

FOOD CONSUMPTION



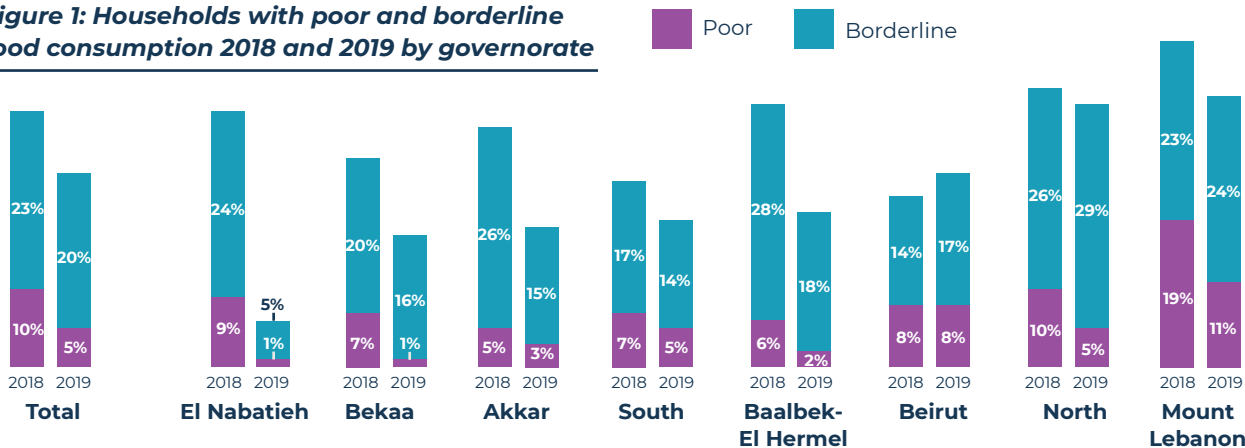
Food consumption is the cornerstone of food security analysis. The indicators in this chapter capture the dimensions related to food consumption which are the basis for classifying households according to their food security status. Quantity of food is measured by the number of meals consumed, while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

- Three out of four Syrian refugees have an acceptable food consumption. **The share of households with adequate diet continues to increase throughout the years (from 62% in 2017, 67% in 2018 to 75% in 2019).** However, a quarter of Syrian households still have a poor or borderline food consumption.
- **Dietary diversity increased, with almost 75% of households consuming 9 or more food groups per week in 2019, as opposed to 70% in 2018.** The same trend is also reflected in daily dietary diversity, showing that one out of three of households consume 6.5 or more food groups per day in 2019, compared to 29% in 2018. Additionally, there is a **more frequent consumption of vitamin A and protein**, yet almost half of the refugees **never consume heme iron, same as in previous years.**
- **Men-headed households are consuming a more diverse diet per day than women-headed households**, where 35% of men-headed families consume 6.5 or more food groups per day (such as dairy products, meat, fish, eggs, and vegetables), compared to only 24% of those headed by women.

Food consumption

- **Food consumption is poorest in Mount Lebanon (35% poor or borderline food consumption) and the North (34%).**
- **Beirut is the only governorate that witnessed an increase in borderline food consumption (25%) in 2019, compared to 22% in 2018.** The food consumption results are also accompanied by a high percentage of households with low dietary diversity of less than 4.5 food groups per day (14%) and the lowest number of meals consumed by adults in the country (2 meals per day).
- By district, **food consumption either increased or stabilized in all districts, except for El Hermel and Jbeil** (where 21-30% of households have poor or borderline food consumption in 2019, as opposed to only 11-20% in 2018).
- Number of meals consumed by adults is stable among Syrians refugees at a national level (2.2 meals per day) but varies by governorate. **The lowest number of meals was consumed in Mount Lebanon and Beirut (2 meals per day).**
- **The number of meals consumed by children decreased**, especially in Baalbek-El Hermel (2.9 in 2019 vs 3.6 in 2018) and the South (2.8 in 2019 vs 3.5 in 2018).

