Technical Guidance Note

Consolidated Approach to Reporting Indicators of Food Security (CARI)

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Consolidated Approach to Reporting Indicators of Food Security (CARI) Guidelines

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Via Cesare Giulio Viola 68, Parco dei Medici, 00148 - Rome - Italy

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Feedback

Any feedback and suggestions for improvement are welcome and should be sent to Kathryn Ogden in the Assessments team: Kathryn.ogden@wfp.org

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PURPOSE OF TECHNICAL GUIDANCE

The purpose of this guide is to support VAM officers carry out assessments using WFP's household-level food security classification: the **Consolidated Approach for Reporting Indicators of Food Security (CARI)**. Specifically, the guide instructs users how to:

- **Collect data for CARI reporting console** by presenting standard questionnaire modules and instructions on how they can be adapted.
- **Construct the reporting console** by transforming standard WFP indicators to generate the overall food security classification.
- **Present and interpret console results.**

Section 1 introduces the reader to the **CARI**, its components, and intended application.

Section 2 explains how the **CARI reporting console** is constructed. First it describes which types of data are needed to produce the console's two food security domains: *current status* and *coping capacity*. It then explains how to calculate the **overall food security classification**.

Sections 3 and 4 explain how to generate the various food security indicators required by the **two CARI domains** (*current status* and *coping capacity*). These sections also explain how to transform the food security indicators into the CARI reporting console layout.

Section 5 provides guidance on how to present and interpret CARI results. It explains how to report on the overall **prevalence of food insecurity**, and how to use the console to describe the experiences of households belonging to each food security classification. It also describes the linkages and similarities between the CARI and the Integrated Food Security Phase Classification (IPC).

Section 6 presents the standard questionnaire modules required to generate the data for the CARI food security indicators. VAM officers should study this section when designing questionnaires and training enumerators.

1. INTRODUCTION TO CARI

1.1 Background and description

The World Food Programme's VAM unit began a project in 2012 to develop a standardized approach for assessing and reporting on household food insecurity in its country-level reports. The project was initiated in response to the wide diversity of methods that had been used previously.

The approach developed —*hereafter referred to as the CARI*[1]— culminates in a **food security console** which supports the reporting and combining of food security indicators in a systematic and transparent way, using information collected in a typical VAM survey. Central to the approach is an explicit classification of households into four descriptive groups: food secure, marginally food secure, moderately food insecure, and severely food insecure. The classification provides a representative estimate of food insecurity within the target population whether it is calculated at the national, district, region or livelihood level.

An in depth overview of the background and testing of the CARI is also available[2].

1.2 What is the CARI Console?

The **food security console** is the final output of the CARI. It combines a suite of **food security indicators** into a summary indicator –called the **Food Security Index** (FSI) - which represents the population's *overall food security status*. The console itself serves to provide a clear snapshot of the rates of the different types of a population's food insecurity at quick glance. **Table 1** provides an example of a completed CARI reporting console.

[1] Consolidated Approach for Reporting Indicators of Food Security
[2] Food Security Assessment at WFP: *Report on Continued Development and Testing of a Standardized Approach*

Table 1: Example of completed CARI reporting console[3]

Domain		Indicator	Food Secure (1)	Marginally Food Secure (2)	Moderately Insecure (3)	Severely Insecure (4)
Current Status	Food Consumption	Food consumption score	51%		36%	13%
		Food energy shortfall	*n/a*	*n/a*	*n/a*	*n/a*
Coping Capacity	Economic Vulnerability	Food expenditure share	8%	9%	11%	72%
		Poverty status	*n/a*	*n/a*	*n/a*	*n/a*
	Asset Depletion	Livelihood coping strategy categories	66%	19%	3%	11%
Food Insecurity Index			**6.9%**	**43.7%**	**42.7%**	**6.8%**

To provide the reader with a complete picture of the CARI console, the example console in Table 1 contains all five possible CARI food security indicators –including those not producible using the example dataset (i.e. *food energy shortfall*, and *poverty status*). In practice, however, when presenting the CARI console, the analyst should only include rows of the indicators which can be reported on.

A useful way to think about the console is to consider each reported food security indicator as a building block required to form the population's overall classification. The console (see Table 1) stacks these blocks together: each row represents an indicator and shows how the target population is distributed, for that indicator, across the console's four standard categories: 1) Food Secure, 2) Marginally food secure, 3) Moderately Insecure, and 4) Severely Insecure.

The final row of the console presents the population's overall food security outcome; this is described as the **food security index**. This is based on an algorithm which combines, at the household level, the results for each of the reported food security indicators.
The convergence of each food security indicator's category with the overall food security category will be explained in detail in **Section 2**.

[3] See Annex J for French and Spanish versions of the console.

1.3 Console domains and food security indicators

The console's domains represent two key dimensions of food insecurity. The **current status** domain (Table 1, *top rows*) employs food security indicators which measure the adequacy of households' current food consumption. Specifically, this domain is based on the **food consumption score** and/or **food energy shortfall** indicators. **Section 3** of this guidance explains how these indicators are incorporated to the console.

The **coping capacity** domain (Table 1, *middle rows*) employs indicators which measure households' economic vulnerability and asset depletion. Specifically, this domain is based upon a combination of the **livelihood coping strategy** indicator and either the **food expenditure share** indicator or the **poverty status** indicator. **Section 4** of this guidance explains how these indicators are incorporated to the console.

1.4 CARI and the Integrated Food Security Phase Classification (IPC)

The CARI has been designed so that it is compatible with the Integrated Food Security Phase Classification (IPC)[4]. WFP analysts are responsible for understanding and explaining the differences between the IPC and the CARI, and how the CARI results should be adapted to the IPC.

The **IPC** is an important approach for combining food security indicators in a way that is standardized and useful as a first step in making programming and policy decisions. Essentially, each IPC takes the form of a national forum –comprised of Government, UN, NGOs, and civil society– that conducts a joint food security analysis using secondary data to reach technical consensus on the nature and severity of that country's food insecurity. Following the forum, the IPC results are consolidated into a report containing the key findings of the analysis and the 'IPC severity phases' map.

The IPC is endorsed by a number of international organizations, including WFP, which participates as a member of the IPC's global steering committee (IPC Global Partners, 2012). The IPC approach combines conceptual frameworks on risk and vulnerability, sustainable livelihoods, and the UNICEF causal framework on nutrition with the four basic dimensions (availability, access, utilization, and stability) of food security analysis.

[4] For a detailed explanation about the IPC, visit: http://www.ipcinfo.org/fileadmin/user_upload/ipcinfo/docs/IPC-Factsheet.pdf

There are **three fundamental differences** between the CARI and the IPC. These are outlined below:

1. **Unit of analysis:** IPC involves area-wide analyses, or considers groups of households; the unit of analysis in the CARI is the household. In the CARI, each household is categorised into a food security group.
2. **Terminology:** IPC is based on five food insecurity **phases** (Minimal, Stressed, Crisis, Emergency, Famine); the CARI uses four food security groups (food secure, marginally food secure, moderately food insecure, severely food insecure).
3. **Algorithm:** IPC is a consensus-based process involving relevant stakeholders who together consider a number of information sources before determining a country's food insecurity phases. The CARI must be based on a single survey dataset. Thus, the CARI applies a specific algorithm (detailed in this guidance) to assign each surveyed household into one of the four food security groups.

