MALAWI

STRATEGY SUPPORT PROGRAM

IFPRI Key Facts Series: Food and Nutrition Security[1] April 2022

This is a second Food and Nutrition Key Facts sheet in a series of Key Facts sheets that IFPRI is producing based on Integrated Household Surveys (IHS). The purpose of the series is to present data relevant to key policy issues on agriculture, food systems, and development topics in Malawi. Other Key Facts Sheets are available on our website at massp.ifpri.info.

Highlights

- While the proportion of households with very low food security status increased between 2010/11 and 2019/20, the proportion of households with high food security status declined in the same period.
- The most common reason for inadequate food consumption in 2010/11 and 2019/20 was lack of farm inputs. In 2016/17 drought was the most common reason due to the drought in the preceding farming season.
- There was a temporary decrease in food security and dietary diversity in 2016/17, which was also likely due to the drought.
- The most common food insecurity coping mechanism in all survey years was reliance on less preferred or less expensive foods. Overall, households had to resort to negative coping strategies more often in 2016/17 than in 2010/11 and 2019/20.
- Although nearly three quarters of households (70%) had an acceptable food consumption status as measured by the Food Consumption Score, most households failed to reach the recommended intake of energy and most micronutrients in 2019/20.
- The prevalence of stunting among children between 6 and 59 months of age remains high in Malawi at 26.7% in 2019/20.

Background to the Integrated Household Surveys (IHS)

This analysis draws from the third, fourth and fifth Integrated Household Surveys (IHS3, IHS4 and IHS5), conducted by the Malawi National Statistical Office (NSO). The IHS3 was conducted between March 2010 and March 2011, covering a total of 12,271 households, IHS4 was conducted between April 2016 and April 2017, covering 12,447 households while IHS5 was conducted between April 2019 and April 2020, covering 12,288 households. All surveys used four questionnaires: (1) household, (2) agriculture, (3) fisheries, and (4) community. Once appropriately weighted, the IHS surveys are representative of national, district, and urban/rural levels. The analysis in this sheet uses the survey sampling weights provided by the NSO, hence all values presented in this Key Facts series are representative of the population of Malawi.

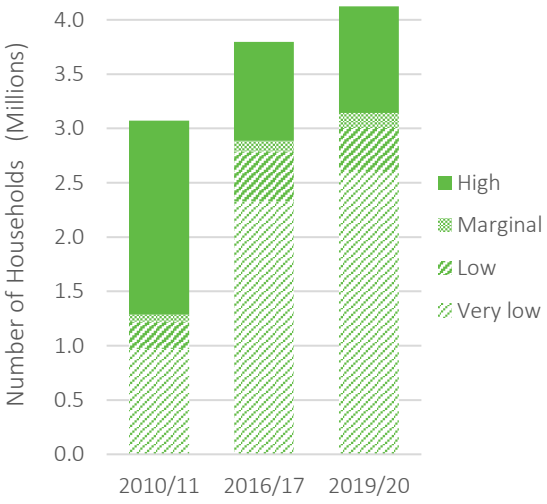
Food Security

Food security is the condition in which all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life. In this section, we focus on household food security status, subjective assessment of food adequacy, causes of food insufficiency and food insecurity coping mechanisms.

Household Food Security Status

To determine their food security status, households were asked if in the past seven days, they worried about not having enough food, altered the quality, quantity, variety, or frequency of food consumed and if they relied on food assistance. Over the survey years, the number of households has been increasing together with the proportion of households with very low food security status - these are households that reported concerns about accessing enough food, reduced quality, variety, quantity and frequency of food consumed and depended on

