

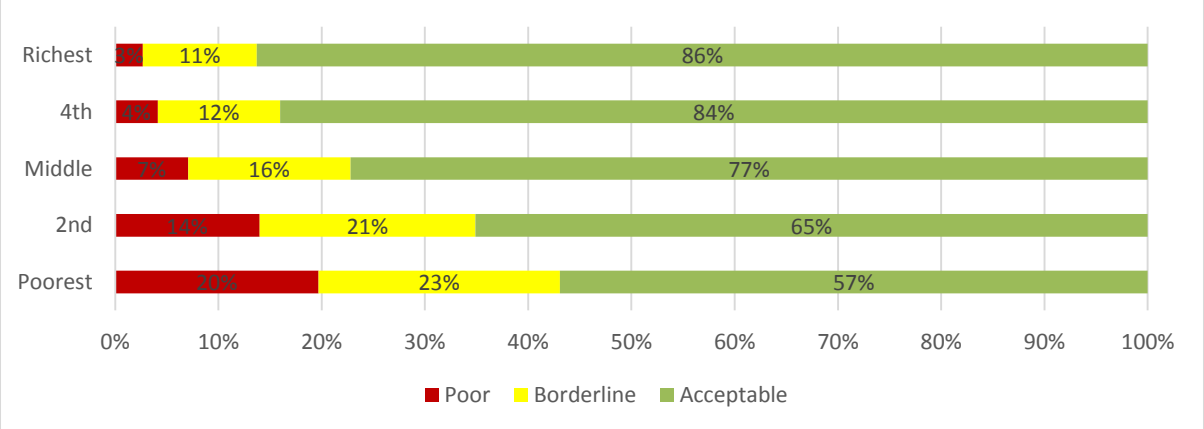
The WMS gathered extensive data on a variety of household assets, both productive and non-productive, as well as livelihood specific assets (such as land, cattle, etc) to create a wealth index, which is then split into five quintiles (each representing 20% of the population) based on their assets. At the regional level, SNNPR, Gambela, Somali, and Afar had the highest prevalence of households in the poorest wealth quintiles with at least 25%.

Figure 6: Percent of households falling into each of the wealth quintiles by region



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. For instance, 24% of households above the poverty line had poor/borderline food consumption, vs. 33% of below-poverty-line households.

Figure 7: Food consumption status by wealth quintiles



Twenty percent (20%) of the poorest wealth index quintile households had poor food consumption compared with 3% of the richest. Indeed, of all households with poor food consumption, 71% were in

the bottom two wealth index quintiles. While, nationally, 50% of households sourced more than 75% of their calories from starchy staples, the percentage rose to 66% of households in the poorest wealth index quintile and dipped to 21% for those in the richest quintile, showing clearly that poor households are consuming a diet with low diversity.

Indeed, 53% in the poorest quintile consumed fewer than three food groups vs. 12% in the wealthiest. The richest households (as classified by the wealth index) consumed meat on average 2.1 days per week compared with 0.5 days a week for the poorest quintile. Increased frequency of consumption of oil, sugar, and to a lesser extent fruit and pulses, was also associated with increased wealth.

Livestock farmers and crop producers

KEY FINDINGS

More than 90% of rural households in Ethiopia rely on livestock, crop production, or a combination of the two as the main occupation of their household head. In Afar and Somali some 60% and 38% respectively rely on livestock only compared with 5% across rural Ethiopia.

