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Comprehensive Food Security and Vulnerability Analysis (CFSVA) Summary Report



Ethiopia
2019



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Food Security Analysis



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Summary Report



Central Statistical Agency

The Comprehensive Food Security and Vulnerability Analysis (CFSVA) is aimed to explore the state of food and nutrition insecurity, identify the most vulnerable groups to food insecurity, examine the spatial distribution of food insecurity in Ethiopia and identify the driving factors to vulnerability to food and nutrition insecurity. This report is primarily based on the analysis of the Welfare Monitoring Survey (WMS) and the Household Consumption and Expenditure Survey (HCES) conducted by the Central Statistical Agency (CSA) from July 2015 to June 2016. A food security module was incorporated into the WMS questionnaire to collect data on different food security indicators as per the agreement between the CSA and the World Food Programme (WFP).

The data were collected from approximately 30,229 households across the country. During analysis, the overall state of household food security was assessed using the Food energy deficiency, poverty status and livelihood coping strategy indicators combined in a Consolidated Approach for Reporting on Food Security Indicators (CARI),

which classifies households into food secure and food insecure.

Food energy consumption, which measures the quantity of food household members consumed, the Dietary Diversity Score (DDS), which measures the quality/diversity of food consumed by members of the household, and the Food Consumption Score (FCS), which measures dietary adequacy were also used for measuring household food access. In addition, economic vulnerability of household to food insecurity was analysed using proxy indicators, such as poverty (food and general poverty), the Wealth Index, and household food expenditure. The Demographic and Health Survey (DHS) data collected by the CSA from January to June 2016 on anthropometric measures, such as height for age (stunting), weight for height (wasting) and underweight (low weight for age), were analysed to provide insight into the nutritional status of children, aged 6-59 months. For non-pregnant women in the reproductive ages (15-49), body mass index (BMI) was applied to estimate the prevalence of under- and overweight.



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Key Findings

State of Food Security in Ethiopia

Food Security Status:

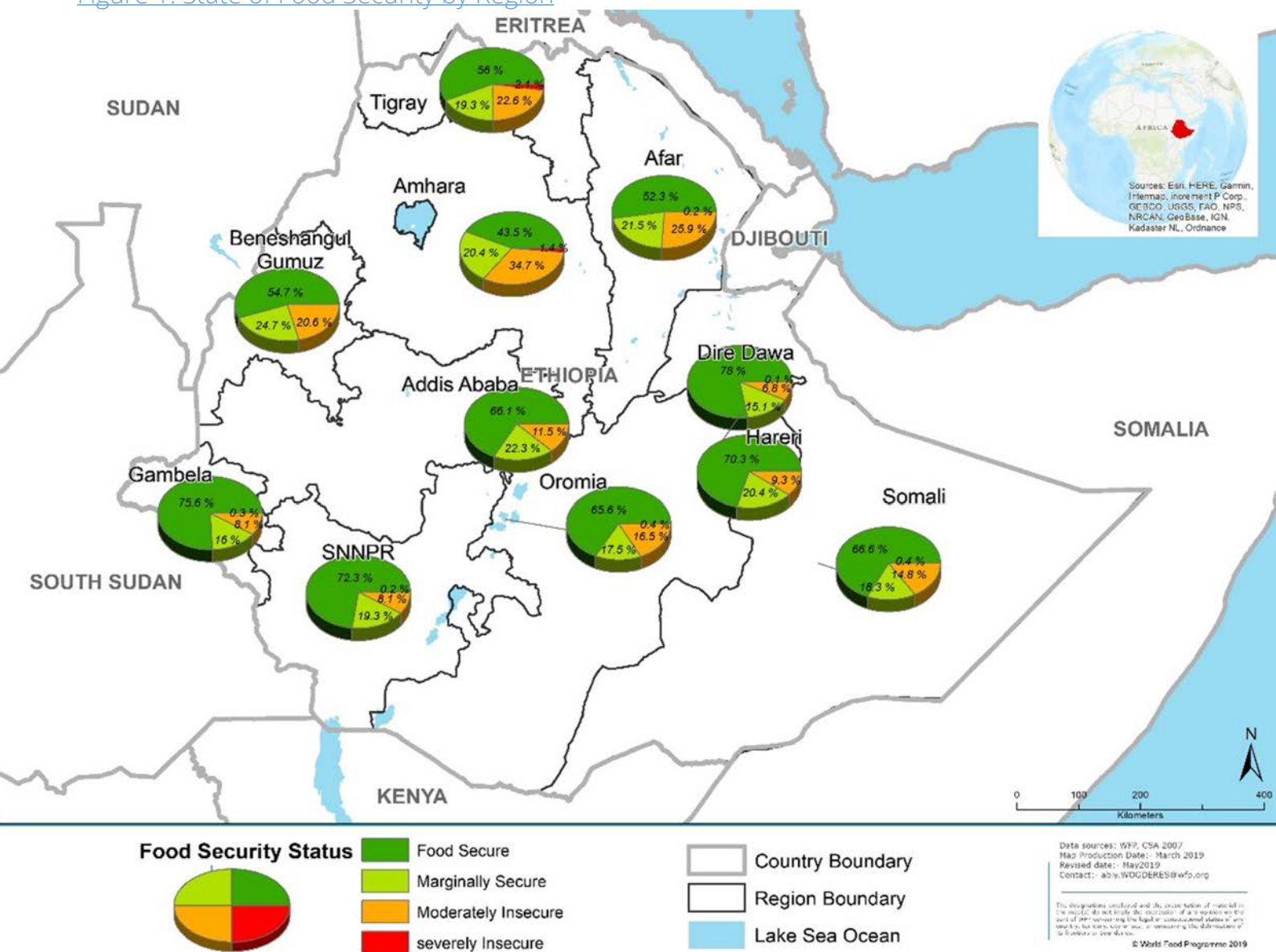
Nationally, approximately 20.5 percent of households are estimated to be food insecure. Nearly 22.7 percent of rural households and 13.9 percent of urban households were food insecure.

The highest percentage of food insecure households was reported from Amhara Region (36.1 percent), followed by Afar (26.1 percent) and Tigray (24.7 percent). Overall, rural households were more food insecure than urban households according to all indicators except calorie deficiency. Disaggregation of the status of food insecurity by gender of household head

showed that 22.2 percent of male headed households and 16.2 of women headed households experienced food insecurity. However, the gender of the household head is not a statistically significant predictor of food poverty and food insecurity in adjustment analysis.

At an individual level, the proportion of food insecure persons stood at 25.5 percent of the total population. This directly translates into approximately 26 million people who experienced food insecurity during the survey period (July 2015 to June 2016). The number of food insecure people could have been much higher had food and cash assistance not been provided to around 18 million people through emergency food assistance and productive safety net programmes.