During the IPC exercise, we suggest the CARI be considered alongside the other available household food security indicators. Given the difference between the two methodologies, the CARI Food Security Index (aggregate results) is unlikely to be incorporate into an IPC process. The IPC "convergence-of-evidence" approach, which requires food security analysts to evaluate the body of evidence as a whole, means the component indicators of the CARI will be treated separately within an IPC analysis, and considered in conjunction with other evidence.[5] Although the two are not comparable (given the aforementioned methodological differences), **Figure 1** shows both the final CARI classifications and the IPC phases. **Annex F** provides a detailed description of each group/phase.

Figure 1: CARI classifications and IPC phases

CARI Household Groups
1 = Food secure
2 = Marginally food secure
3 = Moderately food insecure
4 = Severely food insecure

IPC Phases
1 = Minimal
2 = Stressed
3 = Crisis
4 = Emergency
5 = Famine

[5] For more details on indicators within the CARI and the IPC, please refer to the CARI IPC Factsheet and Technical Annex: http://documents.wfp.org/stellent/groups/public/documents/manual_guide_proced/wfp271451.pdf

1.5 Limitations of the CARI approach

There are a number of limitations to the CARI. First, as is the case whenever multiple data from different dimensions are summarized into one summary indicator, there is a loss of information. That certainly is the case here, where averaging together of *current food consumption* with *coping capacity* gives one an indicator that cannot distinguish, for example, between a household with *poor consumption* today, but adequate *coping capacity* and a household in the opposite situation.

A second concern has to do with the very idea of a global indicator. While standardized indicators are helpful for agencies or donors that work globally across a number of countries or regions, taking action on the ground often requires more specialized information, developed to capture local nuances.

The intention of this approach, however, is to make available a suite of indicators, so that information on a number of dimensions of the problem is provided, in addition to the summary indicator (i.e. the food security index). VAM surveys collect lots of additional data beyond what is suggested here for the food security console. The analyst must continue to present these additional sources of data as they can be useful for informing programmatic decisions. This contextual information is also crucial for developing analytical narrative which underpins the key findings.

Third, the combinations of indicators used within the CARI are likely to change. We will continue to test the CARI as individual food security indicators change overtime. As understanding improves about how sensitive the CARI is to specific conditions of different countries, and as new indicators are developed which are designed to measure food security, some minor adjustments and inclusions may take place. Any such changes will be accompanied by updated versions of this guidance.

2. CONSTRUCTING THE CARI CONSOLE

2.1 When to use the CARI console?

The CARI methodology is designed to be used for WFP food security assessments which aim to estimate the actual number of food insecure households in a target population. The method is suitable for national and regional assessments, as well as more specific locations, such as refugee settlements.

The CARI console requires data sourced entirely from **a single household-level survey**. Suitable survey tools include those used during most standard WFP assessments (including CFSVAs, EFSAs, and comprehensive FSMSs) and some non-WFP surveys (for example, LSMS). The inclusion of CARI questionnaire modules in light food security monitoring systems is encouraged; however, in some cases various constraints (i.e. the number of additional questions and time taken to administer them) will make its inclusion unfeasible. As it is a quantitative approach, the CARI is unsuitable for qualitative assessments which are based only on key-informant interviews and focus group discussions.

2.2 Which food security indicators does CARI require?

To construct the CARI console, the survey tool must generate an *acceptable* minimum combination of food security indicators. **Table 2** shows the six possible combinations of food security indicators which will facilitate construction of the console. These CARI combinations have been determined as sufficient for measuring food insecurity. Each combination contains at least one indicator to gauge the **current food consumption** (i.e. the food consumption score and the food energy shortfall); at least one indicator measuring **economic vulnerability** (either the poverty status or food expenditure share indicators); and, the **livelihood coping strategies indicator**. Each combination has been deemed to contain sufficient information for establishing the population's level of food insecurity.

Capturing the most information, indicator **combination 1** represents the most ideal combination. However, in reality, **indicator combination 4** –comprised of the standard WFP modules- will be the most commonly used (such as in Table 1).

The **standard questionnaire modules** required to generate the console's indicators are included in **Section 6** of this guidance.

Table 2: Acceptable CARI food security indicator combinations[6], and descriptions

Indicator Combo	Food Security Indicators				
	Current Status		*Coping Capacity*		
	Food Consumption Score	**Food Energy Shortfall**	**Poverty status**	**Food Expenditure Share**	**Livelihood Coping Strategy Categories**
1	✓	✓	✓		✓
2	✓	✓		✓	✓
3	✓		✓		✓
4	✓			✓	✓
5		✓	✓		✓
6		✓		✓	✓
Indicator description	Measures current food consumption. Households allocated into groups based on the variety and frequency of foods consumed. ***(see Section 3.1.1)***	Measures current food consumption. Classifies households based on daily per capita calorie intake. ***(see Section 3.2.1)***	Measures economic vulnerability. Households' consumption value compared to established poverty line and food poverty line, ***(see Section 4.1.1)***	Measures economic vulnerability. Households categorised based on the share of total expenditures directed to food. ***(see Section 4.1.2)***	Measures sustainability of livelihoods. Households categorised based on severity of livelihood coping strategies employed. ***(see Section 4.2)***

2.3 Converting food security indicators into a 4-point scale

A central stage of the console methodology involves converting the outcomes of each console indicator into a standard 4-point classification scale. The 4-point scale assigns a score (1-4) to each category, as shown below:

4-point scale category	Score
Food Secure	1
Marginally food secure	2
Moderately Food Insecure	3
Severely Food Insecure	4

[6] Further validation will take place to test whether other indicator combinations are suitable for the CARI console classification; for instance, the combination of 'food consumption groups' and 'livelihood coping strategies', or the introduction of the reduced CSI indicator (see section 6.6). Results to be shared among VAM community upon completion of testing.

Within each of the two domains (current status and coping capacity), the 4-point scale indicator scores are then averaged to establish the household-level *summary indicators*. These summary indicators are then averaged to establish household's overall food security classification. The averaging procedure for adapting the console scores into the **overall food security classification** is explained below in **Section 2.4.**

Sections 3 and 4 of this guide explain in detail the steps involved for converting the stand-alone results of each food security indicator into the 4-point scale.

2.4 Calculating the overall food security classification

Once all the available food security indicators in the console have been converted to the 4-point scale, the **overall food security classification** for a household can be easily calculated.

The steps to calculate the overall food security classification for a household are described below[7].

