

FOOD CONSUMPTION

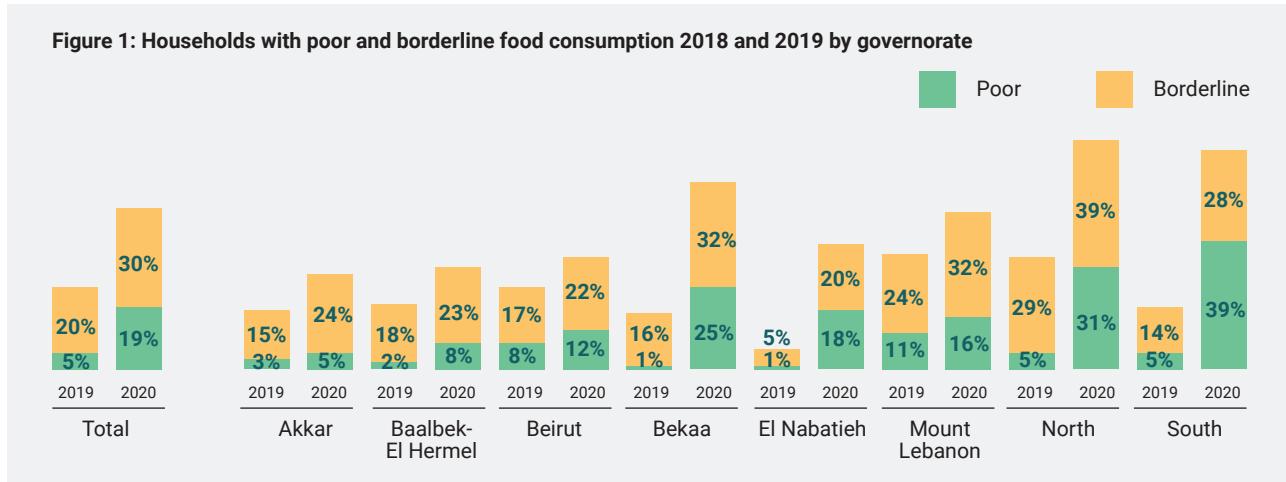
Food consumption is the cornerstone of food security analysis. The indicators in this chapter captured the dimensions related to food consumption which were the basis for classifying households according to their food security status. Quantity of food was measured by the number of meals consumed, while quality and diversity were captured through the Food Consumption Score (FCS) and Household Dietary Diversity Score (HDDS).¹

KEY FINDINGS

- Almost half of the Syrian refugees were with unacceptable food consumption (poor: 19.5%, borderline: 30.2%). The households with inadequate diet have doubled compared to the previous year (25% in 2019 vs. 50% in 2020).
- The dietary diversity decreased in 2020 compared to 2019 with the Syrian households consuming less variety of food. 23% of households consumed 6.5 or more food groups per day in 2019, compared to 33% in 2019. A drastic decrease was observed in the Vitamin A daily consumption (48% in 2019 vs. 32.4% in 2020), as well as protein consumption which dropped by 25% (from 67% in 2019 to 42% in 2020) while iron daily intake remained negligible. This increase in improper diet indicated a risk of micronutrient deficiency.
- Men-headed households were consuming a more diverse diet per day than women-headed households, where 34% of men-headed households consumed Vitamin A on a daily basis compared to 26% for their female counterparts. Similar difference was noticed in the protein's daily consumption where men-headed households were consuming more proteins at 43% compared to 36% for their women counterparts.
- Poor food consumption has drastically increased among governorates and districts. In terms of governorates, food consumption was the poorest in the South (39% poor food consumption) followed by the North (31%). As for districts, almost 58% of Syrian refugees residing in Saida had poor food Consumption followed by Hasbayya at 39%.
- The decrease in the number of meals followed the trend of the food consumption between 2019 and 2020. The number of meals consumed by adults dropped from 2.2 in 2019 to 1.9 meals in 2020. Similarly, the number of meals consumed by children dropped from 2.8 in 2019 to 2.5 in 2020.