Figure 1: State of Food Security by Region



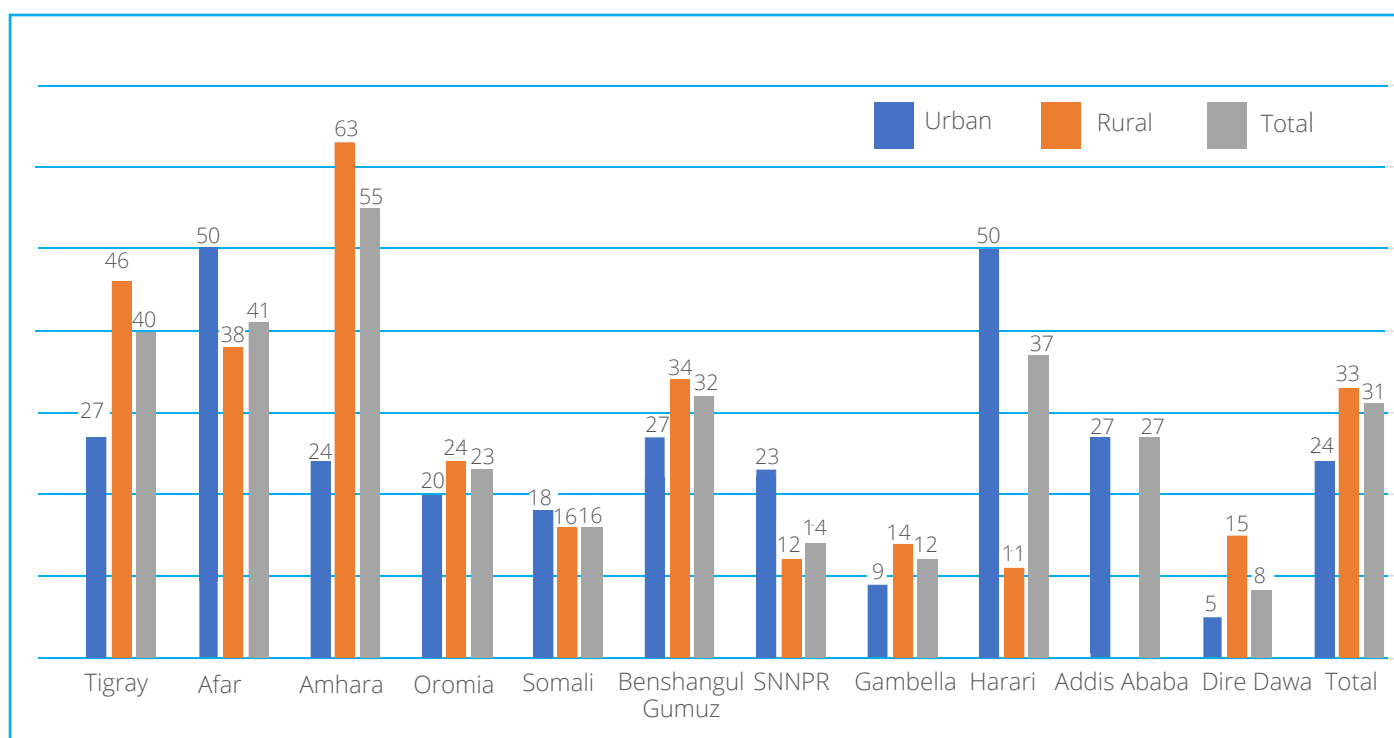
Source: Computed from 2016 WMS and HCES

Food Energy Consumption (Quantity of Food Consumed)

The proportion of households that have inadequate caloric consumption (less than 2,550 Kcal per adult equivalent per day) constitutes 31 percent of the total house-

holds in Ethiopia, with 24 percent located in urban areas and 33 percent in rural areas. Additionally, mean energy consumption has increased by 54 percent since 1996, and stood at 3,008 Kcal per adult equivalent per day nationally (2016).

Figure 2: Percentage of food energy deficient households (<2,550 Kcal per adult equivalent per day) and change in percentage points



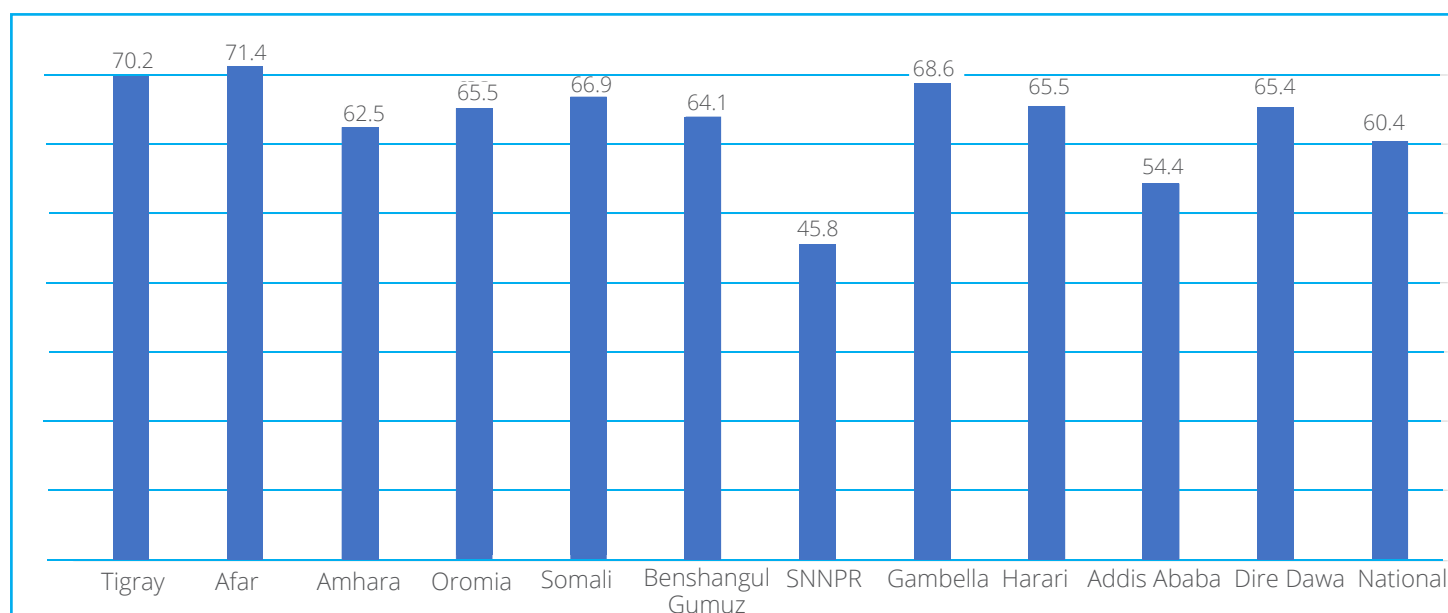
Source: Computed from HCES 2016

The share of starchy staples in total calorie consumption is very high at 71.4 percent indicating a highly unvaried diet.

On average, adults consume 194 kg of cereals per year, which comprises 60.4 percent of the total calorie intake. In 2016, the average annual consumption of maize stood at 66.7 kg per adult equivalent, which constitutes nearly 20 percent of the total calorie intake in the country. Teff, sorghum, and wheat account for 12 percent, 10 percent and 9 percent of overall calories consumed, respectively.

Maize remains the primary calorie source for the poor, while teff is the primary calorie source for the higher wealth quintiles. The share of sorghum and wheat, as calorie sources, is dominant in rural Ethiopia as compared to urban areas and nearly the same among the lower four expenditure quintiles (Q1 to Q4). The most important calorie sources in urban areas are primarily teff, oils and fats, constituting more than 40 percent of the calorie intake. From 1996 to 2016, the consumption of cereals has increased but at a decelerating rate. While the average per adult equivalent quantities of starchy staples consumed has increased over the past two decades, the share of the calories has steadily decreased.