1) Calculate the *'summary indicator of Current Status'* by averaging the household's console score (i.e. the 4-point scale scores) for available indicators in the **Current Status** domain (CS) [8].
2) Calculate the *'summary indicator of Coping Capacity*' by averaging the household's console scores (i.e. the 4-point scale scores) for available indicators in the **Coping Capacity** domain (CC).
3) Average these results together: (CS+CC)/2.
4) Round to the nearest whole number (this will always fall between 1 and 4). This number represents the household's overall food security outcome.

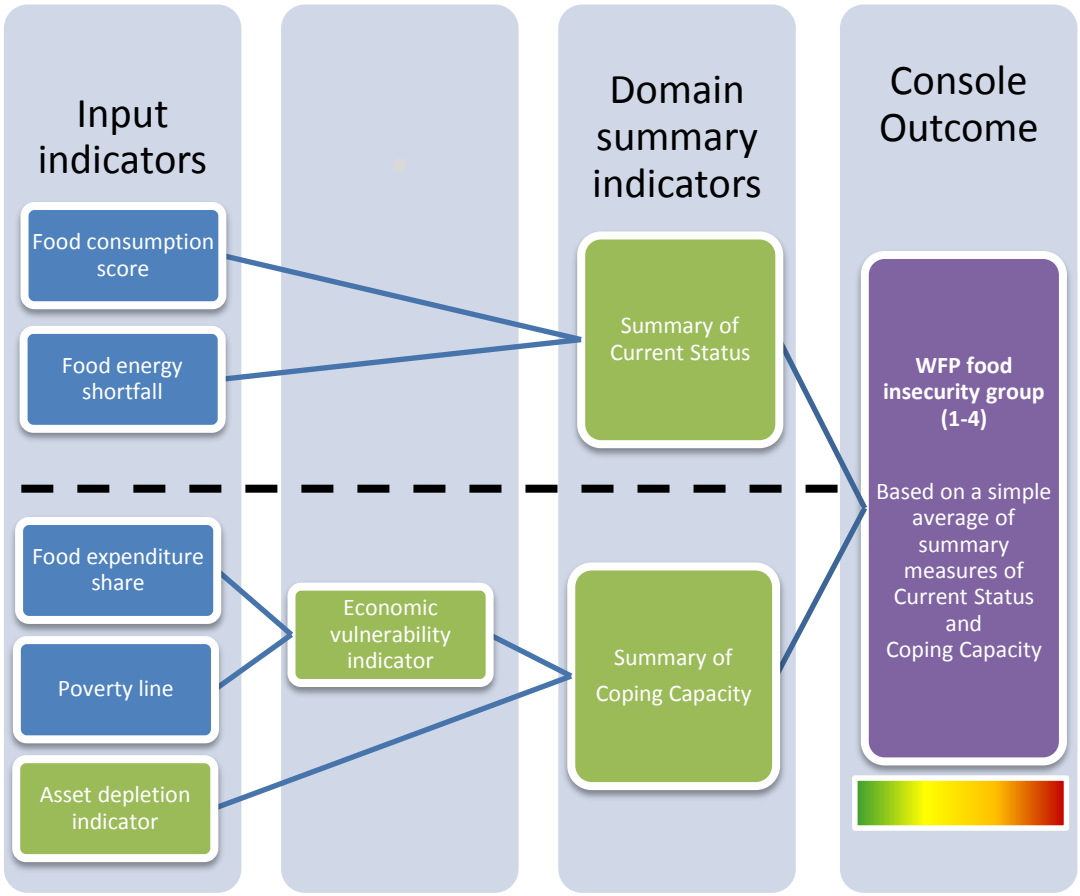
The precise formula used to calculate the food security status of a household will vary depending on which indicators have been employed in the console. **Annex A** includes the formulas for calculating the **overall food security classification** for each of the six acceptable console indicator combinations.

[7] Additionally, **Annex E** contains the relevant SPSS syntax for calculating these steps.

[8] Often, only one current status indicator can be constructed from the survey—for instance, the *food consumption score*. In such cases, the summary CS indicator would simply be the 4–point scale score of whichever single food consumption indicator is available.

The flow-graph in **Figure 2** depicts graphically how the different components of the console combine to generate the **overall food security classification**. The green boxes represent indicators necessary to the construction of the console. The blue boxes represent the indicators of which the analyst will need –at minimum– either one or the other.

Figure 2: Flow-graph of the CARI console components



The final row of the reporting console is used to present the overall results for the population in a summary indicator: the *food security index (FSI)*. **Table 3** provides a description of the four categories belonging to FSI.

Table 3: Description of overall WFP food security classifications

	Food Secure	Marginally food secure	Moderately food insecure	Severely food insecure
Food Security Index	Able to meet essential food and non-food needs without engaging in atypical coping strategies	Has minimally adequate food consumption without engaging in irreversible coping strategies; unable to afford some essential non-food expenditures	Has significant food consumption gaps, OR marginally able to meet minimum food needs only with irreversible coping strategies	Has extreme food consumption gaps, OR has extreme loss of livelihood assets will lead to food consumption gaps, or worse

3. CURRENT STATUS DOMAIN

The CARI console's ***Current Status*** domain (i.e. the top section of Table 1) reports on the adequacy of households' food consumption at the time of survey. The console measures food consumption by using one or both of the following indicators:

- Food consumption score
- Food energy shortfall

Table 4 provides a quick indication of how the **Current Status** standard indicators are converted to the 4-point scale. The remainder of this section elaborates on this table, explaining in detail how to collect the data for the two indicators, and how to transform the indicator results into the console.

Table 4: Current Status domain of CARI Console

Domain		Indicator	Food Secure (1)	Marginally food secure (2)	Moderately food insecure (3)	Severely food insecure (4)
Current Status	Food Consumption	Food Consumption Score	Acceptable		Borderline	Poor
		Food Energy Shortfall	≥ 2100 kcal	< 2100; > avg (2100,MDER)	< avg (2100, MDER); >MDER	<MDER

3.1.1 Food Consumption Score

When the data are available, the CARI console uses WFP food consumption group data (based on the food consumption score or FCS) as a descriptor of a household's ***current status*** of food consumption. The FCS is a proxy of households' food access and a core WFP indicator used to classify households into different groups based on the adequacy of the foods consumed in the week prior to being surveyed.

Section 6.1 presents the **Food Consumption** questionnaire module and contains instructions on how it should be administered to obtain an accurate food consumption score (FCS).

3.1.2 Converting FCS to CARI

The steps to convert FCS results to the CARI console's 4-point scale are described below. The relevant SPSS syntax is provided in **Annex B**. To convert the FCS to the CARI, the analyst must:

1. Calculate the **food consumption score** and categorise each household into one of the three food consumption groups (FCGs): Poor, Borderline, or Acceptable. This should be done using the country's standard food consumption group thresholds. *For more information on constructing the food consumption groups, go here[9].*

2. Using the FCGs, create a new variable in SPSS –for example, '**FCS_4pt'**– which converts each household's FCG status into the corresponding categories of the **4-point scale** as shown below in **Table 5**. To do this:
    - Convert 'Acceptable' households to 'food secure' and assign these households a score of 1.
    - Convert 'Borderline' households to 'moderately food insecure' and assign these households a score of 3.
    - Convert 'Poor' households to 'severely food insecure' and assign these households a score of 4.