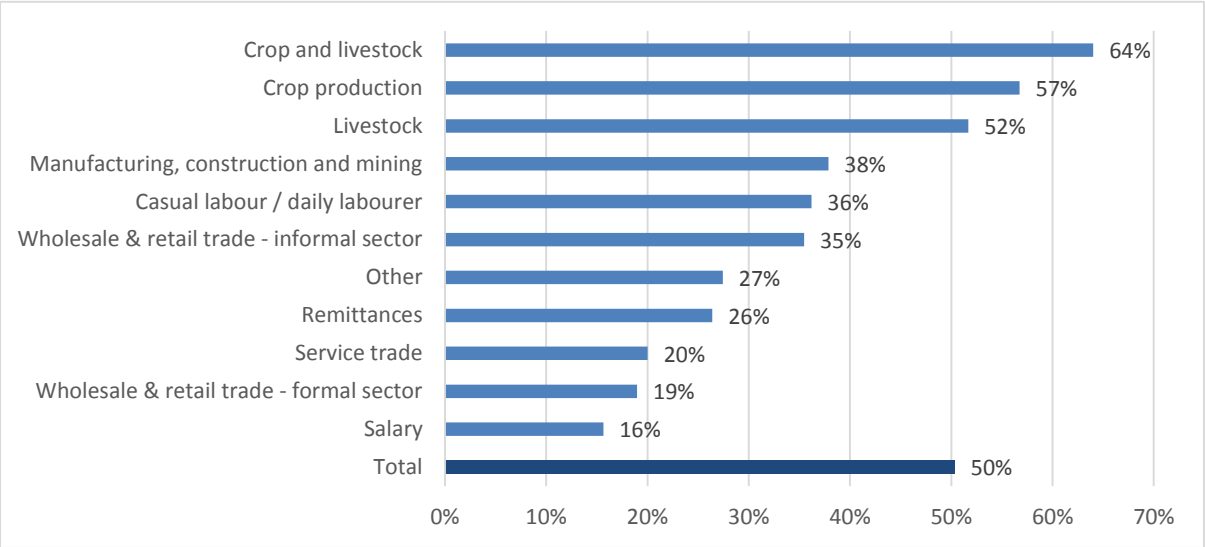
These farming households tend to be poorer and particularly vulnerable to food insecurity as do casual/daily labourers. Although worse off by other measures of diet, households relying on livestock as their main occupation showed a comparatively low prevalence of poor/borderline food consumption patterns (16%), due in large part to their much higher consumption of dairy.

While crop production is the main occupation of 54% of all rural households and livestock the main occupation of 3%, about 34% rely on an equal combination of crop production and livestock.

Households reliant on these livelihoods were found to be particularly vulnerable to food insecurity as measured by a variety of indicators. Fifty-five percent of households engaged in livestock consumed less than the minimum daily energy requirement of 2,550 kcal per adult equivalent per day, the highest prevalence among all livelihoods.

Starchy, staple-heavy diets (more than 75% of calories coming from starch staple foods) were particularly common among households making a living from livestock (52%), crop production (57%), and crop production and livestock combined (64%). Households reliant on crop and livestock and crop production only had a high prevalence of poor/borderline food consumption (33% and 27% respectively). But it should be noted that those relying on livestock as their main occupation had a comparatively low prevalence of households with poor/borderline food consumption patterns (16%), chiefly because of their much higher consumption of dairy (which has a significant impact on their food consumption score) though they were worse off by other measures of diet. For instance livestock farmers consume milk on average five days a week, compared with 1.8 days a week for those relying on crops and livestock, the next most milk-consuming livelihood. Generally better-off livelihood groups include those relying on wholesale and retail trade and those receiving regular salaries.

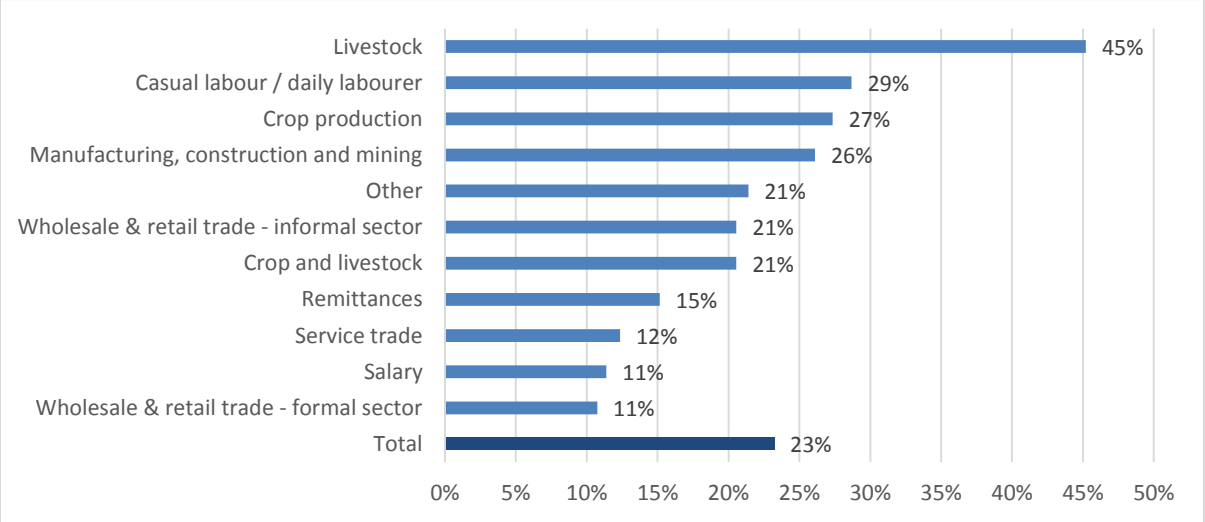
Figure 8: Percent of households consuming more than 75% of calories from starch staples by livelihood



It is also notable that dependency on crop *and* livestock farming did not tend to be associated with energy deficiency. Around a third (34%) were energy deficient – the same prevalence as salaried workers which tend to be the most food secure livelihood group.