¹Check Annex 13 for calculation and definition of Food Consumption Score

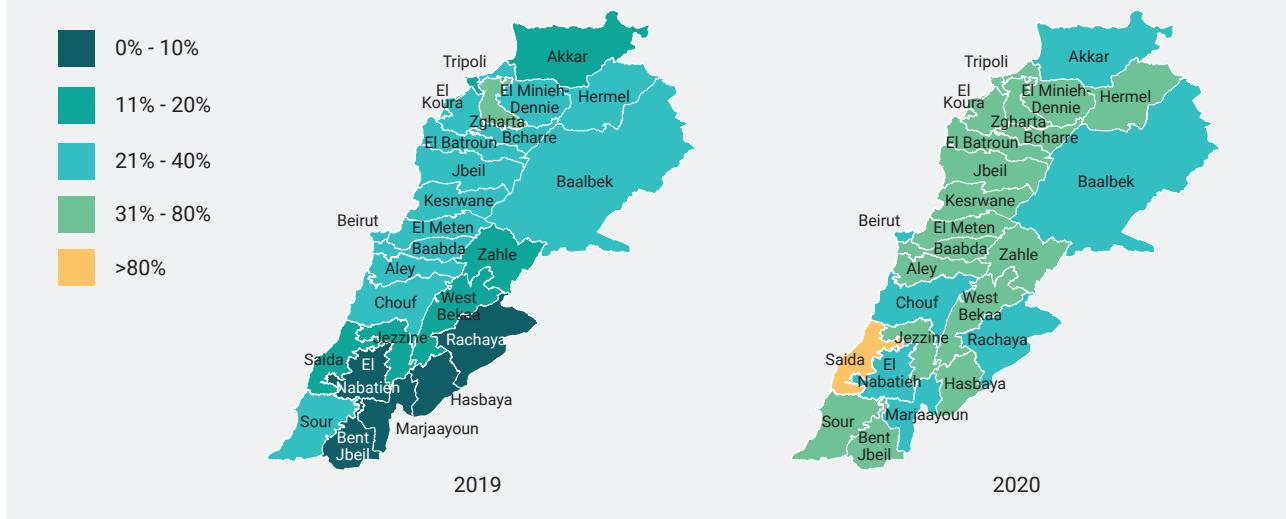
Figure 1: Households with poor and borderline food consumption 2018 and 2019 by governorate



The food consumption levels of Syrian refugees have drastically deteriorated. In 2020, households with poor consumption level has substantially increased to 19.5%, around four times the 2019 reported figure (5%). Similarly, the households with borderline consumption level has increased by 1.5 times from last year (30% in 2020 vs. 20% in 2019).

Poor and borderline food consumption has increased in all households across all governorates in 2020 compared to 2019, with the highest inadequate diet (poor and borderline food consumption) reported in the North, South and Bekaa at 70%, 67% and 57% respectively. In terms of districts, the highest inadequate diets were reported in Saida (84%), Hasbaya (73%), Tripoli and Bcharre (72%).

Figure 2: Percentage of households with poor and borderline food consumption



NUMBER OF MEALS

Number of meals consumed by adults has dropped from 2.2 meals per day in 2019 to 1.9 meals per day in 2020. This figure, however, varied across the governorates. In fact, households across all governorates have reported consuming less meals in 2020 except in Baalbek-Hermel where there was a slight increase of 0.2; nevertheless, the largest drop was reported in Akkar and the South governorates (0.6 meal per day). Similar to 2019, households living in non-permanent shelters were consuming more meals (2.2 meals/day) than those living in non-residential or residential shelters (1.8 meals/day each).