    For the 'food consumption group' indicator, all households will fall into these three categories – that is, no households will be classified as '*Marginally food secure'* (see Table 5).
3. Run a basic frequency for the variable **FCS_4pt** to determine the population's distribution across the categories.

4. Add frequency results to the 'food consumption score' row of the **console** (as illustrated in **Table 5**). Note that, for **FCS_4pt**, the category 'Marginally food secure' will always remain blank.

[9] http://resources.vam.wfp.org/node/13

Table 5: Console – current status component, Food Consumption Score

Domain		Indicator	Food Secure (1)	Marginally food secure	Moderately food insecure (3)	Severely food insecure (4)
Current Status	Food Consumption	Food consumption score	Acceptable		Borderline	Poor

3.2.1 Food energy shortfall

Food energy shortfall is an important indicator of consumption. When the required data are available, the CARI console uses calorie intake as an input to evaluate the household's ***current status*** of food consumption.

WFP questionnaires are typically unable to generate calorie information as this requires exhaustive food consumption data, including information about the quantities consumed. However, a number of WFP assessments make use of already collected non-WFP data (usually generated by national statistics offices). Some examples include household expenditure surveys, and the World Bank series of Living Standards Measurement Study (LSMS).

Section 6.2 provides an example of a 'food quantity' module which would generate sufficient kilocalorie intake information.

3.2.2 Converting calorie intake to CARI

This section explains how kilocalorie analysis should be adapted to suit the FSC module. It does not describe how to estimate households' kilocalorie intake. Clear guidance on the method designed by IFPRI (and followed by WFP) is available here: *'Measuring Food Security Using Household Expenditure Surveys'*[10].

Household calorie intake must be converted into the corresponding categories of the **4-point FSC scale** as shown below in **Table 6.**

[10] http://www.ifpri.org/sites/default/files/pubs/pubs/fspractice/sp3/sp3.pdf

The steps to carry out the conversion follow:

1. For each household, determine the daily per capita calorie intake.
2. Create a new indicator in SPSS -called '**KCAL_4pt'**– and classify households with more than 2100 kilocalories per capita, per day as '**Food Secure'** and assign these households a value of 1.
3. Take the **Minimum Daily Energy Requirement (MDER)** for the country (available here[11]).
4. In the variable **KCAL_4pt,** classify households which have achieved less than the national MDER per person as '**severely food insecure'** and assign these households a value of 4**.**
5. Determine the **midpoint** between the MDER and 2100 kcal/p/d.
6. Classify households with a per capita calorie intake above the **midpoint** but below 2100 kcal/p/d as '**Marginally food secure**' and assign these households a value of 2.
7. Classify households with a kcal/p/d below the '**midpoint'** but above MDER as having '**Moderately Food Insecure'** and assign a value of 3.

Table 6: Console – current status component, Food energy shortfall

Domain		Indicator	Food Secure (1)	Marginally Food secure (2)	Moderately Food Insecure (3)	Severely Food Insecure (4)
Current Status	Food Consumption	Food energy shortfall	kcal/p/d ≥ 2100 (34%)	kcal/p/d < 2100 kcal/p/d ≥ mean (MDER, 2100) (20%)	kcal/p/d < mean (MDER, 2100), kcal/p/d ≥ MDER (30%)	kcal/p/d < MDER (16%)

(1) Households with a per capita daily kilocalorie intake greater than 2,100 calories

(2) Households with a per capita daily kilocalorie intake which is less than 2,100 calories but greater than the mean of 1) the national MDER and 2) 2,100.

(3) Households with a per capita daily kilocalorie intake which is greater than the national MDER but less than the mean of 1) the MDER and 2) 2,100.

(4) Households with a per capita daily kilocalorie intake which is less than the national MDER.

[11] http://www.fao.org/fileadmin/templates/ess/documents/food_security_statistics/MinimumDietaryEnergyRequirement_en.xls

4. COPING CAPACITY DOMAIN

The console's **Coping Capacity** domain (i.e. the middle section of Table 1) aims to measure households' resilience to potential shocks. The CARI console considers two dimensions of household coping capacity:

1. Economic vulnerability; and
2. Asset depletion

Table 7 provides a quick indication of how the **Coping Capacity** standard indicators are converted to the 4-point scale. The remainder of this section explains in more detail how to convert the presented indicators into the CARI console.

Table 7: Coping capacity dimension of the CARI Console

Domain		Indicator	Food Secure (1)	Marginally food secure (2)	Moderately food insecure (3)	Severely food insecure (4)
Coping Capacity	Economic Vulnerability	Poverty Status	Total expenditure > poverty line		100% food poverty line ≥ Total Exp ≤ 100% of poverty line	Total Exp ≤ 100% of food poverty line
		Food Expenditure Share	<50%	50-65%	65-75%	≥ 75%
	Asset Depletion	Livelihood coping indicator	None	Employed stress strategies	Employed crisis strategies	Employed emergency strategies

4.1 Economic Vulnerability

In the CARI console, a household's economic vulnerability is determined using **either** the poverty status (based on the national poverty line), or the share of household expenditures spent on food. While the former indicator provides a stronger estimate of household vulnerability, it is unlikely to be available for most WFP assessments. It is important to note that: only one of the two 'economic vulnerability' indicators should be used (i.e. either *poverty status* OR *food expenditure share*, but not both).

4.1.1 Poverty status

Counting the households which fall below the **national poverty line** is the most widely accepted approach for measuring a household's poverty status, or economic vulnerability. The poverty line represents the value –in local currency- of a standard consumption bundle of goods and services deemed adequate for an average adult to live satisfactorily. This consumption bundle comprises what has been determined as a person's minimum basic needs.

The **food poverty line** is part of the **poverty line.** It is an estimate of the cost of consuming a suitable daily intake of calories for an adult. Essentially, it's the minimum cost of a food basket required to ensure sufficient calorie consumption.

Standard WFP questionnaires are unable to generate poverty lines. However, a number of WFP assessments based on national statistics office or World Bank data may include poverty line data – though in such cases it may not be considered official poverty line data. Some examples include national household expenditure surveys, and the Living Standards Measurement Studies (LSMSs) series. Such surveys vary in regularity and availability. The analyst is responsible for determining whether the timing and data of available non-WFP surveys are suitable for the assessment.

The module used to generated poverty lines must include very detailed food and non-food expenditure lists. National household expenditure surveys provide the best example of what the tool should look like. Indeed, only surveys for which an original objective is to measure poverty using poverty lines will generate data suitable for this CARI indicator (poverty status).