Figure 3: Percentage Share of Cereals for calorie intake by Region



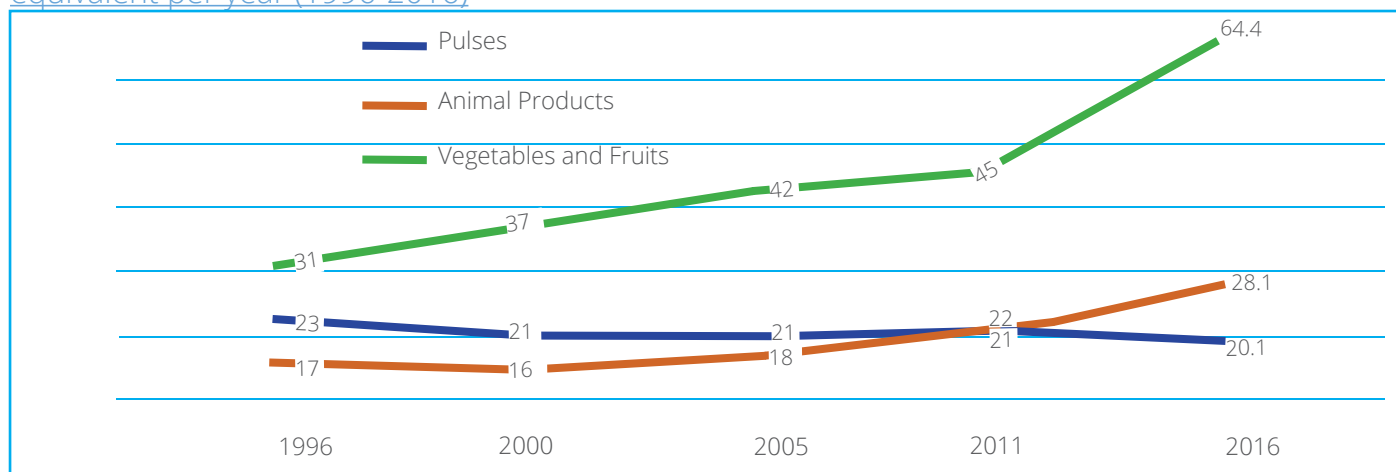
Source: Computed from HCES 2016

The per capita milk and meat consumption of Ethiopian adults is far below the surrounding sub-Saharan countries. The per capita milk consumption level in Ethiopia is around 16.6 kg per year compare to 58 kg and 110 kg in the neighboring countries, Uganda and Kenya, respectively. Pastoral and agro-pastoral regions of Somali and Afar have relatively higher per adult equivalent dairy products consumption as compared to other regions. Additionally, the average Ethiopian adult consumes 7.5 kg of meat per year (6.1 kg per capita). The consumption of animal products, including meat, poultry, fish, eggs, milk and dairy products, has increased by 65 percent over the last two decades while consumption of pulses stagnated in a general downward trend.

Per capita vegetable consumption in Ethiopia stands at 50.2 kg per year, with the average adult consuming 61 kg of vegetables.

The consumption of vegetables is relatively high in SNNPR and Gambella. The consumption of fruits is around 3.5 kg per adult or per capita 2.9 kg per person. Compared to the WHO recommendations of vegetable and fruits consumption, which is around 400g per day per person (146 kg per person per year), the average Ethiopian meets only 36.4 percent of the recommendation. However, there has been a two-fold increase in the quantity of fruits and vegetables consumed by an average adult from around 31 kg in 1996 to 64.4 kg in 2016.

Figure 4.: Trends of average quantity of food groups consumption in Ethiopia-Kg per adult equivalent per year (1996-2016)



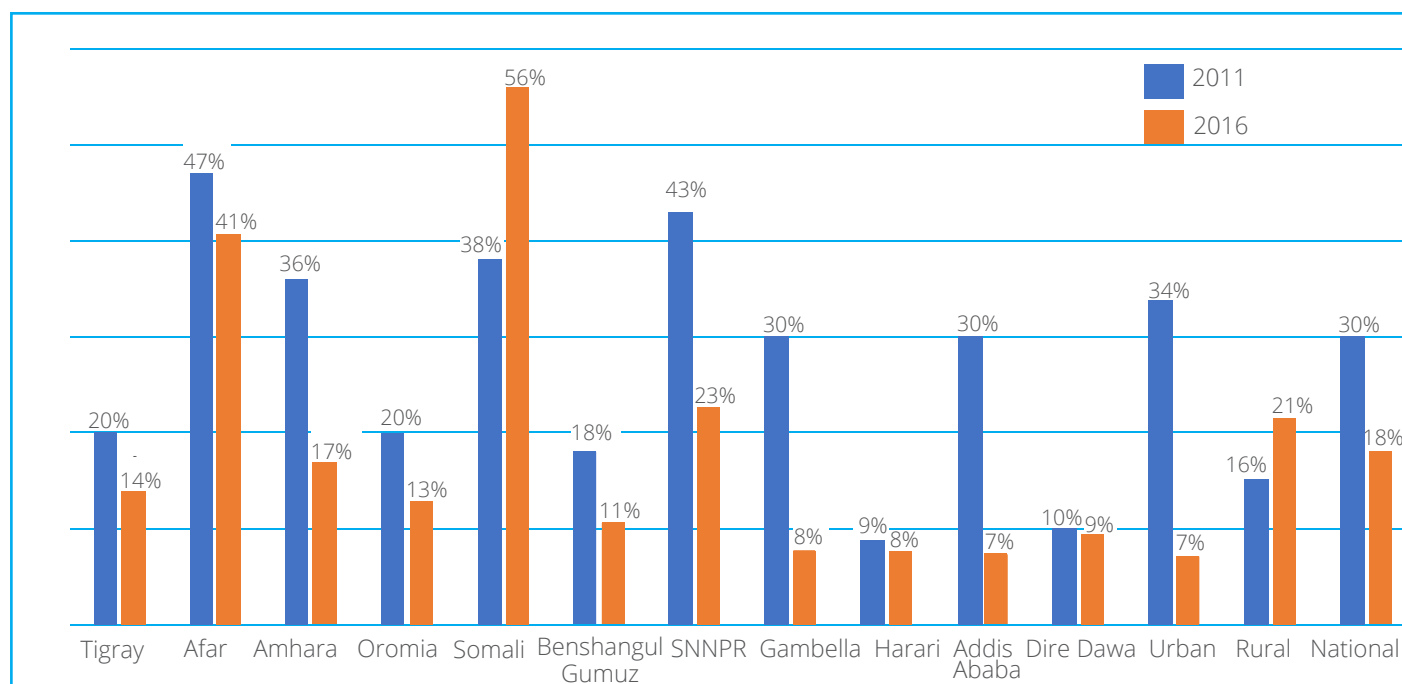
Source: Computed from 2016 HCES

Dietary Diversity Score (Quality and Diversity):

Approximately 54 percent of households consumed four or fewer food groups out of seven during the seven days prior to the date of interview and 18 percent three or fewer. A higher proportion of rural households consumed less diverse diets as compared with urban households (21.4 percent rural

households versus 7 percent urban consumed three or fewer food groups). Somali Region (56 percent), followed by Afar (41 percent) and SNNPR (23 percent), have the highest percent of households consuming three or fewer food groups.