Households that rely on livestock as their main income source were much more likely to be poor as measured by all poverty indicators mentioned above. For instance 41% fell below the food poverty line, and 45% below the absolute poverty line (versus national figures of 28% and 23% respectively), the highest of all livelihood groups.

Figure 9: Percent of households below poverty line by livelihoods



Casual/day labourers

Casual/day labourers make up 4% of all households and 10% of urban households. More than half (54%) of households that rely on this casual work consumed less than the minimum daily energy requirement of 2,550 kcal per adult equivalent per day. This stands in contrast to salaried households, the most food secure livelihood group by all indicators, of whom 34% consumed less than the minimum. This group had a higher prevalence of poverty and food poverty.

Malnutrition

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) 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 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.

Although child malnutrition rates have decreased, the country still has one of the highest malnutrition rates in Sub-Saharan Africa according to the 2011 Ethiopia Demographic Health Survey data. It is estimated that malnutrition contributes to the death of 270,000 children under 5 years of age every year[5].

The percentage of chronically malnourished or stunted children dropped from 58% in 2000 to 44% in 2011, which 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 Gumuz, rural regions with high rates of food poverty.

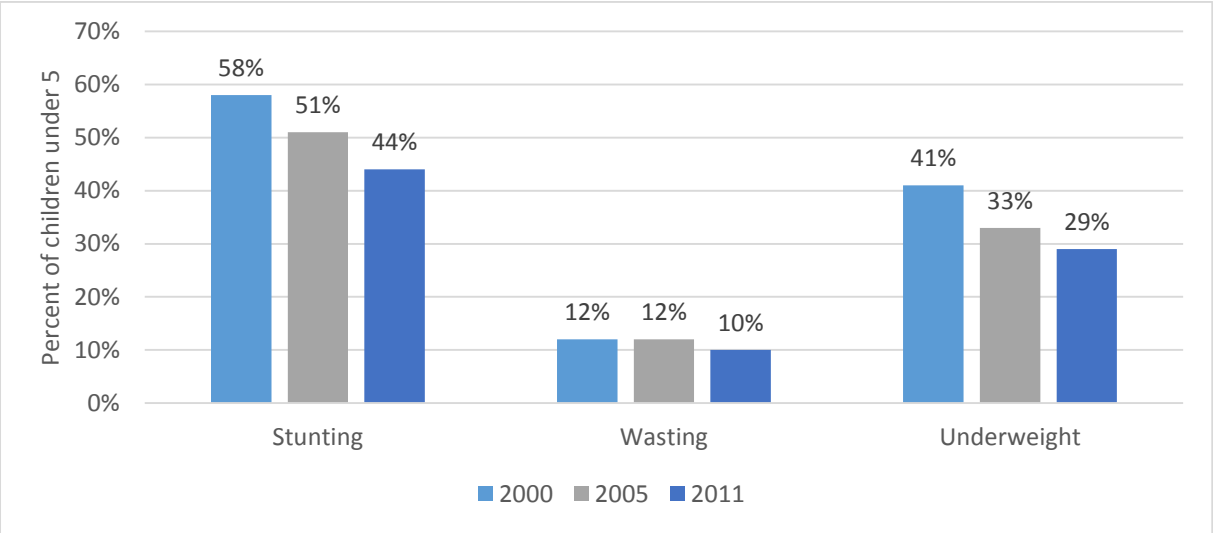
The prevalence of underweight children fell from 41% in 2000 to 29% in 2011. The prevalence was highest in the Afar region (40%) followed by Amhara, Benishangul Gumuz, Somali and Tigray.

Acute malnutrition or wasting stood at 10% or 1.1 million children. There were marked regional differences in acute malnutrition with more than 20% of children wasted in the Afar and Somali regions where large numbers of households rely on livestock as their main livelihood.

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).

[5] Profiles Ethiopia, Academic Educational Development, Washington, 2006

Figure 10: National trends in nutritional status of children (6-59 months) between 2000 and 2011



Source: DHS 2011

Undernourishment of women (Body mass index, less than 18) in Ethiopia is common; 27% of Ethiopian women of reproductive age (15 to 49 years old) were undernourished. Afar and Tigray were by far the most affected (44% and 40% respectively), followed by Somali (33%), Gambela (31%) and Amhara (30%). Similarly, women living in urban areas were less likely to be undernourished (20%) than those living in rural areas (29%).

