Food Expenditure Share (FES)

Guidance Note

September 2024

Contents

1. About this guidance

This guidance is intended for analysts tasked with the computation of the Food Expenditure Share (FES) indicator. Its main objective is to guide the analyst through the necessary steps to compute the indicator accurately and effectively.

Useful resources for the computation of the FES, including standard modules and syntax files, can be found on the FES page of the VAM Resource Centre.

2. What is the FES?

The Food Expenditure Share (FES) is a household-level indicator that reflects economic vulnerability and, consequently, food insecurity. This indicator measures the proportion of a household's total consumption expenditures that is dedicated to food. The higher this proportion, the more economically vulnerable the household is to food insecurity. Additionally, FES serves as a proxy for the household's **financial access to food**, indicating whether households have the economic means to buy sufficient, safe, and nutritious food.

2.1 Importance of FES

The FES captures households' ability to maintain food consumption in the face of shocks. When households encounter significant increases in food prices or other disruptions that hinder their capacity to access food, those allocating a smaller portion of their resources to non-food items have less flexibility to shift their spending towards purchasing food. In other words, the higher the food expenditure share of households, the higher their vulnerability to food price increases and other food access shocks.

It is important to note that the FES indicator is based on the monetary value of household food and non-food consumption, including the value of non-purchased items such as food from own production and in-kind transfers. This comprehensive approach ensures that the indicator accurately reflects the vulnerability of different populations, regardless of their livelihood strategies. For instance, subsistence farmers or households heavily reliant on assistance might appear less vulnerable if only market purchases were considered, as their actual food consumption includes significant non-purchased components.

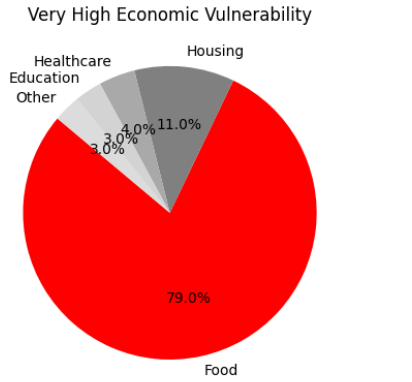
The rationale of the indicator is rooted in Engel's Law, which states that as a household's income increases, the proportion spent on food decreases, even if the actual expenditure on food increases. This means that economically vulnerable households generally dedicate a larger share of their resources to food because food is usually at the top of peoples' survival needs.

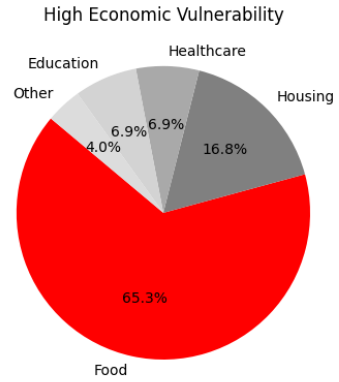
1.1 Example Distribution of Expenditures Across Households with Different Economic Vulnerability

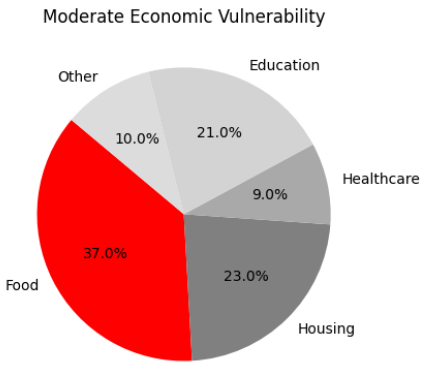
To illustrate the concept, consider the following example distributions of expenditures for low, moderate, high, and very high economic vulnerability households:

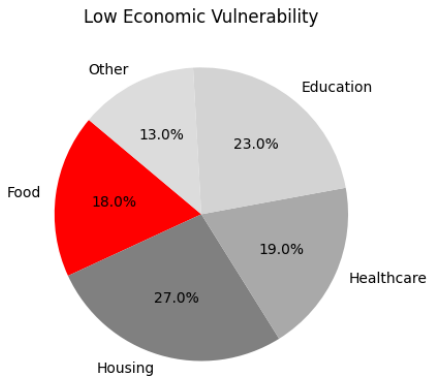
- **Very High Economic Vulnerability Households:** These households spend a significant portion of their total expenditures on food. Because such a large share of their budget goes to food, they have less flexibility to adjust their spending when food prices rise or other economic shocks occur, making them highly vulnerable to food insecurity.
- **High Economic Vulnerability Households:** These households spend a high portion of their total expenditures on food, similar to very high vulnerability households. A large share of their budget allocated to food leaves them with limited flexibility to respond to food price increases or other economic shocks.
- **Moderate Economic Vulnerability Households**: These households spend a moderate portion of their total expenditures on food. While they have more flexibility than highly vulnerable households, a substantial increase in food prices can still significantly impact their ability to maintain adequate food consumption.
- **Low Economic Vulnerability Households:** These households spend a smaller portion of their total expenditures on food. They have the most flexibility to reallocate their budget in response to food price increases or other economic shocks, making them the least vulnerable to food insecurity.