Figure 3: Number of meals consumed by refugees per day

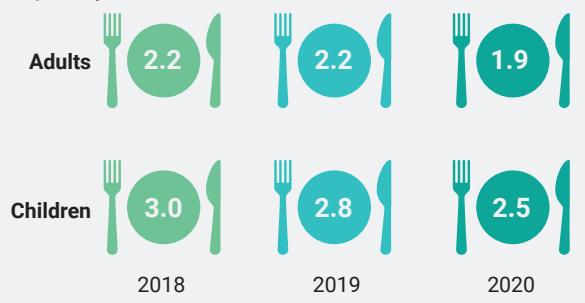
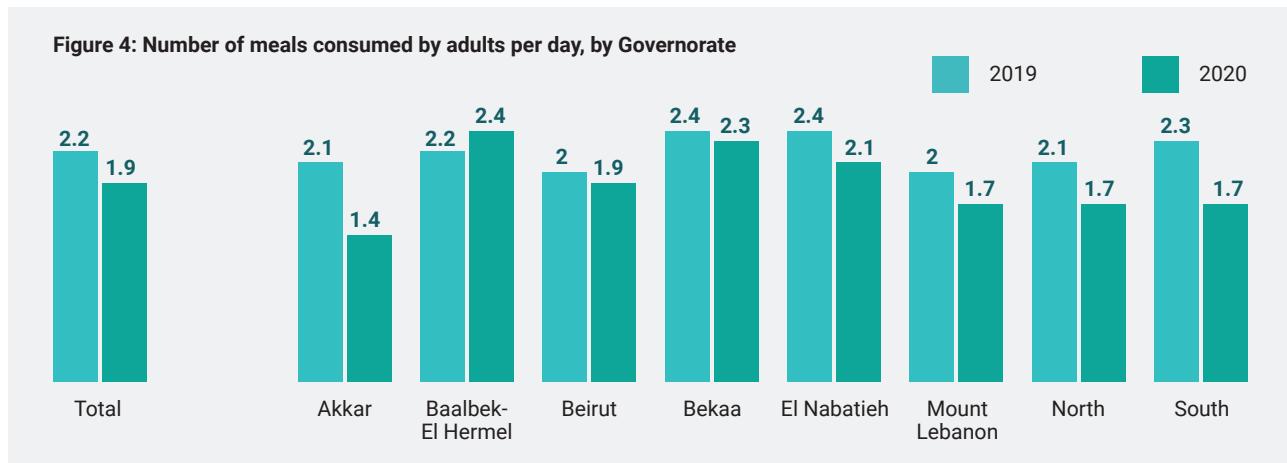
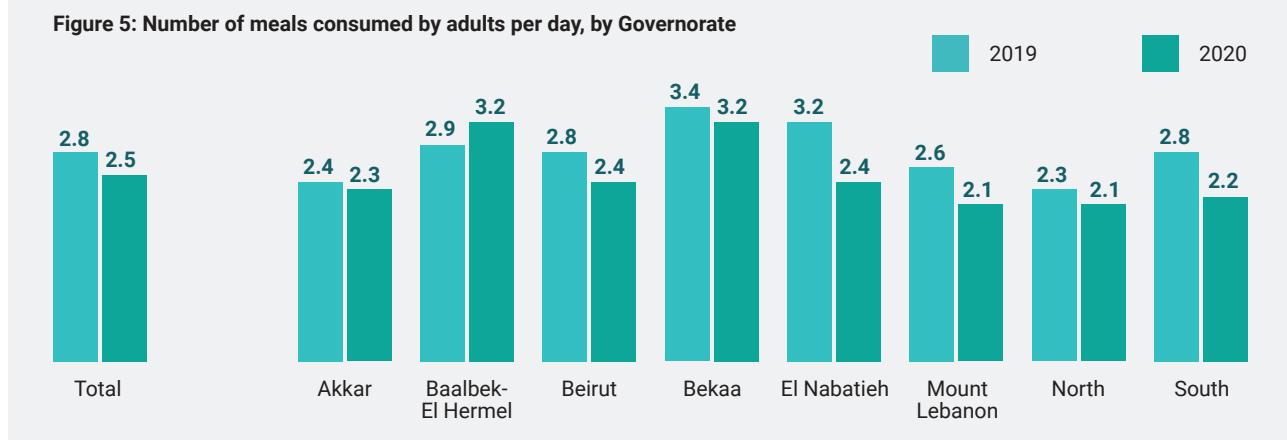


Figure 4: Number of meals consumed by adults per day, by Governorate

In 2020, the number of meals consumed by children declined from 2.8 in 2019 to 2.5 in 2020. Similar to adults, all households across all governorates witnessed a decrease in the number of meals consumed by children per day except in Baalbek-Hermel (slight increase of 0.3). The largest drop was reported in El Nabatieh (2.1 in 2020 vs. 2.4

in 2019), whereas the governorates with the least number of meals consumed by children per day were Mount and North Lebanon at 2.1 meals. Similar to 2019, children living in non-permanent shelters were consuming 3.1 meals per day, significantly higher than those living in non-residential (2.2 meals) and residential shelters (2.3 meals).

Figure 5: Number of meals consumed by adults per day, by Governorate

DIETARY DIVERSITY

The dietary diversity has decreased between 2019 and 2020. The percentage of households consuming 6.5 or more food groups on a daily basis, has decreased by 10% (23% in 2020 vs. 33% in 2019). On a weekly basis, the percentage of households consuming 9 or more food groups has dropped substantially from 74% in 2019 to 44% in 2020. Furthermore, the share of households with poor dietary diversity has approximately tripled on a daily basis from 8% in 2019 to 21% in 2020 (Table 3). From a gender

lens, 24.5% of female-headed households had a poor dietary diversity, consuming less than 4.5 food groups per day, in comparison to 20.7% of male-headed households.