Figure 5: Percentage of households who reported consumption of three or fewer food groups (out of seven) by region and place of residence



Source: Computed from 2016 WMS

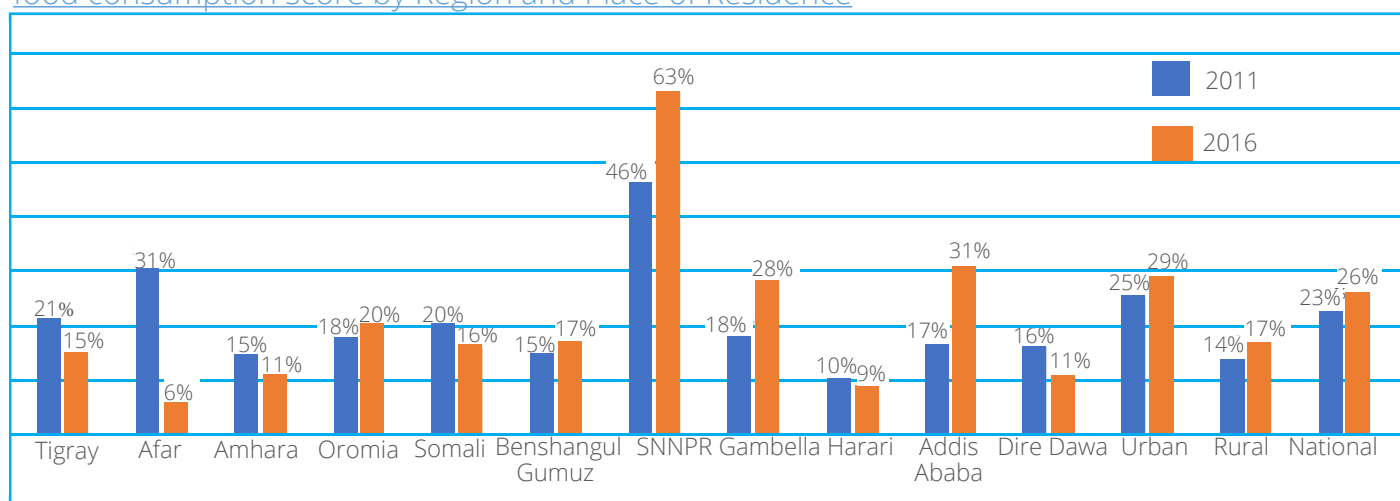
On average, meat and fruit groups are consumed by households less than one day a week.

Urban households have a higher consumption of fruits, meat, oil and sugar groups on average, whereas rural households report higher consumption of dairy products. Households' consumption of diversified food (quality foods) tend to increase as their wealth quintile group increases except for milk and dairy product consumption. Households in the poorest wealth quintile report the highest mean number of days with the consumption of milk and dairy products. This indicates that household milk consumption in Ethiopia is associated with the livelihood of the community rather than household wealth.

Food Consumption Score (FCS) Dietary Adequacy.

Nearly one in four households (23 percent) had inadequate food consumption during the seven days prior to the date of interview, i.e., consumed less than the acceptable variety of foods and/or only consumed foods with less nutritional values (poor micronutrient, low-quality protein) and nearly one in three (31 percent) reported consuming energy deficient food. The proportion of households with inadequate food consumption was higher in rural areas (25 percent) as compared to the urban areas (14 percent). SNNPR had the highest percentage of households with inadequate consumption at 46 percent followed by Afar (30.6 percent). There is a slight reduction in the proportion of households with inadequate food consumption both in rural and urban areas and at the national level as compared to the 2011 survey period (Figure 6).

Figure 6: Percentage of households with inadequate (Poor + Borderline) food consumption score by Region and Place of Residence



Source: Computed from 2016 WMS

Profile of the food Insecure Households

Households who are income and asset poor, those who reside in rural areas, and households located in highland agro-ecology zones tend to experience higher levels of food insecurity.

Poor households are over represented in the food insecure category compared to the non-poor households across all food insecurity measures. Households with higher asset and wealth have a greater likelihood of food security as compared with households with lower assets and wealth. Assets (livestock, perennial crops, farm and transport animals, farm tools, household effects, and amenities) were included in the WMS questionnaire and those assets which were able to distinguish households in terms of asset ownership were used to create a wealth index, which was used to classify households into five wealth groups, and income and assets were found to be key determinants of food insecurity and demographic factors were important drivers of food insecurity.

Food insecurity is relatively high among households engaged in the informal sector, mixed agriculture, and casual labour.

Households that earn their living from agricultural activities (crop and livestock) are

generally the most food poor as compared with other households. Households engaging in formal trade (including wholesale, retail and service), service trade, and salary paying jobs are more food secure as measured by food poverty, FCS, and CARL.

Larger household size, lower level of educational attainment of the household head, and increase in the age of the household head are also significantly associated with household food insecurity.

Household food insecurity is positively correlated with an increase in household size. There is an inverse relationship between the level of education attained by the head household and the likelihood of falling into food insecurity. A higher proportion of households headed by persons that can read and write were found to be better-off, in terms of food poverty and food security, as compared to those with heads of household who are illiterate. Food poverty is significantly lower among the households headed by younger age (less than 25 years) group (7.9 percent) but sharply increases in the prime age (26 to 59) group (20.5 percent) followed by a slight decrease in the old age category (18.8 percent). This pattern may be because younger couples can both work and sometimes there may be wedding gifts to enhance their living standard. However, they may fall into poverty and food insecurity as small children join the household, limiting per person income as the primary caregiver

reduces or forgoes their income to take care of the children. An increase in household size in prime age household head group without opportunities for accommodating additional household labour force could be another reason for increase in food poverty with

increase in age of household head, but this needs further investigation. Adjusted analysis indicated that sex of the household head is not a significant predictor of food insecurity, as measured by food poverty and CARI.

Table 1: Food security status of households by demographic and education characteristics

Independent Variables	Food poverty		Food Energy Consumption (FEC)		Food Consumption Score (FCS)		CARI	
	Non-Poor	Poor	Adequate FEC	Inadequate FEC	Adequate	Inadequate	Food Secure	Food Insecure
Sex of the household head								
Male	79.1	20.9	67.0	33.0	78.4	21.6	77.8	22.2
Female	85.2	14.8	75.6	24.4	74.1	25.9	83.8	16.2
Age of the household Head								
under 25	92.1	7.9	84.3	15.7	79.2	20.8	93.8	8.6
25-59	79.5	20.5	68.0	32.0	77.9	22.1	78.4	21.6
60 and above	81.2	18.8	68.7	31.3	74.1	25.9	80.3	19.7
Marital Status of the household head								
Never Married	93.3	6.7	84.5	15.5	80.7	19.3	93.8	6.2
Married	78.9	21.1	67.1	32.9	78.3	21.7	77.7	22.3
Divorced	84.0	16.0	68.6	31.4	74.7	25.3	80.6	19.4
Separated	88.6	11.4	79.6	20.4	71.2	28.8	88.6	11.4
Widow	82.9	17.1	73.8	26.2	71.6	28.4	83.7	16.3
Household Size								
1	97.1	2.9	89.2	10.8	77.1	22.9	94.7	5.3
2	94.1	5.9	85.0	15.0	76.7	23.3	92.3	7.7
3	89.3	10.7	79.7	20.3	76.6	23.4	87.4	12.6
4	85.5	14.5	71.8	28.2	76.7	23.3	82.7	17.3
5	78.2	21.8	64.5	35.5	77.3	22.7	76.9	23.1
6	72.3	27.7	59.0	41.0	78.2	21.8	72.5	27.5
7 and above	63.4	36.6	52.9	47.1	78.1	21.9	65	35.0
Read and write								
Yes	85.9	14.1	73.0	27.0	82.2	17.8	83.3	16.7
No	76.3	23.7	66.1	33.9	73.1	26.9	76.7	23.3
Highest level of education attained								
No formal education	75.8	24.2	63.7	36.3	74.5	25.5	75.1	24.9
First Cycle Primary school	80.5	19.5	69.7	30.3	75.7	24.3	79.7	20.3
Second Cycle primary school	86.1	13.9	75.5	24.5	78.9	21.1	84.2	15.8
Secondary school	90.9	9.1	81.4	18.6	84.2	15.8	90.4	9.6