The following pie charts illustrate an example of the distribution of expenditures across households with high, moderate, and low economic vulnerability:









3. What is the FES used for?

The Food Expenditure Share (FES) indicator is a crucial tool in **estimating food insecurity within the Consolidated Approach for Reporting Indicators of Food Security (CARI)**. Specifically, the FES is used in the CARI console to assess households' economic vulnerability and, consequently, their ability to stabilize food consumption over time.

> ⚠ **Attention:** In CARI, it is recommended to use the Economic Capacity to Meet Essential Needs (ECMEN) indicator instead of the Food Expenditure Share (FES).
>
> FES should be utilized when MEB/SMEB data is unavailable.

In the CARI framework, the FES helps to identify households that are economically vulnerable and at greater risk of food insecurity. By analyzing the share of household expenditures devoted to food, it provides insights into how households prioritize their spending, especially in times of economic stress or shock. A higher FES indicates greater vulnerability, as households are spending a larger proportion of their income on food, leaving less for other essential needs.

For a comprehensive understanding of how the FES is utilized within the CARI, refer to chapter four of the Technical Guide on CARI. This chapter provides detailed instructions on integrating the FES into the overall analysis of food security and explains its role in conjunction with other indicators.

> ⚠ **Food vs Non-Food:** A higher percentage of food expenditures out of total household expenditures often indicates financial strain, limiting the household's ability to allocate resources to other essential needs such as health, housing, education, and transportation. This imbalance can lead to inadequate investment in crucial areas, potentially compromising overall well-being and long-term stability. Households with a high food expenditure share are more vulnerable to economic shocks and have less flexibility to manage other critical expenses, exacerbating their vulnerability and reducing their quality of life.

4. Data sources used for computing FES

The data required to compute the Food Expenditure Share (FES) should be collected through **comprehensive household surveys.** These surveys provide the necessary information to accurately assess the economic vulnerability and food security status of households. Some key examples of household surveys used for this purpose include:

- Emergency Food Security Assessments (EFSA)
- Comprehensive Food Security & Vulnerability Analyses (CFSVA)
- Essential Needs Assessments (ENA)

To ensure the accuracy and reliability of the FES calculation, the household surveys must meet the following essential criteria:

4.1 Include the Standard Expenditures Module

The surveys should comprehensively capture all relevant expenditures, including food and non-food items. This ensures a complete picture of household consumption patterns. The World Food Programme (WFP) provides standardized modules specifically designed to facilitate the computation of the FES, which are accessible through the Survey Designer tool.

4.2 Include the Relevant Skip Logics

Incorporating relevant skip logics in the survey design is essential for enhancing data quality and efficiency and ensuring that only relevant questions are asked. For example, if a household did not report purchasing cereals in the last 7 days, the survey should automatically skip questions related to the monetary value of these purchased cereals during that period.

4.3 Data Collected Through Face-to-Face Interviews

Data collection should be conducted via face-to-face interviews to ensure the accuracy and completeness of the information gathered. This method helps to minimize reporting errors and provides an opportunity to clarify any ambiguities in the responses.

By adhering to these criteria, the collected data will be robust and reliable, enabling accurate computation and meaningful analysis of the FES.

5. The FES Module and Submodules

To effectively compute the Food Expenditure Share (FES), essential data regarding household economic capacity are derived from a **dedicated standard expenditure module** provided through Survey Designer tool.

The standard expenditure module utilized for computing the FES comprises **three submodules**:

1. **Food Expenditure in the previous 7 days**: Covers the **purchases** of food items made by the household in cash or on credit, the **consumption** of food items received through in-kind gifts and assistance, and the **consumption** of food items obtained through own production or gathering, in the previous 7 days,
2. **Non-Food Expenditure in the previous 30 days**: Covers the **purchases** of non-food items made by the household in cash or on credit, and the **consumption** of non-food items received through in-kind gifts and assistance, in the previous 30 days.
3. **Non-Food Expenditure in the previous 6 months**: Covers the **purchases** of non-food items/services made by the household in cash or on credit, and the **consumption** of non-food items/services received through in-kind gifts and assistance, in the previous 6 months.

⚠ **Purchases vs Consumption**: It is essential to distinguish between purchases and consumption. When we ask about purchased items, it includes all items bought during a specific recall period, regardless of whether they were consumed and independently of the consumed quantity, if any. But, when we ask about consumed items, it should only account for the items that were actually consumed during a specific recall period, not the entire amount initially obtained by the household, and not the amount in possession of the household during the specific recall period.

⚠ Cash vs Credit:

- Cash: This includes direct cash payments as well as value vouchers. The source of cash (e.g., cash assistance) does not affect how it should be recorded; purchases made with cash assistance should be treated the same as any other cash source.
- Credit: This refers to purchases made where the household receives goods or services immediately but pays for them later. When reporting purchases made on credit, the amount that the household will need to repay in the future should be recorded and not Zero.

If the household purchased using both cash and credit, the amount of purchases should be the sum of both cash and credit.

5.1 Food Expenditures in the Previous 7 Days

Food expenditure data are collected at the food group level (e.g., cereals, tubers, pulses, etc.). For enhanced granularity, detailed information at the food item level can also be collected, encompassing the most relevant food items within each food group. This submodule should encompass:

- The monetary value of food **purchased for household consumption** in the previous 7 days, in cash or on credit.

- The monetary value of food **consumed** in the previous 7 days, obtained through in-kind assistance or gifts.