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

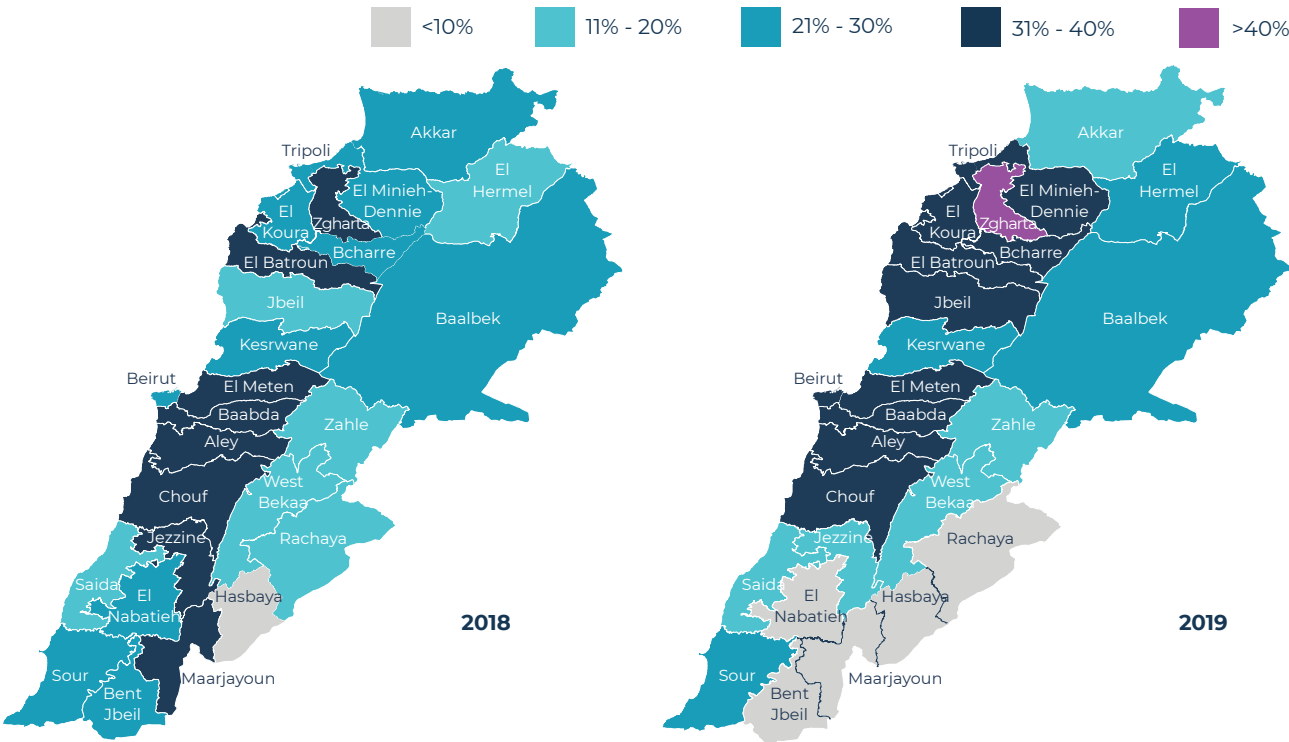


¹ Check Annex 13 for calculation and definition of Food Consumption Score

Food consumption levels of Syrian refugee households in Lebanon have generally improved. In 2019, households with poor or borderline food consumption dropped to 25%, compared to 33% in 2018. A large percentage of assisted households have an acceptable food consumption. For example, 89% of households that received multi-purpose cash assistance of US\$ 173 per month and 83% of households that received a WFP e-card have an acceptable food consumption. This clearly indicates the positive impact of WFP assistance on Syrian

refugee households' food consumption levels. Poor and borderline food consumption decreased in all households in 2019 compared to 2018 except for Beirut, where poor and borderline food consumption increased from 22% in 2018 to 25% in 2019. In 24 out of the 26 districts in Lebanon, food consumption levels either increased or remained stable. The only exceptions are Jbeil and El Hermel, where the percentage of households with poor or borderline food consumption grew from 11-20% in 2018 to 21-30% in 2019.