Source: Computed from 2016 HCE and WMS

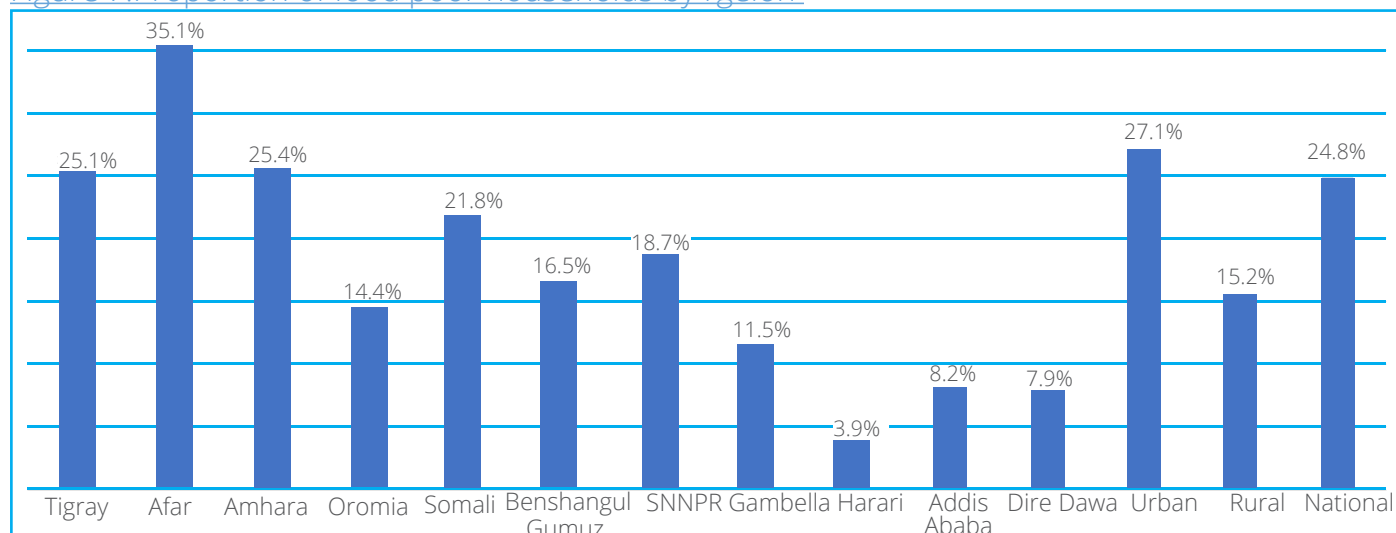
Economic vulnerability to food insecurity

One in four (24.8 percent) households in Ethiopia fall under the food poverty line, suggesting that they are unable to meet the recommended daily calorie requirements. Regionally,

Harari, Dire Dawa and Addis Ababa have the lowest percentage of food poor households where as Afar, Amhara, Tigray, Somali and

SNNPR have relatively higher percentage of food poor households (Figure 7). Food poverty also remains substantially higher in rural Ethiopia (27.1 percent) as compared to urban Ethiopia (15.2 percent). Addis Ababa, Harari, Tigray, and Dire Dawa, have the lowest percentage of households in the poorest quintile of wealth index. While Pastoralist and agro-pastoralist regions, Somali and Afar, have the highest percentage of households in the poorest quintiles.

Figure 7: Proportion of food poor households by region

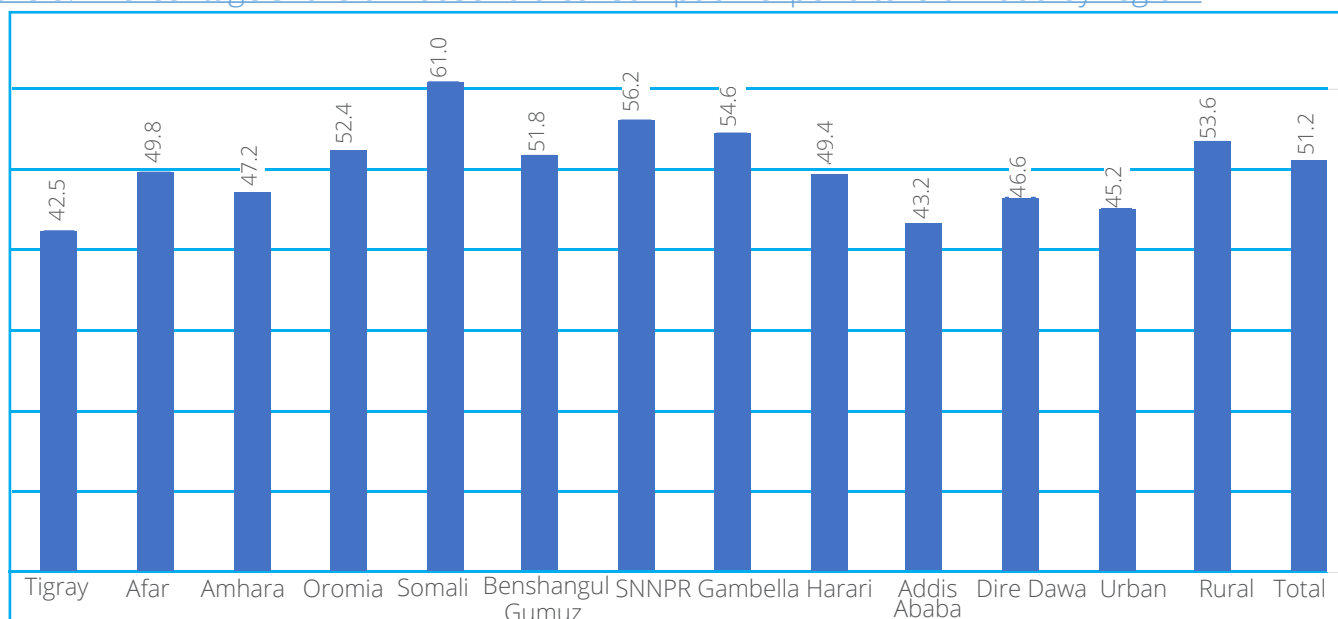


Source: Computed from 2016 HCES

The proportion of household expenditure on food in Ethiopia declined from 65 percent in 2000 to 51 percent in 2016.

Vulnerability to food insecurity is predominately a rural phenomenon with more than 32 percent of rural households spending more than 65 percent of their expenditure on food compared to 18 percent of their urban counterparts.