- The monetary value of food **consumed** in the previous 7 days from household own production and gathering.

⚠ **Purchased Food for Household Consumption:** This category specifically refers to food purchases intended for household consumption. It excludes purchases made for purposes such as giving gifts or feeding animals (e.g., fodder).

⚠ **In-kind Assistance and Gifts:** This category encompasses assistance received from NGOs, UN agencies, governments, religious authorities, as well as gifts and borrowing from family and friends. It specifically includes food received through begging. Please note that we only consider in-kind assistance and gifts in this category. Consumption from cash received as assistance or gifts is not included.

⚠ **Own Production:** This category includes food produced within the household, such as from farms or gardens, as well as food gathered, hunted, or fished from open fields, forests, rivers, lakes, seas, etc. It also encompasses food received in exchange for labor (e.g., as part of remuneration from agricultural wage work). It is important to note that the timing of food production is not relevant; what matters is when the food was consumed. For instance, if the household consumed food from stocks produced in previous periods within the last 7 days, it should be included in this category.

⚠ **Skip Logic**: If the household reported not purchasing a specific food group in the previous 7 days, the follow-up question regarding the monetary value of that food group should be skipped. The same logic applies to the consumed food that was obtained from in-kind gifts/assistance and from own production/gathering.

⚠ **Previous 7 days vs Previous 30 days**: Previously, the standard recall period for the food consumption was 30 days. However, the recall period was changed from the last 30 days to the last 7 days to enhance data accuracy and reliability. A 7-day recall is more accurate as respondents can better remember recent expenditures, providing estimates closer to the actual mean consumption. It also reduces the burden on respondents, making the survey process faster. Additionally, shorter recall periods minimize the risk of reporting variations that can occur with longer periods, ensuring more consistent data collection.

		In the last 7days, did the household purchase any [..] for household consumption using cash or credit?	Considering both purchases made in cash and on credit, how much did your household spend on [..] in the last 7 days?	In the last 7 days, did your household consume any [..] that came from in-kind gifts or in-kind assistance?	What would be the value of the consumed [..] that came from in-kind gifts or assistance if you were to buy that at the market?	In the last 7 days, did your household consume any cereals that you produced, gathered, or received in exchange of labor?	What would be the value of the consumed cereals that you produced, gathered, or received in exchange of labor if you were to buy that at the market?
1.	**Cereals:** These include items such as maize, rice, sorghum, wheat, etc. in the form of raw cereals, flour, bread, pastaand similar products.	[ ] No [ ] Yes	|____|	[ ] No [ ] Yes	|____|	[ ] No [ ] Yes	|____|
2.	**Tubers:** These include items such as potatoes, sweet potatoes, cassava, plantains, yams.	[ ] No [ ] Yes	|____|	[ ] No [ ] Yes	|____|	[ ] No [ ] Yes	|____|
3.	**Pulses and nuts:** These include items such as beans, peas, lentils, nuts in shell or shelled.	[ ] No [ ] Yes	|____|	[ ] No [ ] Yes	|____|	[ ] No [ ] Yes	|____|
4.	**Vegetables:** These include items such as dark green leafy vegetables, orange vegetables, and other vegetables.	[ ] No [ ] Yes	|____|	[ ] No [ ] Yes	|____|	[ ] No [ ] Yes	|____|
5.	**Fruits:** These include items such as fresh, frozen or dry fruit.	[ ] No [ ] Yes	|____|	[ ] No [ ] Yes	|____|	[ ] No [ ] Yes	|____|
6.	**Meat:** These include items such as fresh, chilled, frozen meat and poultry, as well as dry and salted meat.	[ ] No [ ] Yes	|____|	[ ] No [ ] Yes	|____|	[ ] No [ ] Yes	|____|
7.	**Fish:** These include items such as fresh and frozen fish or other seafood.	[ ] No [ ] Yes	|____|	[ ] No [ ] Yes	|____|	[ ] No [ ] Yes	|____|
8.	**Fats and Oils:** These include items such as vegetable oil, butter, margarine.	[ ] No [ ] Yes	|____|	[ ] No [ ] Yes	|____|	[ ] No [ ] Yes	|____|
9.	**Milk and Dairy products:** These include items such as milk, cheese, yogurt, powdered milk.	[ ] No [ ] Yes	|____|	[ ] No [ ] Yes	|____|	[ ] No [ ] Yes	|____|
10.	**Eggs**	[ ] No [ ] Yes	|____|	[ ] No [ ] Yes	|____|	[ ] No [ ] Yes	|____|
11.	**Sugar, chocolate, candies, and desserts**: These include items such as raw sugar, honey, jams, chocolate, ice cream and similar products	[ ] No [ ] Yes	|____|	[ ] No [ ] Yes	|____|	[ ] No [ ] Yes	|____|
12.	**Condiments**: These include items such as salt, spices, bouillon cubes, fish powder.	[ ] No [ ] Yes	|____|	[ ] No [ ] Yes	|____|	[ ] No [ ] Yes	|____|
13.	**Non-alcoholic beverages**: These include items such as coffee, tea, herbal infusion, bottled water, soft-drinks, juices.	[ ] No [ ] Yes	|____|	[ ] No [ ] Yes	|____|	[ ] No [ ] Yes	|____|
14.	**Snacks and meals prepared outside the home:** These include items such as ready-made meals and snacks prepared outside the home, no matter if consumed inside or outside the home.	[ ] No [ ] Yes	|____|	[ ] No [ ] Yes	|____|	[ ] No [ ] Yes	|____|

5.2 Non-food Expenditures in the Previous 30 Days

This submodule captures expenditures on commonly purchased non-food categories, such as hygiene items, transport, and communication. **Customization options allow for the inclusion of specific non-food items to reflect context-specific consumption patterns**. It should encompass:

- The monetary value of non-food items purchased in the previous 30 days, in cash or on credit.
- The monetary value of non-food items consumed/used in the previous 30 days, obtained through in-kind assistance or gifts.