Figure 1. Household Food Security Status in Malawi



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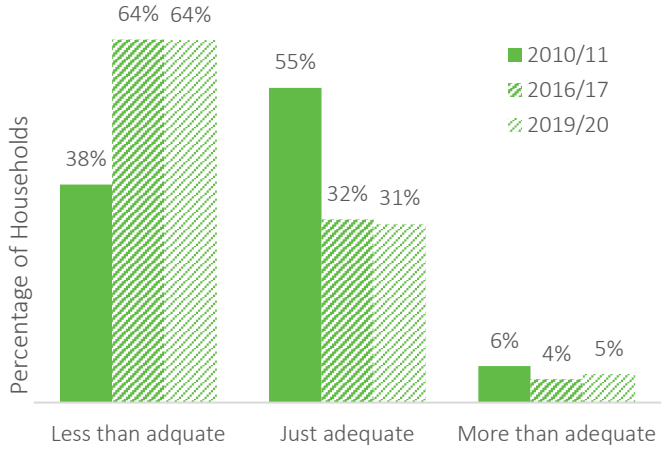
food assistance (Figure 1). There is also an increase in the proportion of households with marginal food security status (households that only had concerns about adequacy of food supply but did not alter food intake). On the other hand, the number of households who had no concerns about food sufficiency (high food security status) declined over the survey years. The sharp decline being between 2010/11 and 2016/17 can be attributed to a drought in the 2015/16 farming season (see Figure 3). In the same year, the share of households in the low food security category (households that were concerned about not having access to enough food and only reduced the quality and the variety of the food consumed) was also the highest. The fact that this high share of food insecure households persisted until 2019/20 however suggests an overall deterioration of Malawi's food systems

Household Food Adequacy

Figure 2. Subjective assessment of food adequacy



Respondents' subjective assessment of their own households' food security paints a similar picture. In 2016/17 and 2019/20, almost two thirds of households (64%) reported that their food consumption was "less than adequate" to meet minimum consumption needs in the month preceding the interview, up from 38 % in 2010/11 (Figure 2). More than half of households (55%) reported having just adequate food consumption in 2010/11. However, this declined to around one third in the last two survey years. Fewer than 6.5% of households reported more than adequate food consumption at any point. In addition, over half of households reported worrying about not having enough food to eat in the past 7 days (59%) and in the past 12 months (66%) in 2019/20.

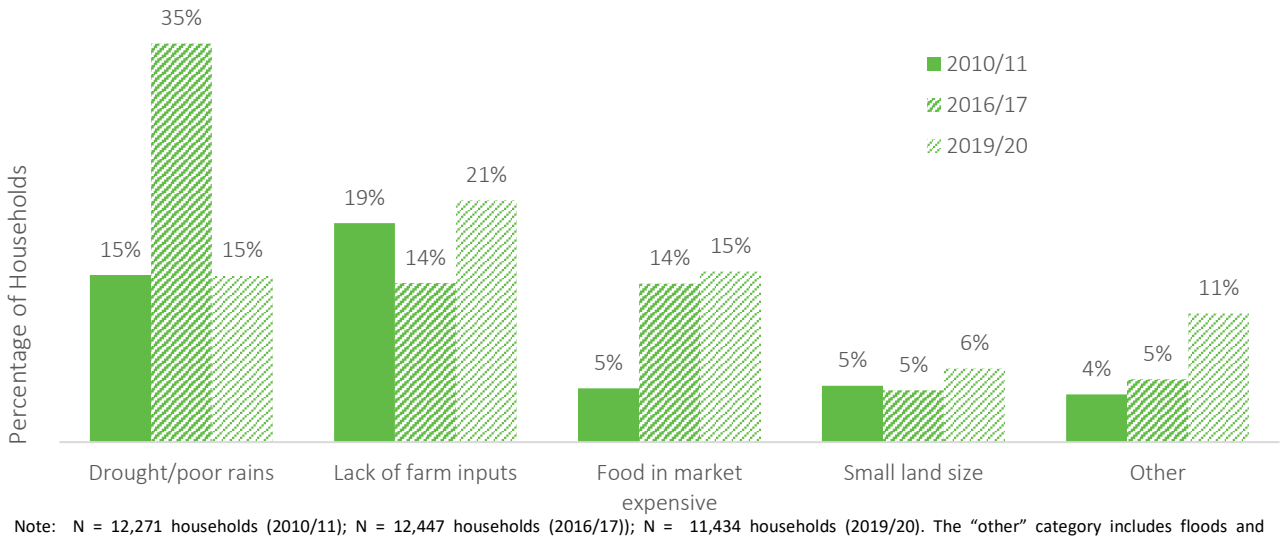
Causes of Food Insecurity

Stability, a dimension of food security, has a temporal component that considers inadequate availability of access to and utilization of food on a periodic basis. Adverse weather conditions, political instability, or economic factors (i.e., unemployment or rising food prices) may have an impact on a household's food security status.