4.1.2 Converting poverty line data to CARI

This section explains how poverty line information can be adapted to suit the FSC module. It does not describe how to generate poverty lines. It is expected that in instances where poverty line data can be generated (such as an LSMS database), the data providers will be responsible for constructing these variables, namely **'poverty line'** and **'food poverty line'** (per adult equivalent or capita).

Table 8 shows how to use poverty line information to categorise households into the 4-point scale.

- If total expenditure (per adult equivalent or capita) exceeds the respective poverty line, the variable **Pov_4pt** should be assigned a score of 1.

- If total expenditure (per adult equivalent or capita) falls below the respective poverty line, the variable **Pov_4pt** should be assigned a score of 3.
- If total expenditure (per adult equivalent or capita) falls below the respective food poverty line, the variable **Pov_4pt** should be assigned a score of 4.

Table 8: Console–coping capacity component, poverty status

Domain		Indicator	Food Secure (1)	Marginally food secure (2)	Moderate Insecurity (3)	Severe Insecurity (4)
Coping Capacity	Economic vulnerability	Poverty status	Total expenditure ≥ poverty line	--	100% poverty line ≥ total expenditure ≥ 100% food poverty line	total expenditure ≤ 100% of food poverty line

(1) Households with total per capita expenditure greater than the national poverty line.

(2) Households with a per capita (or adult equivalent) expenditure which is greater than the national food poverty line per capita (or adult expenditure) but less than the national poverty line.

(4) Households with a per capita (or adult equivalent) expenditure which is less than the national food poverty line per capita (or adult expenditure).

4.1.2 Food expenditure share

In most WFP assessments, poverty line information is not available. When the survey cannot generate poverty line data, **economic vulnerability** is measured using the '**food expenditure share**' indicator. This indicator is based on the premise that the greater the importance of food within a household's overall budget (relative to other consumed items/services) the more economically vulnerable the household.

The **'food expenditure share'** indicator is essentially constructed by dividing the total food expenditures by the total household expenditures. However, an important caveat is that both the denominator and numerator should include the value of non-purchased foods consumed.

By including both non-purchased foods and purchased foods within the overall food expenditure share estimate, the indicator considers households with different food access situations similarly. However, the measure of economic vulnerability is concerned chiefly with how much (proportionately) of the household's total expenditures, is directed to non-food items. In other words, how bigger role does food play with respect to the consumption of other non-food items.

To this end, the indicator is appropriate for classifying households with different food-acquisition patterns.

Section 6.3 and Section 6.4 present example questionnaire modules for capturing food and non-food expenditure information from households. These sections include instructions on how to formulate and administer the modules in order to obtain an accurate food expenditure share.

4.1.2 Calculating food expenditure share and converting to CARI

The steps to calculate the food expenditure share, and convert it to the CARI console 4-point scale, are below. The relevant SPSS syntax is provided in **Annex D**.

1. For each household, sum together the total food expenditures (cash and credit) for the 30 day recall period (*see columns under 3.01 in module of **Section 6.3*** of this guide). Add this total to the summed total value of non-purchased food items which were consumed in past 30 days (column 3.03). Together, these amounts comprise the household's total '**food basket value'** for the past 30 days. You now have the variable **'food_monthly'.**
2. Sum together short-term (30 day) non-food expenses (Section 6.3, module column 3.05). You now have the variable **'nonfood1_monthly'.**
3. Sum together longer-term (6 months) non-food expenses, excluding 'savings' (column 3.07); divide this by 6. You now have the variable **'nonfood2_monthly'.**
4. Divide '**food_monthly'** by the summed total of **'food_monthly**', '**nonfood1_monthly**' and '**nonfood2_monthly**'. The result generated is the '**food expenditure share'** indicator.

$$food\ expenditure\ share = \frac{food\_monthly}{food\_monthly + nonfood1\_monthly\ + nonfood2\_monthly}$$

To convert the '**food expenditure share'** indicator to the 4-point scale, use the corresponding scores shown in Table 9.

Table 9: Console– coping capacity component, food expenditure share

Domain		Indicator	Food Secure (1)	Marginally food secure (2)	Moderately food Insecure (3)	Severely food Insecure (4)
Coping Capacity	Income Status					
		Food expenditure share	< 50%	50% - <65%	65% - <75%	≥ 75%

4.2 Livelihood coping / asset depletion

The CARI uses the **Livelihood Coping Strategies** indicator as a descriptor of a household's *coping capacity*.

The **Livelihood Coping Strategies** indicator is derived from a series of questions regarding the household's experience with livelihood stress and asset depletion during the 30 days prior to survey. Responses are used to understand the stress and insecurity faced by households and describes their capacity to regarding future productivity.

A master list of livelihood coping strategies presents all potential questionnaire items for this indicator (see **Section 6.5, Table 17**). All strategies are classified into three broad groups, including stress, crisis and emergency strategies.

- **Stress strategies**, such as borrowing money or spending savings, are those which indicate a reduced ability to deal with future shocks due to a current reduction in resources or increase in debts.
- **Crisis strategies**, such as selling productive assets, directly reduce future productivity, including human capital formation.
- **Emergency strategies**, such as selling one's land, affect future productivity, but are more difficult to reverse or more dramatic in nature.

Households engaging in routine economic activities that did not involve any of these strategies would be considered equivalent to **food secure** on this indicator.

Section 6.5 presents the questionnaire module for this indicator. It also provides instructions on how to adapt and administer the livelihood-coping strategy modules based on the local context.

4.2.1 Converting livelihood-coping strategies to CARI

The livelihood-coping strategy indicator is used to reclassify households into the CARI's 4-point scale based on the *most severe* coping strategy the household reported. The steps to build this indicator are described below; they can also be followed using the SPSS syntax provided in **Annex C**.

The analyst must identify households which, in the last 30 days, have employed livelihood coping strategies at each level of severity (stress, crisis, emergency). Households which reported that they were unable to employ a particular strategy because they had already exhausted that option (e.g. they've already spent all their savings in order to cope) are also considered to have experienced that strategy.

Using data analysis software, the analyst must build new dichotomous[12] variables representing each coping severity level. In the example module (presented in **Section 6.5**), four 'stress' level strategies are included: **1.1, 1.4, 1.5,** and **1.10**. If a household responds 'yes' to any of these strategies, they would be assigned a '1' for the variable **'stress_coping'**.

As discussed in the previous paragraph, if a household responds 'no' to a strategy listed in question **3.01 (Table 17, middle column),** but for that same strategy responds *'No, because I already....'* in question **3.02**, that household is considered to have experienced that strategy. In these cases, the household's no response is corrected to a 'yes' response because the recently exhausted coping strategy could be still enabling the household to 'survive'; in other words, they are still coping from having used that strategy at an earlier time (within 12 months). For example, if a household reported 'no' for the stress-level variable **'sold household assets**' but in the probe question **3.02** provided the explanation *'No, because I already sold these assets*' (coded as '2'), the household would be assigned a '1' for the variable **'stress_coping'**.