Figure 8: Percentage share of household consumption expenditure on food by region



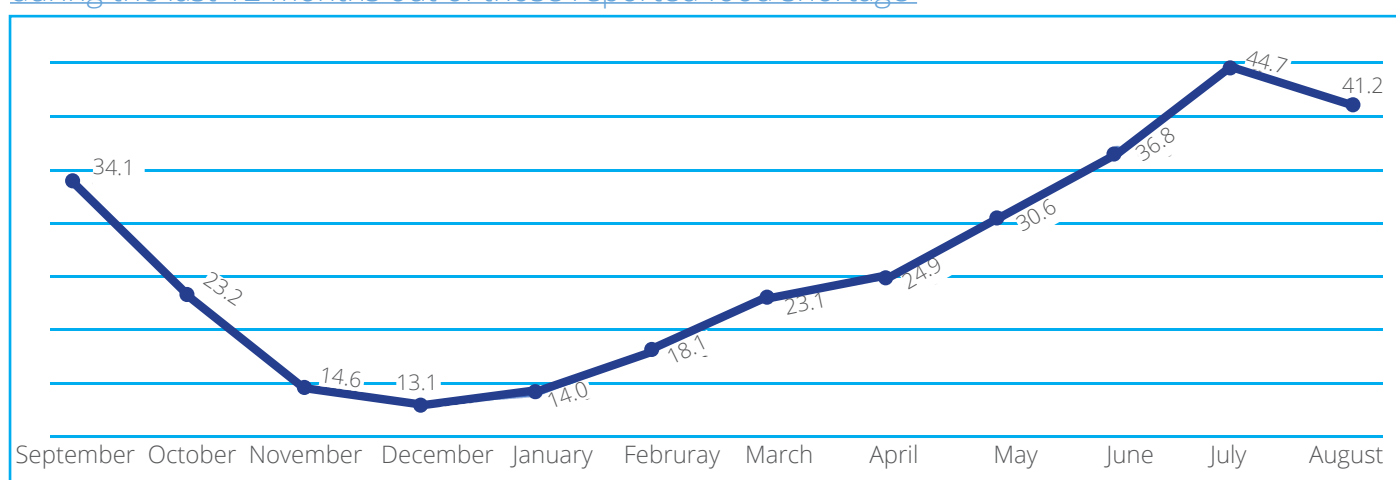
Source: Calculated from 2016 HCES

Shocks, coping strategies and perceptions of food insecurity

At national level, trend analysis shows clear seasonal patterns in food shortages with a decrease in the proportion of households who reported food shortage from August to January following the harvest season and then a steady increase from February to July following the lean season.

The highest proportion of households who reported food shortages was in July. Tigray, Afar, Amhara, Somali, Oromia, and Benishangul Gumuz regions have an almost similar seasonal pattern of food shortage with an increase in the proportion of households who reported food shortage from June to September. In SNNPR, the proportion of households reported food shortage increases from March to June and then start declining.

Figure 9: Percentage of households that reported experiencing food shortage during the last 12 months out of those reported food shortage

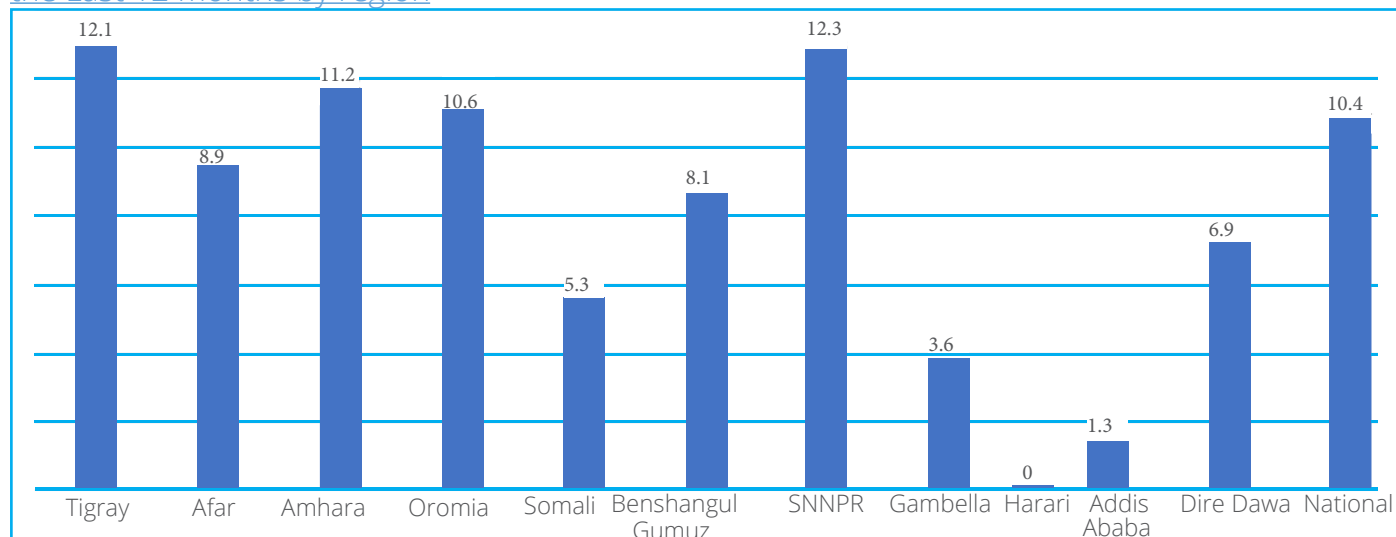


Source: Computed from 2016 WMS

Of the 10.4 percent of households that reported that they had faced a food shortage during the last 12 months, approximately 76 percent had a shortage for one to four months. One in two households (52 percent) reported that their food shortage lasted two

to three months while one in five households reported they experienced food shortage for five to eight months. Each reduced coping strategy was used by more than 80 percent of households when experiencing shocks to fend off the major shocks experienced during the reporting period.

Figure 10: Percentage of households who reported food shortage during the Last 12 months by region



Source: Computed from 2016 WMS

Nearly 28 percent (4.1 percent much worse and 23.9 percent worse) of households nationally perceived that their standard of living with respect to food has declined as compared to the year previous, while 41.7 percent perceive it remained the same.

As compared to the last five years prior to the date of interview, approximately 29 percent (10 percent much worse and 19 percent worse) household perceived their living standards with respect to food much worse and 25.6 percent perceived their living standards remained the same.