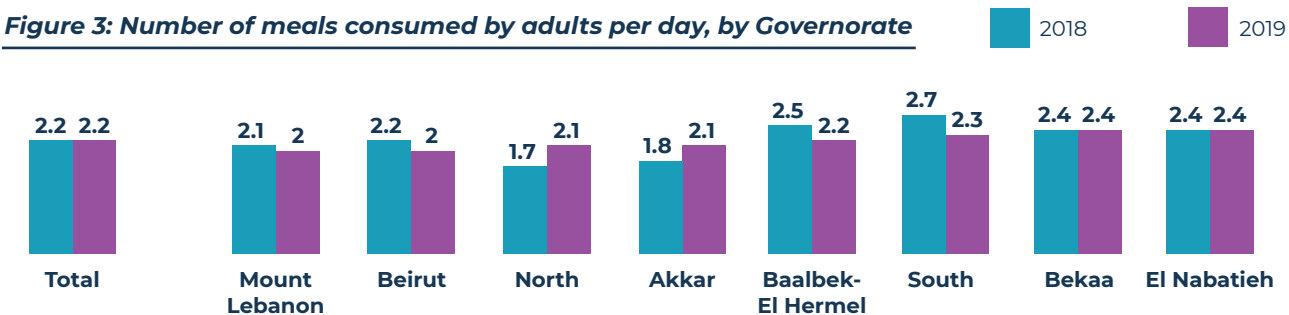
Figure 2: Percentage of households with poor and borderline food consumption



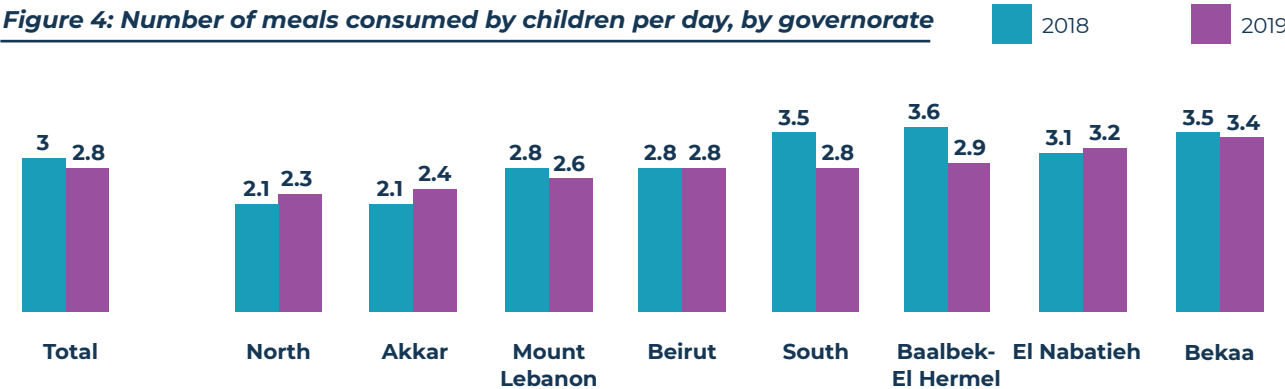
NUMBER OF MEALS

Number of meals consumed by adults remains at 2.2 meals per day in 2019, the same as 2018. However, this figure does not apply in all governorates. For example, households in the North and Akkar are consuming more meals in 2019, Bekaa and El Nabatieh are stable, and households in the South and Baalbek-El Hermel are consuming less meals per day in 2019. It is also worth noting that households living in non-permanent shelters are consuming more meals than those living in non-residential or residential shelters (2.1 meals each).

Figure 3: Number of meals consumed by adults per day, by Governorate



In 2019, children are consuming less meals per day with average 2.8 compared with 3 meals per day in 2018. This decline is strongly pronounced in Baalbek-El Hermel (2.9 in 2019 vs 3.6 in 2018) and the South (2.8 in 2019 vs 3.5 in 2018). Children living in non-permanent shelters are consuming 3.2 meals a day, a much higher number than that for children living in residential (2.7 meals) and non-residential shelters (2.5 meals).



DIETARY DIVERSITY²

Even though the number of meals mostly declined, dietary diversity increased in 2019. 33% of households consume 6.5 or more food groups daily, compared to only 29% in 2018. On a weekly basis, 74% consume 9 or more food groups, as opposed to 70% in 2018. Overall, households with poor dietary diversity both on a daily and weekly basis decreased nearly by half compared to 2018 (table 3). It is also worth noting that 35%

of men-headed households have a good dietary diversity, consuming 6.5 or more food groups per day, compared to only 24% of women-headed households.

Households continue to consume more diversified food, and at the same time poor dietary intake decreased by 3% compared to the past 2 years (9.6 % in 2017, 6.5 in 2018 to 4% in 2019).