In 2010/11, 48 % of households reported facing a situation where they did not have enough food in the past 12 months. Many more households reported facing a similar situation in 2016/17 (73%) and 2019/20 (68%).

The households that had reported not having enough food in the past 12 months were further asked to list the main causes of their food situation, in order of importance (Figure 3). Drought was the leading cause of household food insufficiency in 2016/17. This is expected since there was a severe drought in the preceding farming season.

Figure 3. Self-reported primary cause of insufficient food to feed household in the last 12 months



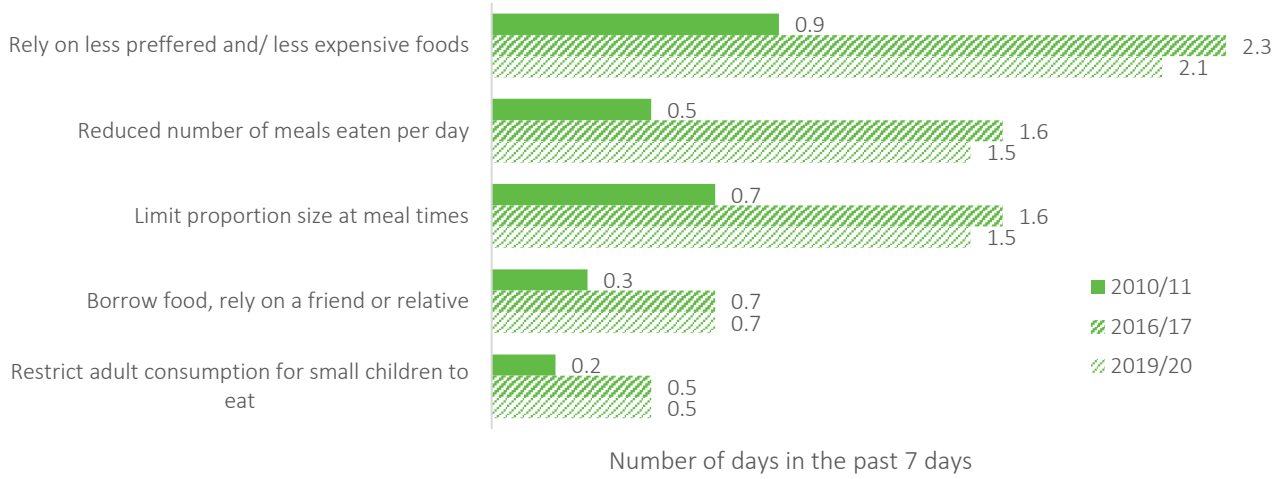
Note: N = 12,271 households (2010/11); N = 12,447 households (2016/17)); N = 11,434 households (2019/20). The "other" category includes floods and waterlogging, pest damage, no food being available in the market, and transport costs to the market.

In 2010/11 and 2019/20, the highest contributor to household food insecurity was lack of farm inputs. There has been an increase in the proportion of households facing food insufficiency due to expensive food in the market. This reflects the impact of food price inflation on household food security.

Food Insecurity Coping Mechanisms

Households facing food insecurity utilize different coping strategies to mitigate the impact of food insufficiency. The average number of days households engaged in various food insecurity coping mechanisms increased between 2010/11 and 2016/17 but slightly declined in 2019/20 (Figure 4). The most common coping mechanism was switching to less preferred or less expensive foods. In 2019/20, 62% of households used this food insecurity coping strategy. Those households who resorted to less preferred or less expensive foods did so on average for 2 days a week. When faced with food insufficiency, households were least likely to restrict adult consumption to ensure that small children can eat. Only 21% of households used this strategy in 2019/20. Those who restricted adult consumption to leave more food for their children did so once a fortnight, on average.