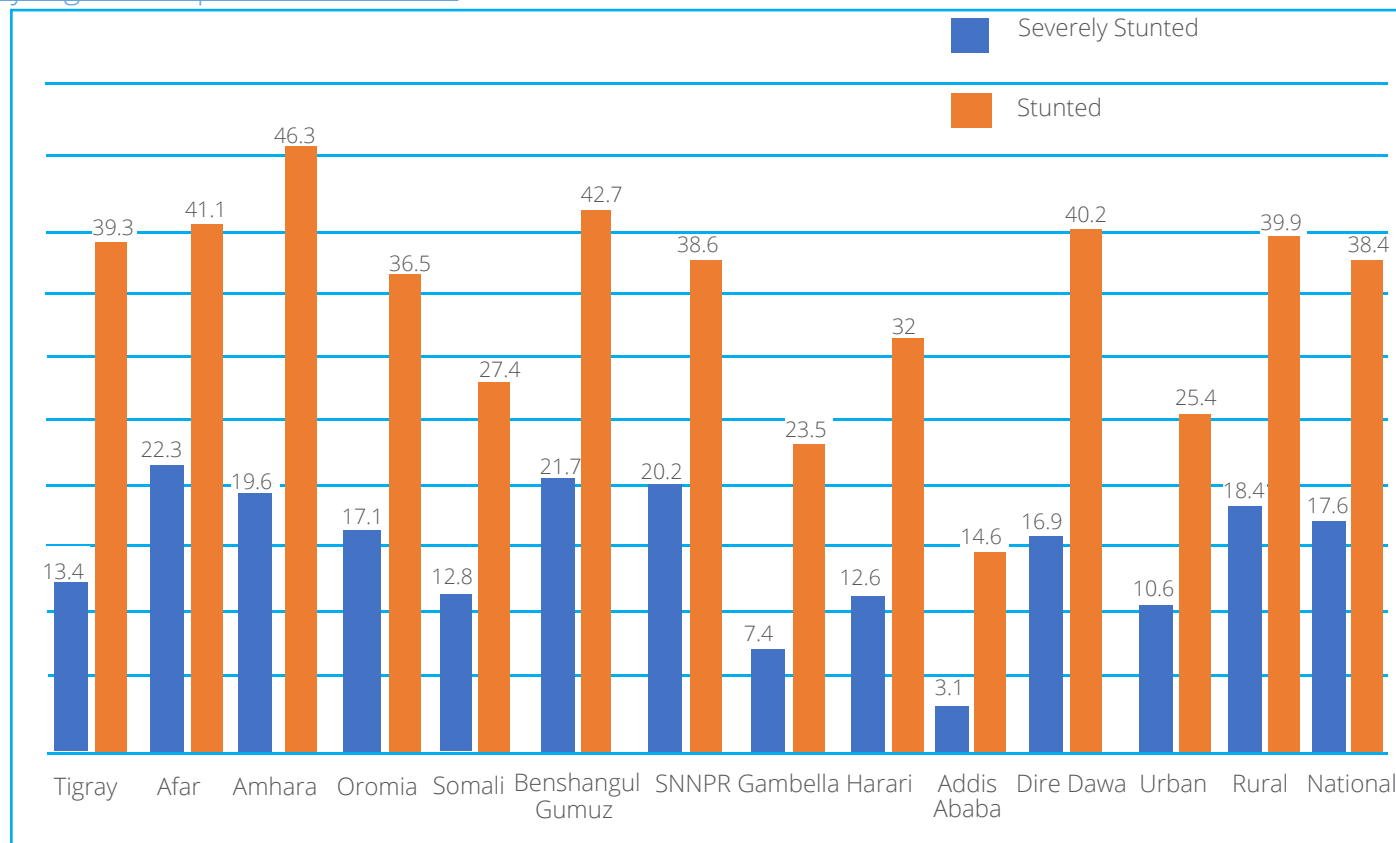


Nutritional status of Children and Women

The prevalence of stunting among children under-five years decreased from 58 percent in 2000 to 38.4 percent in 2016. Two out of every five (nearly 5.8 million) Ethiopian children under-five were stunted.

The prevalence of severe stunting is 18 percent. Rural areas experience higher rates of stunting (39.9 percent) as compared with urban areas (25.4 percent). Regionally, the highest prevalence is found in Amhara (46.3 percent), followed by Benishangul Gumuz (42.7 percent) and Afar (41.1 percent).

Figure 11: Prevalence of severe stunting (below -3 SD) and overall stunting (below -2 SD) by region and place of residence



Source: 2016 EDHS

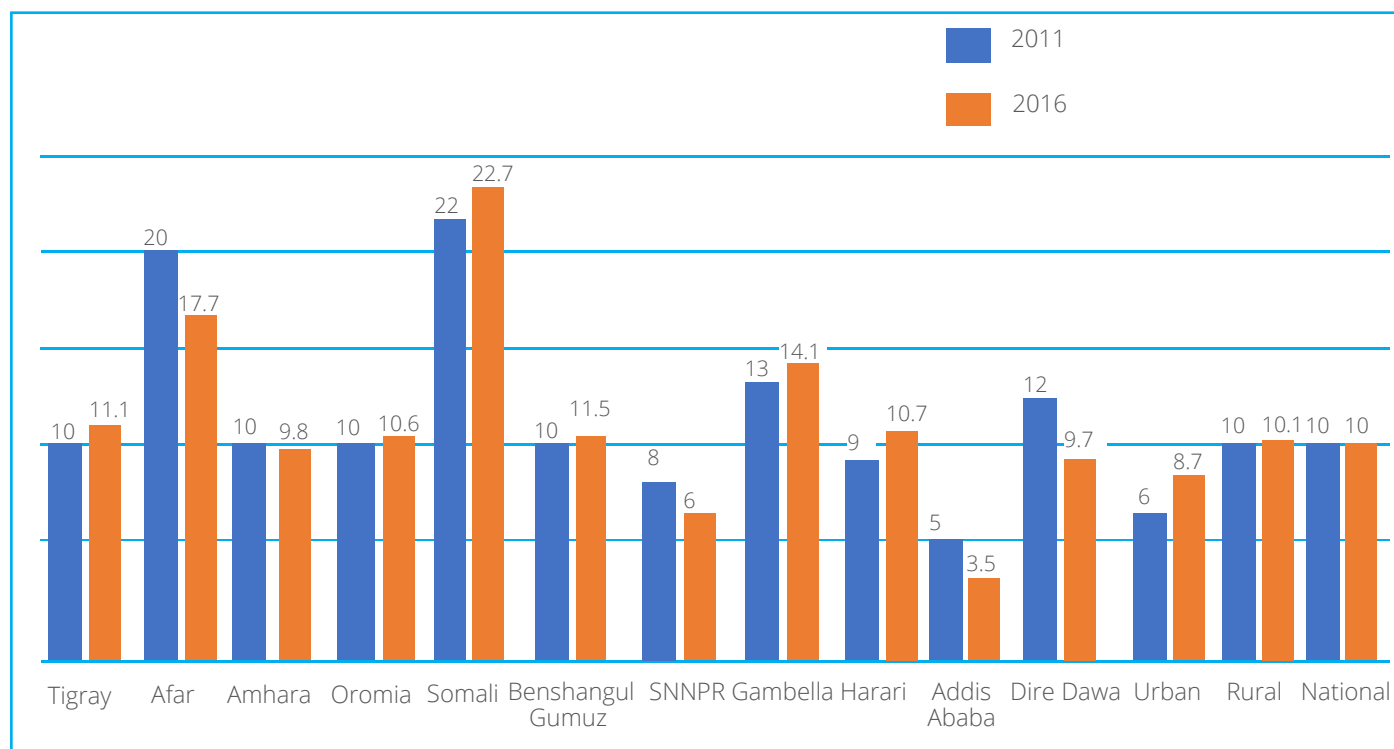


Acute malnutrition or prevalence of wasting among children under-five stands at 10 percent. This means that nearly 1.52 million under - five children are too thin for their height, an indicator of acute malnutrition.

Both Afar and Somali Regions exceed the 15 percent critical public health emergency threshold for wasting. 22.3 percent of women in the reproductive age (15-49 years) are underweight (<18.5BMI). The highest proportion of underweight in women is observed in Afar (39.1 percent), followed by Tigray (34 percent), Gambella (31.8) and

Somali (31.2 percent). Acute malnutrition is more prevalent in rural Ethiopia (10.1 percent) as compared to urban Ethiopia (8.7 percent). The prevalence of underweight among children under-five shows a consistent decline from 41 percent in 2000 to 24 percent in 2016. According to the WHO classification, this is considered as “serious”. Some 70 percent of the women fall under the “normal” BMI category, which is between 18.5 and 25 BMI, while 22.3 percent are underweight (18.5 >BMI) as a result of inadequate energy intake and/or diseases.