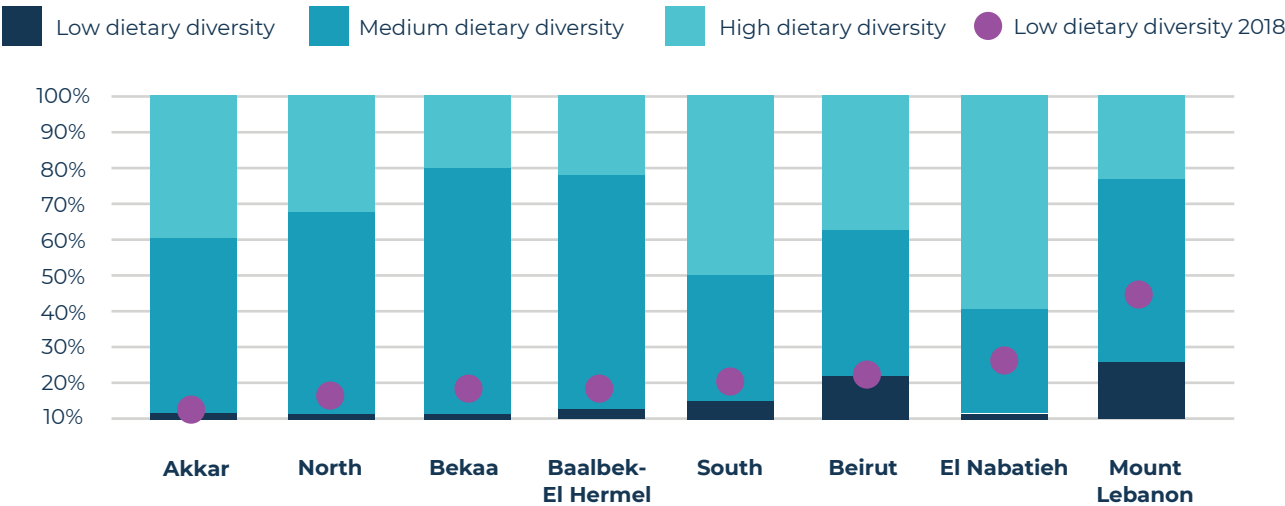
Table 3: HWDD and HDADD groups and mean in 2018 and 2019

	Household Daily Average Diet Diversity (HDADD)	HDADD Category			Household Weekly Diet Diversity (HWDD)	HWDD Category		
	Mean	<4.5 food groups	4.5-6.4 food groups	>=6.5 food groups	Mean	<=6 food groups	7-8 food groups	>=9 food groups
2018	5.6	17%	55%	29%	9.2	7%	24%	70%
2019	6.1	8%	60%	33%	9.4	4%	21%	74%

The percentage of households with low dietary diversity consuming less than 4.5 food groups per day in 2019 decreased in all governorates compared to 2018 (figure 5). Households with the highest percentage of low dietary diversity in 2019 are found in Mount Lebanon (19%) and Beirut (14%). The highest percentage of households with a high dietary diversity, i.e. consuming 6.5 or more food groups, is in El Nabatieh (66%) and the South (55%).

² Check Annex 14 for the definition and calculation of dietary diversity

Figure 5: Household daily dietary diversity groups 2018 and 2019, by governorate

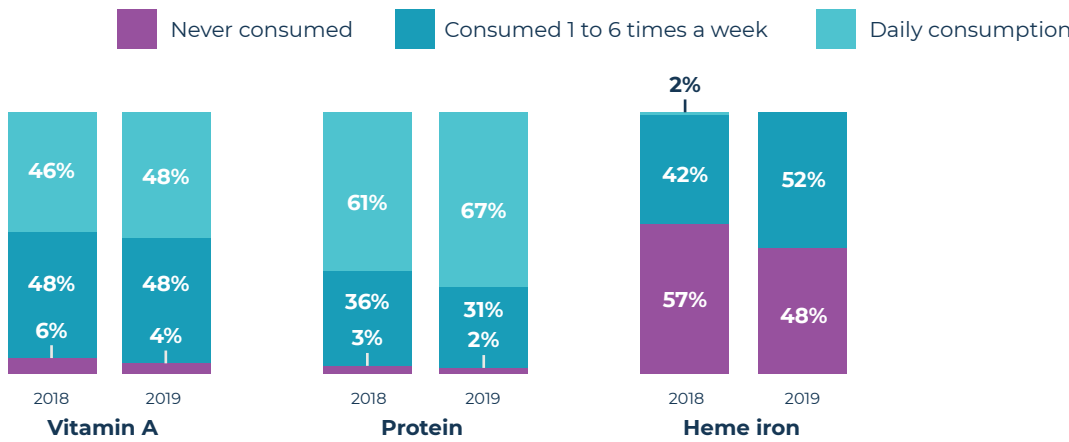


FOOD CONSUMPTION SCORE NUTRITION

In terms of key nutrients intake, there is a clear improvement on all fronts, noting that households are consuming vitamin A, protein, and heme iron more frequently in 2019 compared to 2018. For instance, households that consume protein daily increased from 61% in 2018 to 67% in 2019. Additionally, households that consume Vitamin A daily increased from 46% in 2018 to 48% in 2019. In terms of heme iron, daily consumption declined from 1% in 2018 to 0% in 2019, though the percentage of those consuming iron 1 to 6 times a week increased by 10%, from 42% in 2018 to 52% in 2019. The percentage of households that