⚠ **Own production/gathering does not apply** to non-food expenditures in the previous 30 days. We specifically inquire about purchases of non-food items made with cash or credit, as well as consumption of non-food items received through in-kind assistance and gifts.

⚠ **Skip Logic**: If the household reported not consuming a specific non-food group in the previous 30 days, we should skip the follow-up question regarding the monetary value of that non-food group. The same logic applies to non-food groups obtained from in-kind gifts/assistance.

Non-Food Groups (Last 30 Days)		In the last 30 days, did your household purchase any [..], using cash or credit?	Considering both purchases made in cash and on credit, how much did your household spend on [..] in the last 30 days?	In the last 30 days, did your household use any [..] that came from in-kind gifts or in-kind assistance?	What would be the value of [..] that came from in-kind gifts or in-kind assistance if you were to pay for it?
1.	**Hygiene items and services:** These include items such as soap, toothbrush, toothpaste, toilet paper, razors, detergents, insecticides, feminine hygiene products/menstrual pads, diapers, cosmetics, hairdressers/barber, beauty salon.	[ ] No [ ] Yes	|___|	[ ] No [ ] Yes	|___|
2.	**Transport-related goods and services**: These include items such as public transportation (bus, rail, boat etc.), taxi, rental of vehicles, maintenance of vehicles used for transportation (including lubricant, tires, spare parts, repairs fees etc.).	[ ] No [ ] Yes	|___|	[ ] No [ ] Yes	|___|
3.	**Fuel for transportation:** These include items such as gasoline, diesel and any other fuel used for vehicles.	[ ] No [ ] Yes	|___|	[ ] No [ ] Yes	|___|
4.	**Water supply for domestic use:** These include items such as water for drinking (not bottled), washing, cooking, bathing etc.	[ ] No [ ] Yes	|___|	[ ] No [ ] Yes	|___|
5.	**Electricity**	[ ] No [ ] Yes	|___|	[ ] No [ ] Yes	|___|
6.	**Other sources of energy for cooking, heating, lighting:** These include items such as gas, kerosene, other liquid fuels, wood, **charcoal, candles, other solid fuels.**	[ ] No [ ] Yes	|___|	[ ] No [ ] Yes	|___|
7.	**Services related to dwelling:** These include items such as waste collection, sewage collection, maintenance charge in collective buildings, security services, services of helpers like cleaners and gardeners.	[ ] No [ ] Yes	|___|	[ ] No [ ] Yes	|___|
8.	**Communication-related goods and service:** These include items such as mobile top-up, internet, landline charges, postal services.	[ ] No [ ] Yes	|___|	[ ] No [ ] Yes	|___|
9.	**Goods and services related to recreation, sports, and culture:** These include items such as entertainment, sports, lottery, gambling, newspapers, magazines, books, toys, hobbies, hotels.	[ ] No [ ] Yes	|___|	[ ] No [ ] Yes	|___|
10.	**Alcohol and tobacco.**	[ ] No [ ] Yes	|___|	[ ] No [ ] Yes	|___|

5.3 Non-food Expenditures in the Previous Six Months

Focusing on less frequently purchased non-food items, this submodule encompasses expenses related to health, education, housing, among others. Similar to the previous submodule, it should capture:

- The monetary value of non-food items purchased in the previous 6 months, in cash or on credit.
- The monetary value of non-food items consumed/used in the previous 6 months, obtained through in-kind assistance or gifts.

⚠ **Own production/gathering does not apply** to non-food expenditures in the previous six months. We specifically inquire about purchases of non-food items made with cash or credit, as well as non-food items received through in-kind assistance and gifts.

⚠ **Skip Logic**: If the household reported not purchasing a specific non-food group in the previous 6 month, we should skip the follow-up question regarding the monetary value of that non-food group. The same logic applies to non-food groups obtained from in-kind gifts/assistance.