Figure 12: Prevalence of wasting by region and place of residence, 2011 and 2016



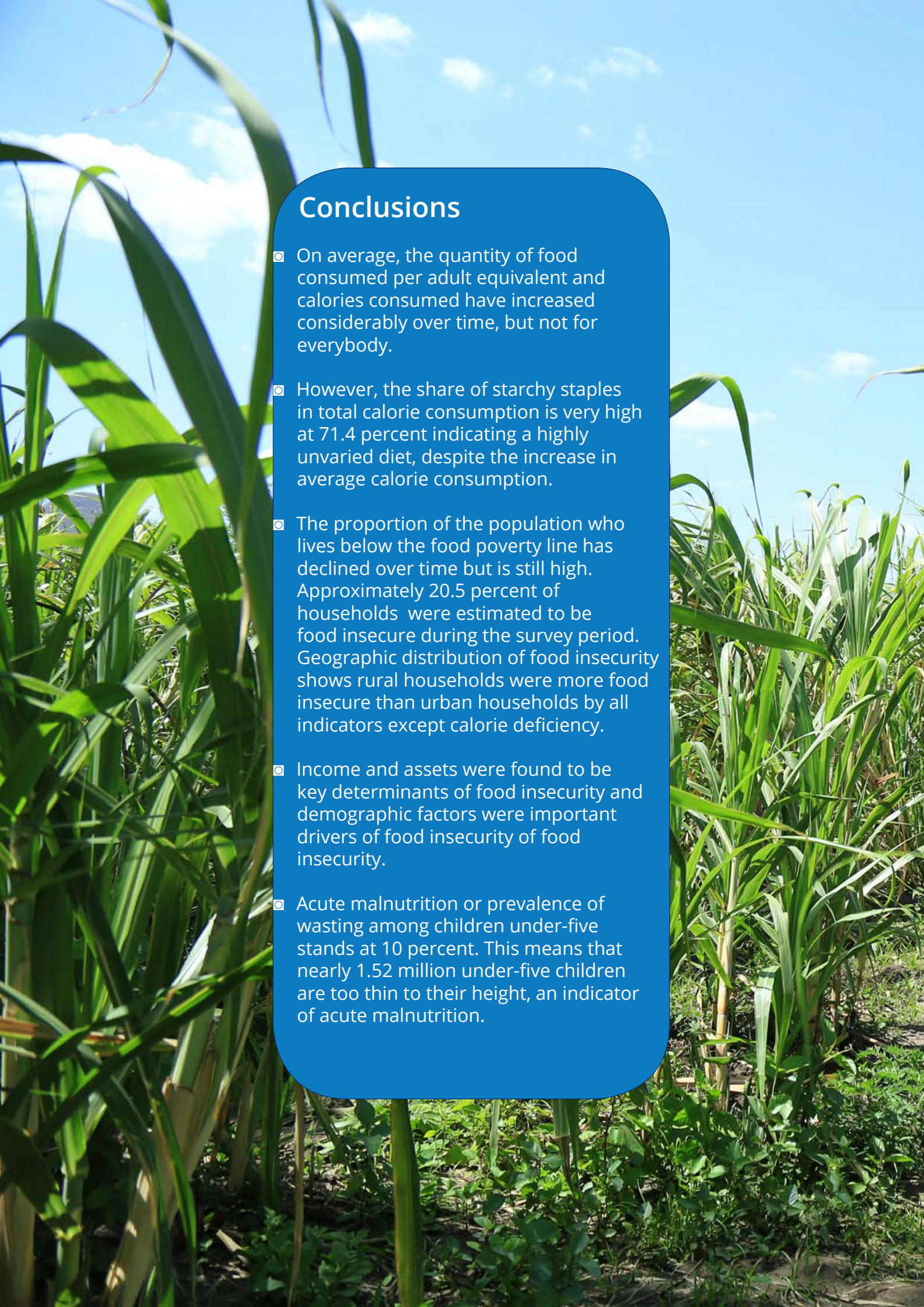
Source: 2016 EDHS



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Conclusions and Recommendations



Conclusions

- ❑ On average, the quantity of food consumed per adult equivalent and calories consumed have increased considerably over time, but not for everybody.
- ❑ However, the share of starchy staples in total calorie consumption is very high at 71.4 percent indicating a highly unvaried diet, despite the increase in average calorie consumption.
- ❑ The proportion of the population who lives below the food poverty line has declined over time but is still high. Approximately 20.5 percent of households were estimated to be food insecure during the survey period. Geographic distribution of food insecurity shows rural households were more food insecure than urban households by all indicators except calorie deficiency.
- ❑ Income and assets were found to be key determinants of food insecurity and demographic factors were important drivers of food insecurity of food insecurity.
- ❑ Acute malnutrition or prevalence of wasting among children under-five stands at 10 percent. This means that nearly 1.52 million under-five children are too thin to their height, an indicator of acute malnutrition.

Recommendations

- ◇ Promote alternative, nutrition sensitive livelihood development programs that provide more stable sources of income and develop and diversify livelihood opportunities.
 - ◇ Support productivity at the household level through efforts such as increased small-scale irrigation and improved storage capacity and food processing technology, applying specific approaches which preserve the micronutrients in the final product.
 - ◇ Increase nutrition sensitive safety nets and pro-poor growth initiatives tailored to specific needs in urban and rural areas, to promote income generation and asset acquisition.
 - ◇ Promote activities such as bee-keeping, sheep and goat fattening, poultry, vegetable and fruit production and consumption, raising and planting tree seedlings as income generating opportunities for smallholder farmers.
 - ◇ Advocate for better child nutrition, encouraging a higher diversity of food items consumed and a higher frequency of meals.
 - ◇ Efforts to increase the nutritional content of food items consumed, through nutrition education and increased accessibility of food rich in nutrients, with a focus on food rich in proteins and iron. This may include expansion of varieties of bio-fortified nutrient-rich crops including high-iron beans, quality protein maize, etc.
 - ◇ Ensure that non-nutrition specific programmes such as livelihoods, climate change, school feeding, and most of all social protection include a nutrition-sensitive component
- ◇ Improve rural infrastructure development to increase the accessibility of services such as markets that promote the production and commercialization of valuable foods.
 - ◇ Design and expand social safety net, index insurances, mandatory saving and establish social scheme through co-funding
 - ◇ Continue to scale up and implement seasonal interventions to help households experiencing seasonal food insecurity and ensure that transfer programmes take seasonal peaks of food insecurity into account.

Acronyms and Abbreviation

BMI:	Body Mass Index
CARI:	Consolidated Approach for Reporting on Food Security Indicators
CFSVA:	Comprehensive Food Security and Vulnerability Analysis
CSA:	Central Statistical Agency
DDS:	Dietary Diversity Score
DHS:	Demographic and Health Survey
FCS:	Food Consumption Score
FEC:	Food Energy Consumption
HCES:	Household Consumption Expenditure Survey
Kcal:	Kilocalorie
SNNPR:	Southern Nations, Nationalities, and People Region
WFP:	World Food Program
WHO:	World Health Organization
WMS:	Welfare Monitoring Survey

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