Conversely, if a household responds 'no' to a strategy listed in question **3.01** and then, in response to the probe question (**3.02**), selects '1' (No, because it wasn't necessary) or '3' (Not applicable[13]), the household is then confirmed as *not* having experienced that particular strategy.

Once the dichotomous variables have been created (i.e. stress_coping, crisis_coping, and emergency_coping), the analyst must convert the results to the 4-point scale (see **Table 10**).

For this process we are only interested in each household's most severe (or maximum) strategy employed. For example, in the previous step, if a household has a score of '1' for the

[12] 1=yes, 0=no.

[13] 'Not applicable' category contains households for which a strategy 1) doesn't apply (for example, households with no children cannot 'withdraw children from school'), or 2) has already been exhausted more than 12 months prior to the survey being conducted.

'**emergency_coping'** variable and '1' for the '**stress_coping'** variable, the household's overall classification for the asset depletion indicator would be '**emergency'** (as 'emergency' is more severe than 'stress' and therefore considered the maximum strategy adopted), and so it would be assigned a final score of '4'.

Similarly, if a household has a score of '0' for the **'emergency_coping**' variable, '1' for the **'crisis_coping**' variable and '1' for **'stress_coping'** variable, the household's overall classification for the asset depletion indicator would be '**crisis'** (and it would be assigned a score of '3').

Table 10: Console – coping capacity component, Livelihood coping strategies

Domain		Indicator	Food Secure (1)	Marginally Food secure (2)	Moderately Insecure (3)	Severely Insecure (4)
Coping Capacity	Asset Depletion	Categories based on type of livelihood coping strategies	None	Stress Strategies (e.g. sell non-prod assets)	Crisis Strategies (e.g. sell prod assets)	Emergency Strategies (e.g. sell major prod assets – land)

5. PRESENTATION AND INTERPRETATION

This section explains how the analyst should report on and interpret the console's results.

By straightforwardly laying out the results of each food security indicator, the console helps to show how each dimension of food security contributes to the population's overall outcome. In addition to presenting the console, the analyst is also responsible for:

- describing which factors are influencing the overall food security outcome;
- calculating the final prevalence of food insecurity within the population;
- determining which levels of representation the console should report on (i.e. national, district, livelihoods);
- Describing how the CARI classification matches up to the Integrated Food Security Phase Classification **(IPC).**

The CARI reporting console should be prepared and **presented at the beginning of each food security assessment**, ideally in the executive summary. This section spells out the reporting process, using an example completed console (See Table 11).

Table 11: Example of a completed CARI console

Domain		Indicator	Food Secure (1)	Marginally Food secure (2)	Moderately food Insecure (3)	Severely food Insecure (4)
Current Status	Food Consumption	Food consumption group	*Acceptable* **51%**		*Borderline* **36%**	*Poor* **13%**
Coping Capacity	Economic Vulnerability	Food expenditure share	*share <50%* **8%**	50% - 65% **9%**	*65% - 75%* **11%**	*Share >75%* **72%**
	Asset Depletion	Livelihood coping strategy categories	*66%*	*Stress* **19%**	*Crisis* **3%**	*Emergency* **11%**
Food Security Index			**6.9%**	**43.7%**	**42.7%**	**6.8%**

5.1 Final prevalence of food insecurity

In addition to providing the population's distribution across the four food security classification groups, the console also generates an answer to the question: ***what percentage of the population is food insecure?*** This is based on a simple calculation of an overall reporting aggregate.

To calculate the overall prevalence of 'food insecurity' in the population, simply sum together the rates of the two most severe categories ('moderately food insecure' and 'severely food insecure'). In the example console above, 49.5% of the population would be considered food insecure.

Table 12 shows how to describe the different food security classification groups, and draw the line between 'food secure' and food insecure'.

Table 12: Final prevalence of food insecurity

Food Security Index	Description	Food secure/ Food insecure
Food secure	Able to meet essential food and non-food needs without engaging in atypical coping strategies	Food secure
Marginally food secure	Has minimally adequate food consumption without engaging in irreversible coping strategies; unable to afford some essential non-food expenditures	
Moderately food insecure	Has significant food consumption gaps, OR marginally able to meet minimum food needs only with irreversible coping strategies	Food insecure
Severely food insecure	Has extreme food consumption gaps, OR has extreme loss of livelihood assets will lead to food consumption gaps, or worse	

Assessment reports must contain a clear explanation of the CARI methodology for the reader. This requires the analyst to explain in plain language which CARI indicators were used in the **Food Security Index**, and how they have been averaged to calculate households' final classifications. This explanation must accompany each completed version of the CARI console; clearly, these descriptions will vary between assessments depending on which CARI indicators have been used. For example, the CARI console presented in Table 11 should be accompanied by text to the effect of:

Each household has been assigned to a Food Security Index group based on a simple averaging process using the 4-point scale scores it attained for each indicator. Specifically, each household's ***Food Security Index*** *classification is based on a simple average of their* ***current status*** *score and their*

coping capacity *score. The latter is itself formed from a simple average of the* ***food expenditure share*** *score and the* ***asset depletion*** *score.*

These descriptions should also direct the reader to a section within the assessment report which provides a more detailed description of the methodology. This section will explain the thresholds used for each indicator, and how exactly the indicators were combined to achieve the final result.

5.2 Reference population

The food security console can be prepared for all geographic levels (i.e. national; urban/rural; district; livelihoods; etc) and other strata (e.g. livelihood activities, sex of household head). The executive summary should present, at minimum, the console for the main target population. For instance, in the case of a CFVSA, this would normally be the national population. Results by other strata -along with the consoles- can be reported on in later sections of the report, along with the reporting of the individual indicators which comprise the console (see section 5.4).

5.3 Food security domains

Once the *overall food security status* is reported, it is important to explain which factors contributed most to each of the four food security classifications. To do this, the analyst can use information generated by the console to help describe the food security issues facing the population.

One useful way to explore how the domains interact within the different food security categories is to create a population distribution table representative of all the possible indicator combinations. **Table 13** provides an example distribution table, created using the data presented in **Table 11** of this guide.

Each cell represents the share of households (out of 100%). In this example, there are 48 possible combinations of indicators in which to classify households. The four colours represent the different food security classifications. The dark red cells represent the **severely food insecure** and the light pink represent the **food secure** category.