never consumed heme iron decreased from 57% in 2018 to 48% in 2019. This means that half of Syrian refugee households are still at risk of developing anaemia. The percentage of households that never consume any of the three key nutrients (vitamin A, protein, and heme iron) have declined. From the gender perspective, men-headed households consume more commonly vitamin A (51%) protein (69%) and heme iron (0.3%) compared to women-headed households (37%, 59%, and 0% respectively). Daily consumption of the three key nutrients is most commonly found in El Nabatieh (77% vitamin A, 90% protein, and 1.2% heme iron).

Figure 6: 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 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 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

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]

Annex 15: Food consumption

	Number of meals consumed by adults		Number of meals consumed by children under 5		Food consumption score	Food consumption groups			Household Daily Average Diet Diversity (HDADD)	HDAAD Category			Household Weekly Diet Diversity (HWDD)	HDAAD Category		
	Mean		Mean		Mean	Poor	Borderline	Acceptable	Mean	<4.5 food groups	4.5-6.4 food groups	>=6.5 food groups	Mean	<= 6 food groups	7-8 food groups	>= 9 food groups
Total	2.2		2.8		54.9	5.2%	19.9%	74.9%	6.1	7.6%	59.5%	32.9%	9.4	4.4%	21.2%	74.4%
Governorate																
Akkar	2.1		2.4		58.8	3.3%	15.1%	81.6%	6.5	2.0%	55.0%	42.9%	6.5	4.1%	19.4%	76.5%
Baalbek-El Hermel	2.2		2.9		54.1	2.4%	17.7%	79.9%	6.0	2.9%	72.1%	24.9%	6.0	2.5%	15.7%	81.8%
Beirut	2.0		2.8		57.1	7.7%	17.3%	75.0%	6.1	14.4%	43.7%	41.9%	6.1	4.2%	12.3%	83.5%
Bekaa	2.4		3.4		55.9	.6%	16.4%	83.0%	6.0	1.0%	75.3%	23.7%	6.0	.6%	17.2%	82.3%
El Nabatieh	2.4		3.2		65.8	1.5%	5.0%	93.5%	7.0	2.5%	31.5%	65.9%	7.0	1.9%	7.1%	90.9%
Mount Lebanon	2.0		2.6		51.5	10.7%	24.2%	65.1%	5.7	18.7%	54.9%	26.4%	5.7	8.4%	28.0%	63.6%
North	2.1		2.3		51.5	4.9%	28.9%	66.2%	6.2	3.1%	61.3%	35.6%	6.2	4.2%	24.9%	70.9%
South	2.3		2.8		61.9	5.2%	13.7%	81.1%	6.5	7.1%	37.7%	55.2%	6.5	5.0%	19.6%	75.4%
Expenditure																
>=125% MEB (>=143\$)	2.1		2.5		55.0	7.7%	20.7%	71.5%	6.1	10.8%	51.8%	37.4%	6.1	5.7%	21.6%	72.8%
MEB- 125% MEB (114- 142\$)	2.2		2.8		55.6	3.7%	19.8%	76.5%	6.1	7.4%	56.6%	36.0%	6.1	4.3%	19.3%	76.3%
SMEB-MEB (87-113\$)	2.2		2.8		56.4	5.6%	15.7%	78.7%	6.2	7.4%	54.9%	37.7%	6.2	3.2%	17.2%	79.6%
< SMEB (87\$)	2.2		2.8		54.5	4.2%	21.0%	74.7%	6.0	6.6%	63.7%	29.8%	6.0	4.2%	22.4%	73.4%
Food security classification																
Food secure	2.5		2.9		67.0	0.0%	0.0%	100.0%	6.9	1.9%	37.8%	60.3%	6.9	.6%	9.6%	89.8%
Mildly food secure	2.2		2.9		59.8	0.0%	7.1%	92.9%	6.3	3.5%	57.3%	39.2%	6.3	1.2%	15.5%	83.3%
Moderately food secure	1.9		2.5		41.7	15.8%	53.3%	30.9%	5.3	16.9%	70.6%	12.4%	5.3	11.1%	36.4%	52.5%
Severely food secure	1.7		2.7		27.1	76.6%	23.4%	0.0%	4.7	47.5%	52.5%	0.0%	4.7	58.7%	35.6%	5.6%
Gender of the head of household																
Female	2.1		2.8		51.7	6.3%	20.8%	72.8%	5.9	8.2%	68.2%	23.6%	5.9	3.9%	22.6%	73.5%
Male	2.2		2.8		55.7	4.9%	19.7%	75.4%	6.1	7.4%	57.6%	35.0%	6.1	4.5%	20.9%	74.6%
Shelter type																
Non-permanent shelter	2.3		2.7		56.5	3.1%	15.8%	81.0%	6.1	2.9%	67.9%	29.2%	6.1	2.8%	17.0%	80.2%
Non-residential	2.1		2.5		52.6	7.9%	21.0%	71.0%	5.9	8.3%	63.4%	28.3%	5.9	6.4%	28.0%	65.6%
Residential	2.1		3.2		54.8	5.4%	21.0%	73.7%	6.1	8.9%	56.4%	34.7%	6.1	4.6%	21.4%	74.0%