Non-Food Groups (Last 6 Months)		In the last 6 months, did your household purchase any or pay for [..], using cash or credit?	Considering both purchases made in cash and on credit, how much did your household spend on [..] in the last 6 months?	In the last 6 months, did your household use or benefit from any [..] that came from in-kind gifts or in-kind assistance?	What would be the value of [..] that came from in-kind gifts or in-kind assistance if you were to pay for it?
1.	**Health services:** These include items such as outpatient and hospital services, doctor fees, traditional healing.	[ ] No [ ] Yes	|___|	[ ] No [ ] Yes	|___|
2.	**Medicines and health products:** These include items such as medicines, other medical products and equipment like glasses, syringes, crutches, etc.	[ ] No [ ] Yes	|___|	[ ] No [ ] Yes	|___|
3.	**Clothing and footwear:** These include items such as Clothes, shoes, and repair, tailor, and laundry services.	[ ] No [ ] Yes	|___|	[ ] No [ ] Yes	|___|
4.	**Education services:** These include items such as tuitions fees, exam fees, other fees.	[ ] No [ ] Yes	|___|	[ ] No [ ] Yes	|___|
5.	**Education goods**: These include items such as uniforms, books, canteen, transport, and other education material**.**	[ ] No [ ] Yes	|___|	[ ] No [ ] Yes	|___|
6.	**Rent paid for housing**	[ ] No [ ] Yes	|___|	[ ] No [ ] Yes	|___|
7.	**Household non-durable furniture and utensils:** These include items such as bed sheets, blankets, pillows, curtains, carpets; utensils like bowls, plates, silverware, cookpots, brooms, brushes, umbrellas, torches, lamps etc..	[ ] No [ ] Yes	|___|	[ ] No [ ] Yes	|___|
8.	**Routine maintenance:** These include goods and services for repairs to dwelling, repairs to appliances and furniture, and similar routine household maintenance.	[ ] No [ ] Yes	|___|	[ ] No [ ] Yes	|___|

6. FES Calculation

To compute the Food Expenditure Share (FES), a structured approach involving **four key steps** is essential, as outlined below:

6.1 Aggregate Consumption Expenditures

Before delving into the computation process, it's crucial to aggregate expenditures, following these guidelines:

6.1.1 Calculate Monthly Food Expenditure

Determine the household's monthly food expenditure by summing:

- The monetary value of food purchased for household consumption in the previous 7 days, through cash or on credit.
- The monetary value of food consumed in the previous 7 days, obtained through in-kind assistance or gifts.
- The monetary value of food consumed in the previous 7 days from household own production and gathering.

⚠ **Watch out for the recall period used**: If food expenditures were collected using the standard seven-day recall period, adjust by **dividing by seven and multiplying by 30** to report in monthly terms.

Food Groups (Last 7 Days)		Cash/Credit (USD)	In-kind Assistance/Gifts (USD)	Own Production/Gathering (USD)
1.	Cereals	9	2	0
2.	Tubers	8	3	0
3.	Pulses and nuts	11	0	0
4.	Vegetables	6	4	4
5.	Fruits	4	0	4
6.	Meat	0	9	0
7.	Fish	0	0	13
8.	Fats and Oils	10	0	0
9.	Milk and Dairy products	3	0	0
10.	Eggs	4	0	0
11.	Sugar, chocolate, candies, and desserts	3	0	0
12.	Condiments	2	0	0
13.	Non-alcoholic beverages	2	0	0
14.	Snacks and meals prepared outside the home	0	0	0
Total		**62**	**18**	**21**
Monthly Food Consumption Expenditure				**432.86**

To calculate the monthly food expenditure for the above table, sum up the weekly expenditures and then extrapolate to a month:

Weekly Food Expenditure Calculation: 62 (Weekly Cash/Credit) + 18 (Weekly In-kind Assistance/Gifts) + 21 (Weekly Own Production/Gathering) = 101 USD

Monthly Food Expenditure Calculation: 101 (Weekly Total) × 30 / 7 = **432.86 USD**

6.1.2 Calculate Monthly Non-food Expenditure

- Aggregate the value of non-food expenditures in the previous 30 days, made in cash or credit and obtained through in-kind assistance and gifts.
- Aggregate the value of non-food expenditures in the previous 6 months, made in cash or credit and obtained through in-kind assistance and gifts, then divide by six to report on a monthly basis.
- Sum up the two aggregates to obtain the total average monthly non-food expenditure.

⚠ **Report in monthly terms**: For the non-food expenditures in the last 6 months, make sure **to divide the aggregation by 6** to report in monthly terms.

⚠ **Excluded Expenditures**: Exclude expenses on celebrations, festivals, donations, large one-off household expenses (e.g., a house or a vehicle), as well as expenditures for livelihood inputs (e.g., agricultural inputs, hired labour) from the non-food consumption expenditure aggregate. This ensures alignment with the FES's objective of reflecting regular household consumption capacity.

Non-Food Groups (Previous 30 Days)		Cash/Credit (USD)	In-kind Assistance/Gifts (USD)	Non-Food Groups (Previous 6 Months)	Cash/Credit (USD)	In-kind Assistance/Gifts (USD)
1.	Hygiene items and services	9	2	Health services	50	0
2.	Transport-related goods and services	8	3	Medicines and health products	18	0
3.	Fuel for transportation	11	0	Clothing and footwear	44	0
4.	Water supply for domestic use	6	4	Education services	23	0
5.	Electricity	4	0	Education goods	11	0
6.	Other sources of energy for cooking, heating, lighting	0	9	Rent paid for housing	0	0
7.	Services related to dwelling	0	0	Household non-durable furniture and utensils	0	0
8.	Communication-related goods and services.	10	0	Routine maintenance	0	0
9.	Goods and services related to recreation, sports, and culture	3	0			
10.	Alcohol and tobacco	4	0			
Total		**55**	**18**		**146**	**0**
Monthly Non-Food Expenditure						**78.33**

To calculate the monthly non-food expenditure for the above table, divide the non-food consumption expenditure in the previous 6 months by 6 and sum it up with the non-food consumption expenditure in the previous 30 days:

Non-Food Expenditures (in the Last 30 Days): 55 (Monthly Cash/Credit) + 18 (Monthly In-kind Assistance/Gifts) = 73 USD

Non-Food Expenditures (in the Last 6 Months): 146 (Cash/Credit in 6 months) + 0 (In-kind Assistance/Gifts in 6 months) = 146 USD

Monthly Non-Food Expenditures Calculation: 73 + (146 / 6) = **97.33 USD**

6.2 Calculate Household Total Monthly Expenditures

Sum up households' monthly food and non-food expenditures to determine total monthly expenditures.