Figure 4. Average number of days households engaged in different food insecurity coping mechanisms in past week

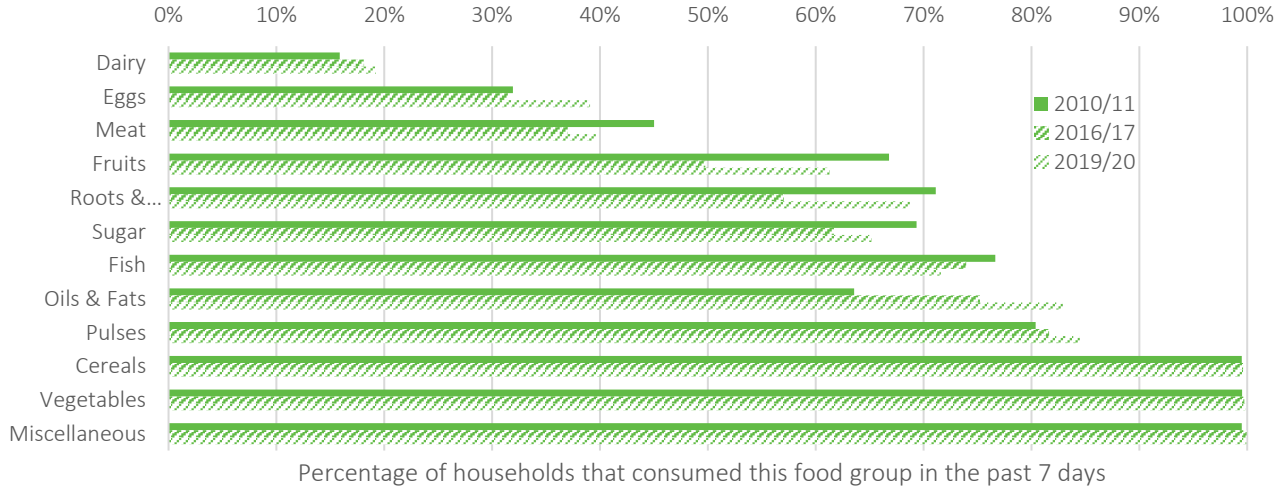


Nutrition Security

Nutrition security requires secure access to an appropriately nutritious diet, comprising all essential nutrients and water, coupled with a sanitary environment and adequate health services and care to ensure a healthy and active life for all household members. Food security is therefore a necessary but not sufficient condition of nutrition security.

Food diversity, reflected in a household's ability to consume different food groups, is a necessary precondition of nutrition security. Figure 5 shows the percentage of households that ate at least one item in a food group in the past seven days. The consumption of cereals, vegetables, and miscellaneous foods (which include salt) remained stable and nearly universal over the years. The trends were mixed for other food groups. The consumption of pulses, oils and fats, eggs, and dairy products increased over time. Consumption of fish, sugar, roots and vegetables, fruits, and meat declined between 2010/11 and 2019/20 (with some deeper dips in 2016/17, which were likely due to unfavorable weather conditions during the preceding farming season). It is therefore not immediately clear how overall food diversity changed over time, especially with regards to sources of protein.

Figure 5. Prevalence of household consumption of food groups in the past week



Household Dietary Diversity and Food Consumption Scores

Two composite indices constructed from information on food groups can be used to better gauge the trends in dietary diversity: the household dietary diversity score (HDDS) and the food consumption score (FCS).