Therefore, opposite to the past two years, poor dietary intake has increased fourfold in comparison to the previous year (16% in 2020 vs. 4% in 2019); similarly, less households were consuming more diversified food.

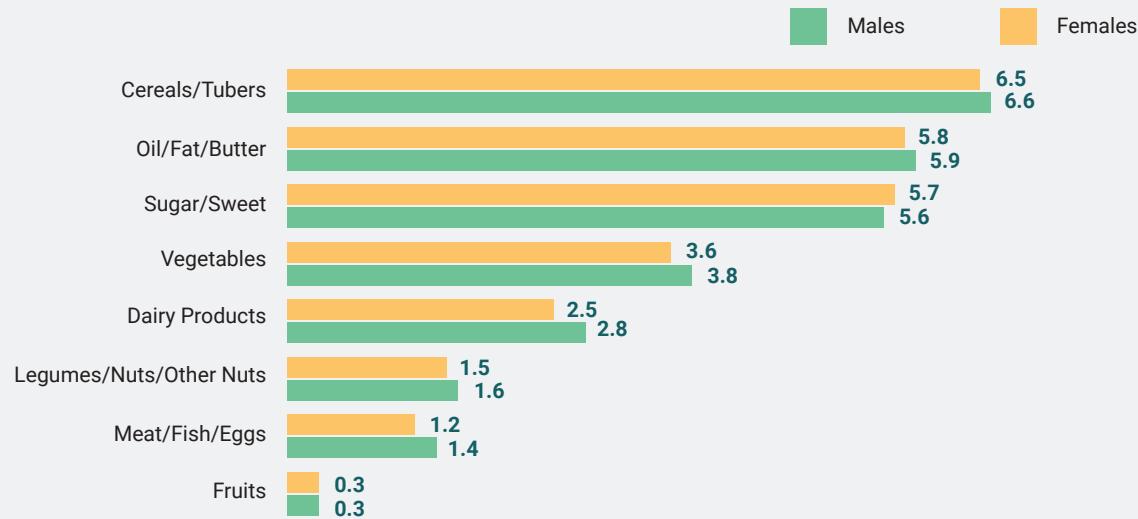
Table 1: HWDD and HDADD groups and mean in 2018 and 2019

	Household Daily Average Diet Diversity (HDADD) Mean	HDADD Category			Household Weekly Diet Diversity (HWDD) Mean	HWDD Category		
		<4.5 food groups	4.5-6.4 food groups	>=6.5 food groups		<= 6 food groups	7-8 food groups	>= 9 food groups
2019	6.1	8%	60%	33%	9.4	4%	21%	74%
2018	5.4	21%	56%	23%	8.1	16%	40%	44%

Opposite to 2019, the share of households with low dietary diversity consuming less than 4.5 food groups per day in 2020 increased in all governorates compared to 2019 with the largest increase reported in the South governorate. Households with the highest percentage of low dietary diversity in 2019 were found in the South (53%) and the North (32%), followed by Mount Lebanon (30%). The highest percentages of households with a high dietary diversity, i.e. consuming 6.5 or more food groups, were in El Nabatieh (40%).

As shown in figure 6, the most consumed food group by households was cereals/ tubers followed by oil/ fat/ butter then sugar/sweets. The least consumed food groups were meat/fish/eggs followed by fruits. Male-headed households consumed more dairy products (2.8) including fresh/sour milk, yogurt, Lebneh and cheese – than female-headed households (2.5). Similarly, meat/fish/eggs were consumed more by male-headed households than their female counterparts (1.4 vs. 1.2). Additionally, vegetables were consumed more by male than female headed households (3.8 vs. 3.6). This might indicate that female-headed households had lower dietary diversity than their male counterparts.