Expenditures		Value (USD)
1.	Monthly Food Expenditure	432.86
2.	Monthly Non-Food Expenditure	97.33
Total Monthly Expenditures		**530.19**

To calculate the total monthly expenditures for the above table, sum up the monthly food expenditure and the monthly non-food expenditure:

Total Monthly Expenditures Calculation: 432.86 (Monthly Food Consumption Expenditure) + 97.33 (Monthly Non-Food Consumption Expenditure) = **530.19 USD**

6.3 Calculate the FES of Each Household

Compute the food expenditure share of each household by dividing its monthly food expenditure by its total monthly expenditures.

Expenditures		Value (USD)
1.	Monthly Food Expenditure	432.86
2.	Total Monthly Expenditures	530.19
FES		**81.64%**

FES Calculation for the Above Table: 432.86 (Monthly Food Expenditure) / 530.19 (Total Monthly Expenditure) = **81.64%**

Classification of this household: The calculated FES ratio is 0.8164 (81.64%), indicating that this household has a Very High Expenditure Share and, therefore, High Economic Vulnerability (see next section for more classifications).

⚠ **Expected FES range**: Each household's FES falls within the range of 0 and 1 (Between 0% and 100%).

⚠ **Data quality**: Extreme values of 0 or 1(100%) in the FES could indicate potential data quality issues. Households reporting zero consumption expenditures in either category are rare and may reflect data collection problems. Refer to the Data Quality Guidance Note for further guidance on preventing and resolving such instances.

6.4 Assign Each Household into an FES Category

After calculating the food expenditure share (FES) for each household, it's important to assign them into FES categories based on their FES score. The following ranges are typically used for classification:

FES Range	Classification
0 <= FES < 50%	Low Food Expenditure Share
50% ≤ FES < 65%	Medium Food Expenditure Share
65% ≤ FES < 75%	High Food Expenditure Share
75% ≤ FES ≤ 100%	Very High Food Expenditure Share

Assigning households into these categories provides insights into their economic vulnerability and helps in understanding their ability to access food.

7. Training on FES Data Collection

During the enumerator training:

- **Explain the Objectives of the Module**: The primary objective of this module is to gather comprehensive information on the Food Expenditure Share (FES) of households within the targeted population. This indicator is crucial as it reflects the economic vulnerability of households. The data collected is used for both internal management and external reporting purposes, providing insights for programmatic decisions and evaluations.
- **Ensuring Data Quality**: FES is a key food security indicator that requires rigorous validation. Enumerators must conduct thorough data quality checks by triangulating FES data with other food security indicators. Techniques such as probing should be employed to ensure accurate responses. Enumerators should refrain from assuming answers and must ask each question in its entirety.
- **Understanding Question Wording and Recall Periods**: It is essential to clarify how each question is framed and differentiate between recall periods (7 days, 30 days, and 6 months). Enumerators must ensure respondents understand the distinction between purchases and consumption, which is critical for probing and follow-up questions in case of misunderstandings.
- **Recall Period Clarification**: The recall period always begins from the day before the interview. For example, if today is Wednesday, the enumerator should inquire about expenditures or consumption from Wednesday of the previous week up to yesterday. It's crucial to use precise terms like "the previous 7 days" to avoid confusion among respondents.
- **Food and Non-Food Group Classification**: Enumerators should be familiarized with a list of relevant food and non-food groups based on local consumption patterns and common items.

This classification should be thoroughly discussed and understood during enumerator training to ensure consistency in data collection.

- **Special Instructions for In-kind Assistance**: Enumerators should specifically address how to handle items received as in-kind gifts or assistance. These items should only be included when used by the household, and their value estimated accordingly.
- **Handling Unusual Responses**: Enumerators should be prepared to probe and verify unusual expenditure or consumption patterns. This includes checking for discrepancies related to household size, reported income, type of livelihood, and food consumption habits.
- **Currency and Quantity Verification**: Ensure that values are reported in the correct currency and quantities are accurately recorded. Enumerators should probe if there are discrepancies or uncertainties in reported figures.
- **Additional Considerations**: During training, emphasize that respondents should not double-report expenditures, especially for non-food items like fuel under transport-related goods and services. Large expenditures such as vehicles or appliances should be excluded. Ensure clarity that expenditures for business inputs or investments are not included, even if related to agricultural activities.
- **Difficulty in Remembering Expenditures**: Recognize that interviewees may have difficulty remembering the exact expenditures for each food and non-food item. This challenge can be even greater if the interviewee does not have direct knowledge of certain expenditures (e.g., a household member went to the hospital for medical checks and the interviewee does not know the cost). In such cases, enumerators should guide respondents to make reasonable estimations of the expenditures.