Annex 15: 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
Total	3.6%	48.3%	48.1%	1.6%	30.9%	67.5%	48.0%	51.8%	.4%
Governorate									
Akkar	3.1%	44.8%	52.1%	1.0%	26.0%	73.0%	53.0%	46.6%	.4%
Baalbek-El Hermel	1.1%	60.6%	38.3%	1.0%	31.2%	67.8%	42.7%	57.3%	0.0%
Beirut	1.4%	30.3%	68.3%	1.8%	22.9%	75.4%	35.2%	63.7%	1.1%
Bekaa	.6%	62.7%	36.7%	.3%	30.6%	69.2%	47.3%	52.7%	0.0%
El Nabatieh	.9%	21.9%	77.2%	.5%	9.9%	89.6%	30.9%	67.9%	1.2%
Mount Lebanon	5.0%	41.3%	53.7%	2.9%	31.6%	65.6%	50.0%	49.7%	.3%
North	8.0%	56.5%	35.5%	2.0%	44.3%	53.7%	51.6%	48.4%	0.0%
South	4.4%	25.4%	70.2%	1.6%	23.3%	75.0%	49.5%	50.2%	.2%
Expenditure									
>=125% MEB (>=143US\$)	3.7%	44.1%	52.1%	2.6%	30.2%	67.2%	42.0%	57.7%	.4%
MEB- 125% MEB (114 - 142US\$)	5.1%	42.5%	52.5%	2.1%	26.6%	71.2%	37.0%	62.6%	.4%
SMEB-MEB (87-113US\$)	4.5%	45.7%	49.8%	1.1%	28.8%	70.1%	45.3%	54.2%	.5%
< SMEB (87US\$)	2.9%	51.2%	45.9%	1.2%	32.4%	66.5%	51.9%	48.0%	.1%
Food security classification									
Food secure	.1%	23.7%	76.1%	0.0%	5.0%	95.0%	21.4%	77.9%	.8%
Mildly food insecure	.4%	42.3%	57.3%	0.0%	17.5%	82.5%	42.0%	57.7%	.3%
Moderately food insecure	10.4%	68.2%	21.4%	4.7%	66.4%	28.9%	67.2%	32.8%	0.0%
Severely food insecure	39.8%	54.6%	5.6%	28.9%	65.5%	5.6%	92.1%	7.9%	0.0%
Gender of the head of household									
Female	3.8%	58.9%	37.3%	1.5%	39.2%	59.3%	53.7%	46.2%	.0%
Male	3.5%	45.9%	50.5%	1.6%	29.1%	69.3%	46.7%	53.0%	.3%
Shelter type									
Non-permanent shelter	2.1%	55.3%	42.5%	.7%	28.5%	70.8%	48.6%	51.2%	.2%
Non-residential	4.7%	50.4%	44.8%	2.9%	33.6%	63.5%	54.7%	45.3%	0.0%
Residential	3.9%	45.8%	50.3%	1.6%	31.2%	67.1%	46.7%	53.0%	.3%