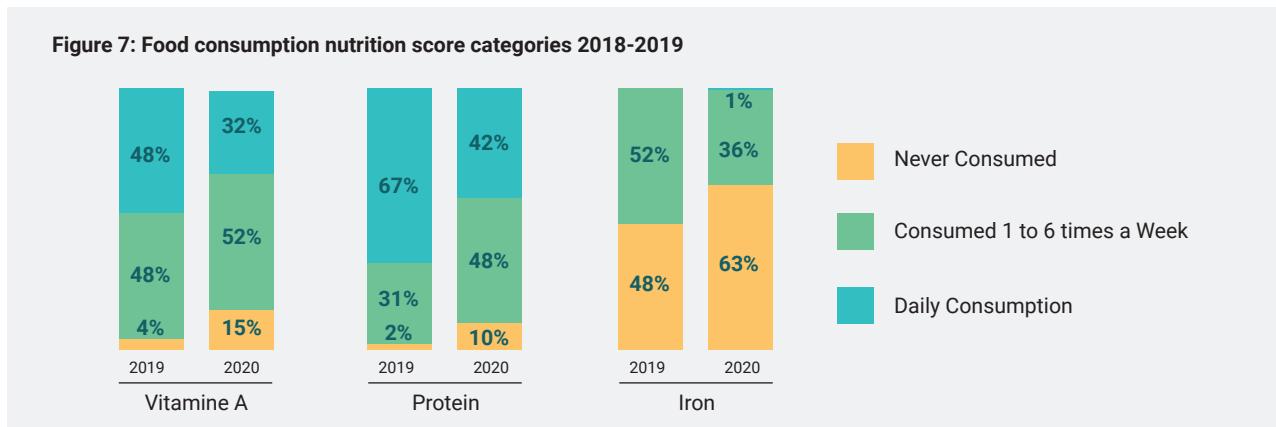
Figure 6: Mean of the food groups by gender of the head of household



FOOD CONSUMPTION SCORE NUTRITION

In terms of key nutrients intake, there was a substantial decline on all aspects, noting that the share of households who never consumed any of the three key nutrients (Vitamin A, Protein, and heme iron) has increased between 2019 and 2020. Moreover, a significant drop of 16% was observed in the Vitamin A daily consumption, from 48% in 2019 to 32% in 2020. Protein daily consumption has also declined by 25% (67% in 2019 vs. 42% in 2020) while iron daily intake remained negligible. The percentage of households who have never consumed heme iron increased from 48% in 2019 to 63.44% in 2020. This implied that around two out of three Syrian refugee households were at risk of developing anemia. The percentage of households that have never

consumed Protein in 2020 was five times the percentage reported last year (2% in 2019 vs. 10% in 2020). Similarly, the percentage of households that have never consumed Vitamin A was around four times the percentage observed last year (3.6% in 2019 vs. 15.3% in 2020). Contextualizing these results in terms of gender, men-headed households were consuming a more diverse diet per day than women-headed households. Men-headed households consumed on a daily basis Vitamin A at 34% and Protein at 43%, compared to women headed households at 26% and 36% respectively. The North was the governorate with the least daily consumption of Vitamin A (20%), Protein (24%) and iron (0%).

Figure 7: Food consumption nutrition score categories 2018-2019**Annex 13: Food consumption score**

The food consumption score (FCS) is based on dietary diversity (number of food groups consumed by households during the seven days prior to the survey), food frequency (number of days on which each food group is consumed during the seven days prior to the survey) and the relative nutritional importance of each food group. A weight was

attributed to each food group according to its nutrient density. The food consumption score is calculated by multiplying the frequency of consumption of each food group (maximum of seven if a food group was consumed every day) by each food group weight and then averaging these scores.

Food groups	Weight	Justification
Main staples	2	Energy dense/usually eaten in large quantities, protein content lower and poorer quality (lower protein energy ratio, or PER) than legumes, micronutrients (bounded by phytates).
Pulses and nuts	3	Energy dense, high amounts of protein but of lower quality (PER less) than meats, micronutrients (inhibited by phytates), low fat.
Vegetables	1	Low energy, low protein, no fat, micronutrients.
Fruits	1	Low energy, low protein, no fat, micronutrients.
Meat and fish	4	Highest quality protein, easily absorbable micronutrients (no phytates), energy dense, fat. Even when consumed in small quantities, improvement to the quality of diet are large.
Milk	4	Highest quality protein, micronutrients, vitamin A, energy. However, milk might be consumed only in very small amounts and in that case should be treated as a condiment, needing re-classification in such cases.
Sugar	0.5	Empty calories. Usually consumed in small quantities.
Oil	0.5	Energy dense but usually no other micronutrients. Usually consumed in small quantities.
Condiments	0	These foods are by definition eaten in very small quantities and not considered to have an important impact on overall diet.

The FCS can have a maximum value of 112, implying that each food was consumed every day for the last seven days. Households are then classified into three categories (poor, borderline and acceptable) on the basis of their FCS and standard thresholds. The cut-off points have been set at 28 and 42, as recommended by the WFP Emergency Food Security Assessment Handbook. This is to allow for the fact that oil and sugar are consumed extremely frequently among all households surveyed; the cut-off points have been heightened to avoid distorting the FCSs of those surveyed.