8. Data Collection

Data collection of household food expenditure share must employ the standard FES module available here as well as in the CARI technical guide here. The XLSForm on the VAM resource centre also helps in designing forms using Excel which can be converted to MoDA or ODK forms - data collection software. The form can also be generated through the WFP Survey Designer.

Note that for comparability, it is recommended that the FES and other FS indicators are collected within the same timeframe in the country. If not, the comparability of results over time and assumptions will be limited. For example, for programme activity monitoring, it is strongly recommended that data collection for follow-ups (or endline assessments) happen in the same period/season as the baseline.

9. Quality Assurance

Data quality checks should be applied for quality assurance purposes during the data collection phase to flag irregular reported data for early detection of potential data quality concerns. Ideally data quality issues should be captured and corrected as soon as they have been detected to avoid the same mistakes being repeated during the entire data collection, resulting in a bias to the entire dataset. For instance, if non-food consumption expenditures

in the previous 6 months were over-reported, the food security situation will look better than the reality, while over-reporting of purchased food items in the previous 7 days will make the situation look worse than the reality.

Data quality checks: It is important to stress that the enumerators are the first point of control for data quality checks. They should check for the following inconsistencies during data collection:

⚠ **Consistency between Expenditures and Consumption**: Enumerators should probe discrepancies where respondents report consuming certain perishable food products frequently but claim no expenditures on them within the past 7 days. This situation could indicate either underreporting of expenditures or overestimation of in-kind assistance.

⚠ **Erroneous Values**: Enumerators must be vigilant for outliers such as unusually high or low expenditure values. These anomalies could skew overall expenditure trends and must be verified through probing and cross-referencing with other indicators.

⚠ **Importance of Accurate Recording**: One critical aspect of accurate data recording is the handling of values that include multiple zeros. Adding or removing a zero can drastically alter reported expenditures, leading to misleading conclusions if not corrected promptly. For example, mistakenly recording 100,000 instead of 10,000 or vice versa can skew the analysis of household spending patterns.

⚠ **Currency Issues:** Ensuring consistency in currency values reported is crucial, especially in diverse economic contexts where respondents may use different currencies or face fluctuating exchange rates. Enumerators should clarify and convert values where necessary to maintain accuracy.

Erroneous Values:

- During the tool design phase: It is critical to program the XLSForm to enforce limits on expenditure values (e.g., 0 - 100,000,000) to prevent erroneous entries. Additionally, incorporating a **thousand-separator** in the tool interface enhances readability for enumerators, facilitating accurate data entry.
- During data collection, enumerators and team leaders must conduct daily checks to identify and correct any values that exceed logical thresholds or appear erroneous.
- In the data analysis phase, any expenditures outside the predefined limits should be carefully reviewed and, if necessary, adjusted to maintain consistency and accuracy in expenditure reporting.

Missing Values:

- During the tool design phase: To minimize missing data, questions within the FES module should be **set as mandatory** during the tool design phase using XLSForm.
- During data collection, enumerators should immediately flag any missing values identified during quality checks to ensure completeness.
- During data analysis: It is essential to review and address these gaps promptly to maintain the integrity and reliability of the dataset.

Abnormal Expenditure Patterns:

- During the tool design phase, integrate **qualitative follow-up questions** in the XLSForm to probe abnormal expenditure patterns (e.g., unusually high or low spending on specific food categories).
- During data collection, analysts should conduct thorough checks to identify outliers and investigate reasons behind inconsistent spending behaviors.
- In the data analysis phase, outliers should be reviewed contextually to determine their impact on overall expenditure trends and adjust accordingly to reflect accurate household expenditure patterns.

10. Analysis of the FES Module

10.1 Median Per Capita Expenditure Analysis

- Median Per Capita Expenditure of Households per Item: Calculate the median per capita expenditure for each item within both food and non-food items.
- Median Per Capita Expenditure per Various Factors: This includes analyzing median per capita expenditure of each item based on factors such as geographical area, livelihood groups, population groups, and FES classification.

10.2 Percentage of Households within Each FES Classification

- Overall: Calculate the overall percentage of households within each FES classification (low FES, medium FES, high FES, very high FES).
- By Various Factors: Determine the percentage of households within each FES classification (low FES, medium FES, high FES, very high FES) based on various factors such as geographical area, livelihood groups, and population groups.

10.3 Spending Analysis on Specific Items

Percentage of Households that Spent Money or Did Not Spend Money on Each Item:

- Food Items: Assess the percentage of households that spent or did not spend money on specific food items.
- Non-Food Items: Assess the percentage of households that spent or did not spend money on specific non-food items.

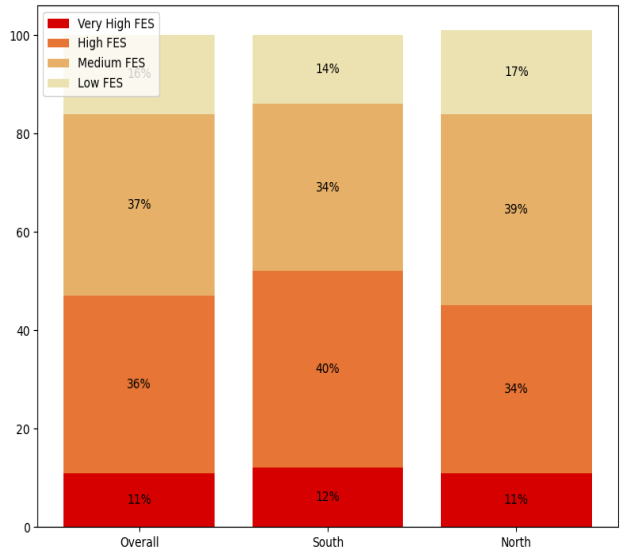
These analyses provide a comprehensive understanding of household expenditure patterns, enabling the identification of trends and insights that can inform policy and program interventions.