Table 1. Average Household Dietary Diversity Scores (HDDS) and Food Consumption Scores (FCS)

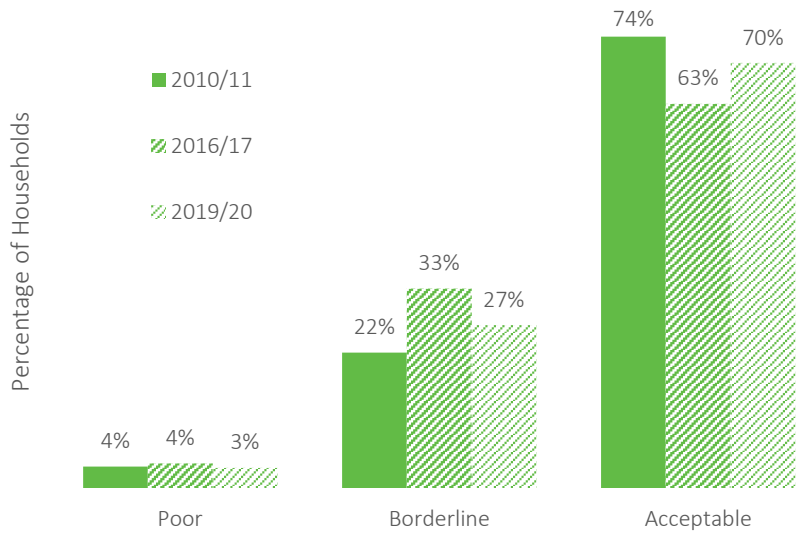
	2010/11		2016/17		2019/20	
	HDDS	FCS	HDDS	FCS	HDDS	FCS
Malawi	8.2	48.0	7.8	43.6	8.3	45.7
Region						
North	8.4	48.2	8.3	47.7	9.2	53.1
Central	8.2	47.8	7.9	43.0	8.1	43.1
South	8.1	48.2	7.7	43.5	8.3	46.0
Sex of HH head						
Male	8.4	49.3	8.1	45.0	8.6	47.4
Female	7.6	44.0	7.3	40.2	7.7	41.8
Age of HH head						
<18	8.7	50.2	7.9	41.4	7.5	41.6
18-40	8.5	49.2	8.1	44.4	8.5	46.5
40-60	8.2	48.3	7.9	44.9	8.3	45.9
>60	7.3	43.4	7.0	39.0	7.7	42.9
Observations	12,271		12,447		11,434	

Note: HDDS are calculated using 7-day dietary recall data and include foods eaten outside the home (prepared by vendors). Range: 0-12. FCS is calculated using a food frequency questionnaire. Range: 0-112.

The HDDS is calculated based on individual food items the household reports having eaten in the past 7 days, aggregated into a total number out of 12 food groups. The 12 food groups used in constructing the HDDS are the same as in Figure 5. By only considering whether a household consumed any food from each of the groups, the HDDS is unable to take into account whether amounts consumed were sufficient. The FCS partially overcomes this limitation by considering the number of days on which food from each of 8 groups (staples; pulses; vegetables; fruits; meat, fish, and animal products; dairy; sugar; and oils and fats) was consumed and weighing the number by the nutritional importance of the group.

Both indices suggest that overall dietary diversity declined in Malawi between 2010/11 and 2016/17 (likely due to the drought during the 2015/16 farming season), before rebounding again by 2019/20, although not to its original level as measured by the more comprehensive FCS (Table 1). This is illustrated in Figure 6, where households' food consumption status is classified as poor (FCS < 21), borderline (21 ≤ FCS ≤ 35) or acceptable (FCS > 35). Both indices show that dietary diversity was higher in the Northern region than in the rest of the country. Households headed by women, children under the age of 18, and the elderly over the age of 60 had lower dietary diversity than their counterparts headed by men and adults in the productive age (Table 1).

Figure 6. Households Food Consumption Status



Household Micronutrient Adequacy

Table 2 presents summary statistics for nutrient availability indicators in 2019/20. These include total daily per capita calorie availability which represents how much energy was on average available to each household member and daily per capita availability of micronutrients; calcium, folate, iron, protein, vitamin A, vitamin B12, vitamin C and zinc. We report both mean values (skewed upwards by high consumption in a few wealthy households) and median values, which are representative of the typical household. The table also presents the average minimum recommended nutrient intake (RNI) and the percentage of households that reached the RNI in the 2019/20.