Food Consumption Score Nutrition (FCS-N)

The way in which the FCS is analysed does not explicitly provide information on the main macronutrient (carbohydrate, fat, protein) and micronutrient (vitamins and minerals) adequacy and consequent potential risks of deficiencies of these nutrients, but the data recorded in the FCS module provides enough information to shed light on the consumption of these nutrients.

WFP has developed an analytical method to utilize this data and provide information on specific nutrients – a tool called the FCS-N. While it does not identify individual nutrient intake, the ‘food consumption score nutrition quality analysis’ fills this gap at the household level, and attempts to improve the link between household food access/consumption and nutritional outcomes.

The analysis looks at how often a household consumed foods rich in a certain nutrient. The thesis of the FCS-N is that although the nutrient, for example Vitamin A, can be obtained from many foods, the number of times a household consumed food particularly rich in this nutrient can be used to assess likely adequacy of that nutrient. The FCS-N analysis is complementary to the standard FCS estimation.

The following two steps illustrate this analytical method using a hypothetical example.

Step 1. Aggregate the individual food groups into nutrient rich food groups. As the purpose of the analysis is to assess nutrient inadequacy by looking at the frequency of consumption of food groups rich in the nutrients of interest, we first need to create the nutrient-rich food groups. This is done by summing up the consumption frequency of the food sub-groups belonging to each nutrient-rich food group, following the FCS module table above:

- Vitamin A rich foods: dairy, organ meat, eggs, orange vegetables, green vegetables and orange fruits.
- 2. Protein rich foods: pulses, dairy, flesh meat, organ meat, fish and eggs.
- 3. Hem iron rich foods: flesh meat, organ meat and fish.

The first three groups above (Vitamin A, Iron and Protein) are mandatory to be able to perform FCS-N.

- Categorize the Vitamin A rich groups (dairy, organ meat, orange vegetables, green vegetables, orange fruits) and sum up the frequencies of consumption of foods rich in Vitamin A.

- Categorize the protein rich groups (pulses/nuts, dairy, meat, organ meat, fish, eggs) and sum up the frequencies of consumption of foods rich in protein.

- Categorize the hem iron rich group (flesh meat, organ meat and fish) and sum up the frequencies of consumption of foods rich in hem iron.

Step 2. Build categories of frequency of food consumption groups. Based on the validation tests, frequency groups are classified according to the consumption frequency of:

- Never: 0 day
- Sometimes: 1-6 days
- At least daily: 7 (and/or more) days

For the purposes of analysis, the consumption frequencies of each nutrient rich food group are then recoded into three categories:

- 1 = 0 times (never consumed)
- 2 = 1-6 times (consumed sometimes)
- 3 = 7 times or more (consumed at least daily)
- 2.1 Build the category of frequency of the Vitamin A rich group
- 2.2 Build the category of frequency of the protein rich group
- 2.3 Build the category of frequency of the hem iron rich group

Reference:

<https://resources.vam.wfp.org/node/87>

Annex 14: Diet diversity annex

Household food access is defined as the ability to acquire a sufficient quality and quantity of food to meet all household members' nutritional requirements for productive lives. Household dietary diversity, defined as the number of unique foods consumed by household members over a given period, has been validated to be a useful proxy for measuring household food access, particularly when resources for undertaking such measurement are scarce.

The number of different foods or food groups eaten over

¹This set of food groups is derived from the U.N. Food and Agriculture Organization Food Composition Table for Africa. Rome, Italy, 1970. [www.fao.org/docrep/003/X6877E/X6877E00.htm] For a more thorough discussion of the differences between measures of dietary diversity from the socioeconomic compared with the nutritional perspective, see Ruel, Marie. Is Dietary Diversity an Indicator of Food Security or Dietary Quality? A Review of Measurement Issues and Research Needs. FCND Discussion Paper 140, International Food Policy Research Institute, Washington, DC. 2002. [www.ifpri.org/divs/fcnd/dp/papers/fcndp140.pdf]

a reference period are recorded (in the VASyR questions were asked about food groups consumed over the 7 days previous to the data collection), without regard to frequency of consumption.

Household weekly diet diversity is equal to the number of food groups consumed over the previous 7 days. Household daily average diet diversity equal to the number of food groups consumed over the previous 24 hours (for this assessment, the number of food groups consumed was divided by 7 to determine equivalency for one day).