11. Reporting and interpreting the FES

11.1 Analysis and Visualization of the FES indicator

Figure 1 illustrates the **reporting of the Food Expenditure Share (FES),** comparing the economic vulnerability between two regions within a country. It's customary to highlight the proportion of households exhibiting high or very high food expenditure shares when discussing FES estimates. Importantly, unless the sample is self-weighting, analysts must apply sample weights to each observation when computing the FES.

Figure 1 – Food expenditure share (FES)



*Almost half of the population (47 percent) face notable economic vulnerability, dedicating **more than 65 percent of their expenditures to food**. For 11 percent of the households, this share is greater than 75 percent, indicating very high financial strain and vulnerability to food insecurity.*

While overall vulnerability is high in both regions, the economic situation in South appears slightly worse than in the North (the share of households with a food expenditure share larger than 65 percent is 52 and 45 percent, respectively). This might be due to the recent drought that affected the South…"

A standardized colour palette has been designated for visualizing FES results. The RGB and HEX colour codes for visualization are presented in the table below:

FES Range	HEX	Colour Code (RGB)
Low FES	#ECE1B1	236, 225, 177
Medium FES	#E6B068	230, 176, 104
High FES	#E67536	230, 117, 54
Very High FES	#D70000	215, 0, 0

Additionally, it can be informative to **report the average food expenditure share of the population alongside the distribution of households across the four categories**. This facilitates comparisons of economic vulnerability across diverse population groups, administrative regions, or different time periods.

11.2 Complementarity with other indicators

For a comprehensive analysis of food insecurity, the **FES should be integrated with indicators reflecting various aspects of food insecurity**, such as the Food Consumption Score (FCS), reduced Coping Strategy Index (rCSI), and Livelihood Coping Strategy Index for Food Security (LCS-FS). While the FES assesses households' economic ability to access food, it does not directly measure food insecurity. For more details on how FES is used in the CARI see chapter four of the Technical Guide on CARI.

Triangulating FES findings with LCS-FS results is particularly recommended, as households may temporarily sustain relatively low food expenditure shares through unsustainable coping

strategies. Additionally, **it's advisable to correlate FES with complementary indicators of household economic vulnerability**, such as income, debt, housing, and asset-related metrics.

12. Limitations and complementarity with other indicators

While the Food Expenditure Share (FES) serves as a valuable and easily calculable indicator of economic vulnerability, it's crucial to recognize and understand its limitations. Awareness of these limitations aids in the accurate interpretation of the indicator.

12.1 Impact of In-kind Assistance

The provision of in-kind food assistance to households typically increases the proportion of their consumption expenditures allocated to food. Consequently, following the receipt of in-kind food assistance, a population may appear more economically vulnerable, holding other factors constant. This widens the gap in economic vulnerability between assisted and non-assisted population groups instead of diminishing it.

As a result, the FES indicator is not ideal for monitoring changes in the vulnerability of assisted populations over time or for comparing the vulnerability status of assisted and non-assisted groups. In such cases, the Economic Capacity to Meet Essential Needs (ECMEN) indicator is preferable for addressing these analytical objectives.

12.2 Use of Non-standard Consumption Expenditure Modules

The FES indicator is highly sensitive to variations in the consumption expenditure modules used to compute it. Changes in elements such as the number and type of consumption categories, recall periods, and the definition of consumption expenditures can significantly affect the estimated share of consumption expenditures allocated to food.

Country Offices are strongly advised to use standard WFP expenditure modules consistently across data collection rounds. When variations in modules occur or when comparing FES estimates for different population groups surveyed with different assessment tools, analysts should exercise caution in interpreting the results.

12.3 Relationship between FES and Household Size

The FES indicator may inadvertently portray larger households as more vulnerable than smaller ones due to its inability to account for household economies of scale. Certain non-food goods and services, such as housing and utilities, can be shared among household members. Consequently, the amount of expenditures required to meet non-food needs grows less than proportionally with household size.

This means that, while holding economic status and vulnerability constant, larger households are likely to have a higher food expenditure share than smaller households. The issue of economies of scale can potentially be addressed by the ECMEN indicator, which sets different per capita Minimum Expenditure Basket values for households of different sizes, considering economies of scale.

Acronyms

CARI	Consolidated Approach to Reporting Indicators of Food Security
CFSVA	Comprehensive Food Security and Vulnerability Analyses
ECMEN	Economic Capacity to Meet Essential Needs
EFSA	Emergency Food Security Assessment
ENA	Essential Needs Assessment
FES	Food Expenditure Share
LCS	Livelihood Coping Strategies indicator
rCSI	Reduced Coping Strategy Index
WFP	World Food Programme

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