Table 13: Console indicators, population distribution table

		Food consumption groups on 4 point scale											
		Acceptable (1)				Borderline (3)				Poor (4)			
		Summary of asset depletion coping strategies				Summary of asset depletion coping strategies				Summary of asset depletion coping strategies			
		(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Share of exp. on food	< 50% (1)	2.3%	1.0%	0.1%	0.4%	1.3%	0.3%	0.0%	0.3%	1.1%	0.4%	0.1%	0.2%
	50-65% (2)	3.6%	1.3%	0.2%	0.8%	1.1%	0.6%	0.1%	0.3%	0.6%	0.3%	0.0%	0.1%
	65-75% (3)	4.1%	1.3%	0.2%	0.8%	2.5%	0.5%	0.1%	0.5%	0.8%	0.3%	0.0%	0.3%
	75% + (4)	23.8%	7.1%	0.9%	3.5%	20.2%	4.9%	0.8%	2.8%	4.8%	1.6%	0.2%	1.9%

Food insecurity index	**Share**
Food secure (1)	6.9%
Marginally food secure (2)	43.7%
Moderately food insecure (3)	42.7%
Severely food insecure (4)	6.8%

Creating a population distribution table –such as that in **Table 13**– will not necessarily be useful for inclusion within an assessment report, but it can help the analyst to form summary statements which describe the experience of households within each of the different food security categories. It also helps identify unusual situations; for instance, if a high share of the 'severely food insecure' households also had 'borderline' food consumption (rather than poor food consumption).

Below are some example statements which can be made about the ***severely food insecure*** households shown in **Table 13:**

- Almost all (95%) had a *very high food expenditure share* (i.e. greater than 75%).
- Around 59% had *poor food consumption* (41% had borderline consumption).
- A third (33%) resorted to employing at least one *emergency livelihood strategy*.

The population distribution table is useful for generating a high-level analytical narrative to accompany the console. However, this is not a substitute for traditional techniques for reporting on the indicators contained in the console. It is important that all indicators used in the console are also separately reported on in later sections of the assessment, using their traditional thresholds and/or reporting methods.

In this second version of the CARI technical guidance, the colour scheme for reporting results and mapping has been modified. In order to avoid confusion with the IPC green to red scale, the CARI colour scale is now as follows:

Food Security Classification	RGB code
Food Secure	R: 255 G: 215 B: 215
Marginally food secure	R: 255 G: 110 B: 110
Moderately food insecure	R: 215 G: 0 B: 0
Severely Food Insecure	R: 130 G: 0 B: 0

To promote clear communication and consistency across assessments, ensure that all reporting and mapping of food security results follows the RGB codes above.

5.4 Reporting on the console's components separately

The data which generate the CARI console indicators should –at a later point in the report– be described in greater detail. How extensively the data are examined depends on the context and purpose of the assessment. The analyst should also judge by which strata to report on (for instance, district, livelihood, urban/rural, sex of household head). Table 14 provides suggestions on ways the data can be separately reported.

Table 14: Reporting CARI indicators seprately

Indicator	Additional reporting options with data
Food consumption score	• Prevalence of poor, borderline, acceptable groups • Mean number of days each food group consumed • Mean Food Consumption Score • Sources of main food groups
Energy shortfall	• Average per adult equivalent daily calorie intake • Average per capita daily calorie intake • Identify households for which daily calorie intake falls short of recommended household calorie intake (determined using age/sex profile of members and World Health Organisation recommendations[14]) • Depth of hunger: identify households for which daily calorie intake falls *far* short of recommended calorie intake (for instance, a 300 calorie deficit per capita).
Food expenditure share	• Prevalence of food expenditure share groups across 4 thresholds • Share of own-production as part of food expenditures • Share of expenditure on particular food groups • Total expenditure per capita • Total food expenditure per capita

[14] For recommended calorie intakes by age and sex, see Appendix 8: http://www.ifpri.org/sites/default/files/pubs/pubs/fspractice/sp3/sp3.pdf

Livelihood coping strategies	• Prevalence of individual coping strategies employed • For each strategy, comparison of 'yes' responses to 'No, because I already did this…' responses. The latter showing the share of households which have already exhausted that coping strategy. • Prevalence of the severity class of strategies employed (stress, crisis, emergency)
Poverty line	• Prevalence below poverty line • Prevalence below food poverty line

5.5 Response options

The current version of this guideline presents an approach for reporting on food security using the food security console; it does not attempt to instruct analysts on how to recommend specific program responses based on a particular set of console results. Response options are highly context-specific and should always be tailored to address issues of access, availability and utilisation over the short, medium and long term. For these reasons, the standard practice[15] for forming useful and practical programming recommendations should be followed. It should be noted that VAM plans to eventually –in collaboration with Programmes– prepare guidance on how to use CARI results to develop meaningful and actionable programme recommendations.

[15] See Chapter 7 of the CFSVA Guidelines:
http://documents.wfp.org/stellent/groups/public/documents/manual_guide_proced/wfp203196.pdf

6. STANDARD MODULES

This section contains the WFP-endorsed standard modules for inclusion in surveys designed to measure food insecurity. Together, these modules can be used to generate the required data for estimating the CARI food insecurity prevalence.

VAM officers should refer to this section during the design phase of household surveys, as well as in preparation for enumerator training. It should be noted that these modules can be incorporated into non-WFP surveys such as the Living Standards Measurements Studies (LSMS). The modules – and the CARI indicator they generate– are listed in the table below:

Module	CARI food security indicator
1. Food consumption	Food consumption score
2. Food quantity	Food energy shortfall
3. Food basket value	Food expenditure share
4. Non-food expenditure	
5. Livelihood coping strategies	Livelihood coping strategies indicator

There are no standard WFP modules for two CARI indicators –**food energy shortfall** and **poverty status**. Generating these indicators requires more extensive questionnaires than those typically administered during a WFP assessment. However, as described in sections **3.2.1** and **4.1.1,** the CARI can use data from other sources. For this reason, this section also includes an example 'food quantity' module (taken from a national *household budget survey*) to demonstrate what is acceptable module for constructing the food energy shortfall indicator.

Although not currently used in conjunction with the CARI, the module for the **consumption-based coping strategies** –which develops the *Reduced Coping Strategies Indicator*) – is also included in this section.

6.1 Food consumption

The standard food consumption module contains sixteen food groups. The analysis of the Food Consumption Score requires eight food groups, though the module includes a ninth group of condiments/small quantities. The other seven food groups are required for the Food Consumption Score Nutrient Adequacy Analysis (FCS-N). The FCS-N analyses consumption of three key nutrients,

derived from the FCS data; this is recommended, but is not a component indicator of the CARI.[16] The food group list is designed to improve understanding about households' intake of key nutrient-rich foods. The sixteen listed *food groups* in the food consumption module should match that presented in **the module below.** However, the *food item list* presented within the box beside each *food group* should be adjusted to reflect the typical diet consumed within the local context. It is important to note that the module refers only to food consumed or prepared inside the home. In a context where people often eat outside of home (note this is more common in urban areas), it is recommended to develop a separate outside the home consumption module, in order to comprehensively capture household diets.

Enumerator information

Specifically, the module asks respondents how many days (within the past week) their household consumed each of the food items/groups listed in the module. It also asks how each food was obtained. All households must respond to these questions; the respondent must answer on behalf of the entire household. If a food item is consumed at home by only one household member, it should not be recorded. The module refers only to food consumed or prepared inside the home.