Impact of shocks on food security

KEY FINDINGS

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 their main occupation experienced one or more shocks.

Food price rises

Food inflation will always hit the poorest households hardest because they spend the highest proportion of their total income on food. These households are highly likely to become food insecure if food prices rise.

In addition higher food prices will of course hit those who are market-dependent for food. Rural households sourced a higher percentage of their calories from their agricultural production (an average of 59% and an additional 20% from the sale of agricultural production). But they still sourced more than 20% of their energy requirements from the market.

Food price increases was the main 'shock' reported by Ethiopian households, cited by 18% of the total. It was more common in urban areas, though frequent in rural areas too. To cope with price hikes households tended 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%) or sell more animals than usual (7%).

High inflation affected food security in Ethiopia between 2008 and 2012. A hike in cereal prices was the main contributor. Although inflation had dropped to 8% by the end of 2010 it rose again in 2011 to about 30%. It will remain a challenge due to dependence on imported fuel as well as domestic factors such as borrowing. Food prices are still higher than the five year average. The price of staple cereals generally shows a seasonal pattern peaking in the lean season (May–August) and then declining as the new harvest approaches and finally drops to the lowest level at harvest time.

Food shortages

Households were asked if they had suffered from food shortages in the past year, and, if so, for how long.

Nationally, 21% of households reported having suffered from a food shortages in the past year. The majority (71%) of these households said they suffered shortages for 1-4 months, 18% for 5-8 months, and only 3% for 9-12 months. Households in rural areas were more likely to report shortages than those in urban areas (24% and 10%, respectively). In rural Somali, SNNPR and Gambela more than 30% reported shortages.

Climatic extremes[6]

Rainfall is one of the key determinants of food security in Ethiopia. This is because 90% of rural households rely on agricultural activities (livestock, crop production, or a combination of the two) and irrigation coverage levels are very low. Poorer and farming households are more vulnerable to food insecurity if unfavourable climatic conditions cause the harvest to fail because they are more dependent on their own production. According to the WMS survey, the agricultural livelihood groups obtained more than 40% of their food from own production.

Not only does lack of (or erratic rainfall) hit production of crops for own consumption but it may also affect food prices, and therefore the ability of poor households to purchase food.

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.

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.

Indeed, one in four livestock households in these areas mentioned that they had experienced drought as a shock during the past 12 months vs. 4% nationally. Yet 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.

With a predominantly rain-fed agricultural system, wetter years are generally associated with higher food production and dry years with lower production. For instance cereal production increased steadily between 1961 and 2010 with declines between 1973 and 1975, and again in 1984/1985, linked to the impact of major droughts during those years.

[6] The climate sections are based primarily on the report 'Climate risk and food security in Ethiopia: Analysis of climate impacts on food security and livelihoods'

Erratic rainfall patterns can reduce the length of the growing season as well as yields, with negative impacts on incomes and food security. It also affects the availability of animal feed and water for livestock rearing and can render livestock more vulnerable to diseases with potential impacts on the quality of meat and milk. Flooding damages crops and results in animals losses. Extremes of temperature – from very low in the highlands to extremely high in the lowlands - destroys crops and in pastoral parts of the country is a critical challenge to livestock productivity.

Milk is a key component of nutrition among pastoralists. Climate change is 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.

Methodology

This CFSVA made use of the nationwide, multi-topic Welfare Monitoring Survey (WMS) and Household Consumption and Expenditure Survey (HCE) with the aim 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.

WMS data collection took place in April - June 2011 while HCE data collection took place over one year from July 2010 - July 2011. Both covered all rural and urban areas of the country except the three non-sedentary zones of Afar and six zones of the Somali Region. They were designed to provide estimates at regional, rural and urban levels.

Approximately 96% of the households interviewed for the WMS were also participants in the HCE survey. Key indicators from the HCE survey were merged into the WMS database to provide additional insights into poverty and food security which form the basis of the CFSVA analysis.

The Ethiopia CFSVA is a joint publication between the Ethiopia Central Statistical Agency and the World Food Programme. This brief and the full report are available online:

http://www.csa.gov.et
http://www.wfp.org/food-security/

For more information on this report, please contact:

Central Statistical Agency	Mrs. Samia Zekaria	samiaz@ethionet.et
	Mr. Biratu Yigezu	ybiratu@yahoo.com
WFP Ethiopia	WFP Ethiopia	wfp.addisababa@wfp.org
WFP Headquarters	Mr. Amit Wadhwa	amit.wadhwa@wfp.org
	Mr. John McHarris	john.mcharris@wfp.org

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