For a better reflection of diet quality, the calculation is based on the number of different food groups consumed and not on the number of different foods consumed. The more food groups households consumed, the more diversified the diet is; for example, an average of four different food groups implies that their diets offer some diversity in both macro- and micronutrients. This is a more meaningful indicator than knowing that households consume four different foods, which might all be cereals.

The following set of 12 food groups is used to calculate the household dietary diversity score (HDDS):¹

1. Cereals
2. Roots and tubers
3. Vegetables
4. Fruits
5. Meat/poultry/organ meat
6. Eggs
7. Fish and seafood
8. Pulses/legumes/nuts
9. Milk and milk products
10. Oils/fats
11. Sugar/honey
12. Miscellaneous

Key concerns: The dietary diversity score does not take into account the nutrient value of food items eaten. The questionnaire should properly account for food items consumed in very small quantities. For instance, if a spoon of fish powder is added to the pot, this should be treated as a condiment rather than a day's consumption of fish. The same is true for a teaspoon of milk in tea.

Reporting: Mean dietary diversity score; compare mean between different groups.

Descriptive procedure: compare means; descriptive statistics.

Interpretation: Dietary diversity is positively linked with adequacy of food intake. Hence, a smaller value indicates poor quality of diet.

For a detailed discussion on the dietary diversity indicator, see the following websites:

http://www.fantaproject.org/downloads/pdfs/HDDS_v2_Sep06.pdf.

http://documents.wfp.org/stellent/groups/public/documents/manual_guide_proced/wfp203208.pdf

Annex 6: Food consumption

	Number of meal consumed by adults	Number of meal consumed by children under 5	Food consumption score	Food consumption groups			Household Daily Average Diet Diversity (HDADD)	Household Weekly Diet Diversity (HWDD)	HWDD Category					
				Mean	Poor	Borderline	Acceptable		HDADD Category					
									<4.5 food groups	4.5-6.4 food groups	>=6.5 food groups			
Total	1.9	2.5	44.3	19.5%	30.2%	50.3%	5.4	21.4%	55.6%	23.0%	8.1	16.0%	39.7%	44.3%
Governorate														
Akkar	1.4	2.3	52.3	4.9%	24.5%	70.6%	6.3	2.5%	58.7%	38.8%	8.5	5.7%	40.5%	53.8%
Baalbek-EHermel	2.4	3.2	51.5	8.1%	23.2%	68.7%	5.9	7.6%	66.0%	26.3%	9.4	5.5%	23.3%	71.2%
Beirut	1.9	2.4	49.0	12.3%	22.4%	65.3%	5.4	26.3%	47.1%	26.6%	8.5	8.9%	34.9%	56.3%
Bekaa	2.3	3.2	42.5	25.1%	32.0%	43.0%	5.7	7.5%	67.1%	25.4%	8.1	19.9%	40.1%	40.0%
El Nabatieh	2.1	2.4	51.2	17.8%	19.8%	62.4%	5.8	20.9%	39.3%	39.8%	8.1	17.4%	37.2%	45.4%
Mount Lebanon	1.7	2.1	45.0	15.6%	31.7%	52.7%	5.2	29.6%	50.6%	19.8%	8.3	10.5%	41.9%	47.7%
North	1.7	2.1	36.2	30.9%	39.4%	29.7%	4.8	32.0%	56.9%	11.2%	7.3	27.5%	50.1%	22.4%
South	1.7	2.2	34.9	38.8%	28.4%	32.8%	4.1	52.9%	32.5%	14.6%	6.8	37.9%	36.0%	26.1%
MEB/SMEB categories														
>=125% MEB (>=)	1.7	1.5	45.3	19.0%	28.7%	52.2%	5.2	34.7%	38.2%	27.1%	8.3	15.4%	31.4%	53.1%
MEB- 125% MEB (LBP 350,200-437,750)	1.9	2.6	48.1	15.9%	24.4%	59.7%	5.3	27.3%	43.3%	29.5%	8.6	11.2%	36.1%	52.7%
SMEB-MEB (LBP 308,722-350,200)	1.9	2.6	50.2	7.6%	30.7%	61.7%	5.7	14.2%	57.4%	28.4%	8.6	8.2%	34.2%	57.6%
< SMEB (LBP 308,722)	1.9	2.5	44.0	20.1%	30.3%	49.6%	5.4	20.6%	57.0%	22.4%	8.1	16.4%	40.4%	43.2%
Food Security Classification														
Food secure	2.1	2.2	59.1	0.0%	0.0%	100.0%	6.0	10.1%	55.2%	34.7%	9.3	6.6%	20.8%	72.6%
Mild food insecurity	2.0	2.6	55.8	0.6%	11.6%	87.7%	6.1	9.2%	50.4%	40.3%	9.0	3.0%	31.7%	65.4%
Moderate food insecurity	1.8	2.4	33.2	34.0%	54.2%	11.8%	4.7	32.1%	61.6%	6.3%	7.4	25.5%	50.5%	24.0%
Severe food insecurity	1.7	2.2	23.4	96.6%	3.4%	0.0%	4.1	49.5%	50.5%	0.0%	5.9	67.6%	30.0%	2.4%
Gender of Head of Household														
Female	2.0	2.6	42.1	23.5%	30.0%	46.5%	5.2	24.5%	54.6%	20.9%	8.0	19.4%	36.1%	44.5%
Male	1.9	2.5	44.9	18.5%	30.3%	51.2%	5.4	20.7%	55.8%	23.5%	8.2	15.2%	40.5%	44.3%
Shelter type														
Residential	1.8	2.3	44.5	18.5%	30.9%	50.6%	5.3	24.3%	53.7%	22.0%	8.1	15.2%	40.3%	44.5%
Non-residential	1.8	2.2	41.1	26.7%	30.3%	43.1%	5.1	25.4%	54.8%	19.8%	7.8	20.2%	40.5%	39.3%
Non-permanent	2.2	3.1	45.7	18.5%	28.0%	53.5%	5.7	10.1%	61.9%	28.0%	8.4	16.3%	37.2%	46.5%