An average member of a typical (median) household consumed 1,798 calories per day, 380 kcal (17%) less than recommended. Only a third of households consumed at least their recommended daily calorie intake. The only micronutrients which are on average consumed in sufficient amounts are Protein, Vitamin A and Vitamin C. Even in their

case, only 69%, 62% and 56% of households respectively consumed at least the recommended amounts. An average member of a typical household consumed more than the required Protein (57.6/36.0), Vitamin A (477.4/272.1) and Vitamin C (67.7/39.8), and more than half of households reached the recommended nutrient requirement for these Vitamins. Calcium and Vitamin B12 were the least sufficiently consumed micronutrients, with only 4.2 % and 6.1 % of households respectively consuming at least the recommended amounts. The detailed nutrient consumption data show that despite being fairly diverse as measured by the FCS, the diets of most Malawians lack in almost all essential nutrients.

Table 2. Calorie and Micronutrient Consumption in 2019/20

	Daily nutrient availability per capita			Households consuming RNI (%)
	Actual (median)	Actual (mean)	Recommended (RNI)	
Calorie availability (kcal)	1798.4	2044.6	2178.5	36.8
Protein availability (mg)	47.2	57.6	36.0	69.4
Calcium availability (mg)	172.9	246.2	747.7	4.2
Iron availability (mg)	14.5	16.8	15.6	45.3
Zinc availability (mg)	8	9.3	11.9	23.8
Vitamin A availability (mg RAE)	349.8	477.4	272.1	61.9
Folate availability (mg DFE)	192.8	238.3	343.4	17.5
Vitamin B12 availability (µg)	0.4	0.7	2.1	6.1
Vitamin C availability (µg)	45.6	67.7	39.8	56.4

Note: N=11,434. Recommended nutrient intake (RNI) was calculated using sex and age specific nutritional requirements. RAE = retinol activity equivalent. DFE = dietary folate equivalent.

Prevalence of Child Malnutrition

The IHS collects data on age, weight and height/length of children aged 0 to 59 months for purposes of evaluating their nutritional status. This data is used to calculate prevalence of stunting, wasting and whether infants and young children are underweight or overweight.

Table 3. Prevalence of child malnutrition (6 to 59 months)

	Percentage of children		
	2010/11	2016/17	2019/20
Stunting	31.3	28.9	35.6
Severe stunting	14.3	1.8	13.8
Wasting	3.5	6.1	3.8
Severe wasting	1.0	1.6	1.2
Overweight	12.0	4.7	6.5

Note: Calculations based on 2006 WHO child growth standards. Biologically implausible z-scores have been excluded. Children whose height-for-age Z-score is less than two standard deviations (-2 SD) below the median of the reference population are stunted; those who are three standard deviations (-3 SD) below are considered severely stunted. The same cut-off points for weight-for-height are used for wasting and severe wasting. A child is overweight if weight-for-height Z-score is equal to or greater than 2 standard deviations above the reference population.

A child is considered stunted if they are too short for their age (a measure of chronic malnutrition) and considered wasted if they are too light for their age (a measure of acute malnutrition). The poor nutrient intake of most households is reflected in a consistently high prevalence of stunting in children between 6 and 59 months of age. Roughly 1 in 3 were stunted (too short of their age) throughout the observed years, and 1 in 7 were severely stunted in both 2010/11 and 2019/20. The apparent sharp dip in severe stunting in 2016/17 is likely due to anthropometric data accuracy issues in IHS4 rather than a reflection of reality, considering that (1) there is a rebound of the rate in 2019/20, (2) the Demographic and Health Survey conducted in 2015/16 found a severe stunting rate of 11%, which is similar to the IHS rate from 2010/11 and 2019/20, and (3) as a cumulative measure, the rate can only change slowly over time.

3.5% of children were wasted (too light for their height) in 2010/11, suggesting that they were acutely malnourished. This rate nearly doubled to 6.1% in 2016/17 (probably because of the drought in the preceding farming season) before declining again to 3.8%. Conversely, the share of overweight children (those too heavy for their height) declined from 12.0% in 2010/11 to 4.7% in 2016/17 before rebounding to 6.5% in 2019/20.