Annex 6: Food consumption

	Vitamin A Consumption				Protein Consumption				Iron Consumption	
	Never Consumed		1 to 6 Times a Week	At Least Daily	Never Consumed	1 to 6 Times a Week	At Least Daily	Never Consumed	1 to 6 Times a Week	At Least Daily
	ROW N %	ROW N %	ROW N %	ROW N %	ROW N %	ROW N %	ROW N %	ROW N %	ROW N %	ROW N %
Total	15.3%	52.3%	32.4%	10.0%	48.2%	41.9%	63.4%	36.0%	.6%	
Governorate										
Akkar	10.7%	57.5%	31.8%	1.8%	40.5%	57.7%	79.3%	20.4%	.4%	
Baalbek-EI Hermel	5.4%	51.1%	43.5%	3.5%	38.8%	57.7%	44.1%	53.0%	3.0%	
Beirut	4.3%	47.4%	48.3%	2.1%	41.6%	56.3%	57.1%	42.9%	0.0%	
Bekaa	24.0%	56.5%	19.5%	17.2%	52.0%	30.8%	60.9%	39.1%	0.0%	
El Nabatieh	11.5%	32.2%	56.3%	8.8%	33.9%	57.3%	71.8%	27.7%	0.5%	
Mount Lebanon	7.0%	51.7%	41.3%	5.7%	47.1%	47.2%	63.6%	36.4%	0.0%	
North	26.9%	53.2%	20.0%	17.3%	58.4%	24.3%	80.3%	19.7%	0.0%	
South	29.3%	49.9%	20.8%	17.2%	56.8%	25.9%	66.8%	33.2%	.0%	
MEB/SMEB categories										
>=125% MEB (>=)										
MEB-125% MEB (LBP 350,200-437,750)	10.4%	52.9%	36.7%	8.9%	47.1%	44.0%	63.8%	36.2%	.1%	
SMEB-MEB (LBP 308,722-350,200)	8.0%	47.5%	44.5%	4.7%	46.3%	49.0%	61.4%	37.2%	1.4%	
< SMEB (LBP 308,722)	7.0%	50.7%	42.3%	5.9%	36.9%	57.2%	72.0%	28.0%	.0%	
Food Security Classification										
Food secure	16.1%	52.3%	31.6%	10.4%	48.4%	41.2%	46.6%	36.5%	.6%	
Mild food insecurity										
Moderate food insecurity										
Severe food insecurity										
Gender of Head of Household										
Female	67.1%	32.6%	67.4%	0.0%	14.4%	85.6%	59.0%	48.5%	4.9%	
Male										
Shelter type										
Residential	18.0%	56.1%	25.9%	12.0%	52.4%	48.5%	65.3%	34.4%	0.3%	
Non-residential	14.6%	51.5%	33.9%	9.5%	47.2%	52.7%	35.0%	31.8%	0.3%	
Non-permanent	19.0%	50.5%	30.5%	11.8%	44.6%	46.6%	55.1%	43.4%	1.5%	