[16] For more details on the calculation of the FCS-N, refer to the Technical Guidance Note, found at vam.wfp.org

Module 1: Food Consumption Score

How many days over the last 7 days, did members of your household eat the following food items, prepared and/or consumed at home, and what was their source ?

(Use codes below, write 0 if not consumed in last 7 days)

Note for enumerator : Determine whether consumption of fish, milk was only in small quantities.

	Foods	**1.03**- Number of days eaten in past **7 days** *If 0 days, do not specify the main source.*	**1.04**- How was this food acquired? **Write the main source of food for the past 7 days**
1.	**Cereals, grains, roots and tubers** Rice, pasta, bread, sorghum, millet, maize, fonio, potato, yam, cassava, white sweet potato	|___|	|___|
2.	**Legumes / nuts :** beans, cowpeas, peanuts, lentils, nut, soy, pigeon pea and / or other nuts	|___|	|___|
3.	**Milk and other dairy products**: fresh milk / sour, yogurt, cheese, other dairy products (Exclude margarine / butter or small amounts of milk for tea / coffee)	|___|	|___|
4.	**Meat, fish and eggs:** goat, beef, chicken, pork, blood, fish, including canned tuna, escargot, and / or other seafood, eggs (meat and fish consumed in large quantities and not as a condiment)	|___|	|___|
	If 0 → skip to question 5		
4.1	**Flesh meat:** beef, pork, lamb, goat, rabbit, chicken, duck, other birds, insects	|___|	|___|
4.2	**Organ meat:** liver, kidney, heart and / or other organ meats		
4.3	**Fish/shellfish:** fish, including canned tuna, escargot, and / or other seafood (fish in large quantities and not as a condiment)	|___|	|___|
4.4	**Eggs**	|___|	|___|
5.	**Vegetables and leaves:** spinach, onion, tomatoes, carrots, peppers, green beans, lettuce, etc	|___|	|___|
	If 0 → skip to question 6		
5.1	**Orange vegetables (vegetables rich in Vitamin A):** carrot, red pepper, pumpkin, orange sweet potatoes,	|___|	|___|
5.2	**Green leafy vegetables:**, spinach, broccoli, amaranth and / or other dark green leaves, cassava leaves	|___|	|___|
6.	**Fruits:** banana, apple, lemon, mango, papaya, apricot, peach, etc	|___|	|___|
	If 0 → skip to question 7		
6.1	**Orange fruits (Fruits rich in Vitamin A):** mango, papaya, apricot, peach	|___|	|___|
7.	**Oil / fat / butter:** vegetable oil, palm oil, shea butter, margarine, other fats / oil	|___|	|___|
8.	**Sugar, or sweet:** sugar, honey, jam, cakes, candy, cookies, pastries, cakes and other sweet (sugary drinks)	|___|	|___|
9.	**Condiments / Spices:** tea, coffee / cocoa, salt, garlic, spices, yeast / baking powder, lanwin, tomato / sauce, meat or fish as a condiment, condiments including small amount of milk / tea coffee.	|___|	|___|

Food acquisition codes		
1 = Own production (crops, animal) 2 = Fishing / Hunting 3 = Gathering 4 = Loan	5 = market (purchase with cash) 6 = market (purchase on credit) 7 = beg for food 8 = exchange labor or items for food	9 = gift (food) from family relatives or friends 10 = food aid from civil society, NGOs, government, WFP etc.

For all food items, the recall period is set at the previous seven days. For example, if today is Wednesday, we would be asking about the period from Tuesday last week to yesterday. The purpose is to capture the number of days out of seven that each food item/group was consumed.

The food items/groups listed must collectively account for all foods prepared or consumed at home by the household. In other words, all foods (consumed or prepared at home) by the household during the 7 days must be recorded somewhere in the list. Related to this, it is important to note that the listed food items/groups are mutually exclusive17. Therefore the enumerator must be careful not to record consumption of any one food item in more than one category in the list.

For each food item/group, the column titled 'Number of days eaten in past 7 days' requires a numeric value. If a household did not consume a particular food item/group in any days within the previous seven days, the enumerator should enter zero and then move on to the next line item.

Within the module, in-country officers must adjust the suggested food items listed for each of the food groups should so that they accurately reflect the typical diet consumed in the country.

Small quantities

It is important that the food consumption module is not used to register instances in which only small amounts of a food item were consumed by the household. Food line items 1 to 15 are intended to only record the consumption of significant quantities of food by the household.

The condiments/spices line item should be used to capture consumption of very small quantities of certain foods have been consumed. Essentially, if a food item is consumed only as a condiment or in a similarly small quantity (i.e. fish powder, grated cheese, and powdered milk) it should only be recorded in line item 9 (condiments/spices).

Table 15 below provides some examples of what constitutes a 'small quantity' for each food group. This table should be adjusted to suit each country and used to guide enumerators in determining whether household consumption of a food item should be registered in the module. The rationale behind the table is that if a food item is consumed only as a condiment or in such small quantity

[17] While this should be clear by the names of the food groups, it is important to highlight this to enumerators.

that it cannot be considered as a proper portion by the household it should not be registered. Prior to asking the food consumption module questions, enumerators should explain to the respondent context-specific examples of food quantities considered too small to be captured by the module.

Table 15: Examples of quantities too small for the food consumption module, by food type

Food items/groups	**Example quantities**			
Meat, chicken, fish	One small piece (like a box of matches) for 3 or more persons	Fish powder spread over meals	A piece to add flavour to a soup	
Eggs	One egg for 4 or more persons	Egg used only as condiment	Less than ¼ egg per person	
Milk	A pinch of milk added to tea and/or coffee	A single glass or cup for 3 or more persons	A spoon of powdered milk added to coffee/tea	
Cheese	A little grated cheese spread over meals	A small piece (like a box of matches) for 4 or more persons		
Vegetables	One or two tomatoes or onions used as condiment	Cauliflower and/or carrot consumed only as pickle	only a half/ small unit for 4 or more people	Leaves: a few leaves for all
Fruits	Fruits used to flavour refreshments (like a lemon slice added to a drink)	Only one unit for 4 or more persons		

Additional food item lines

Food items which are very commonly consumed within a country may warrant their own distinct inclusion within the main food list – i.e. separated from their broader food group (e.g. rice or maize from 'cereals and grains', cassava from 'roots and tubers', etc.). However, it is critical that these foods are NOT included in the FCS analysis, as this may inflate the scores. The FCS must be constructed from only the eight overall food groups. Other food items may be listed for additional/complementary analyses. For instance, distinguishing household consumption of the country's main staple cereal would be useful for understanding how important it is to different population subgroups. Similarly, if suitable, fortified foods such as Corn Soya Blend (CSB) can be added as a single line-item to the food consumption module.

However, it should be noted that long lists containing many food items separately should be avoided. Moreover, it is very important to ensure the module will generate results which are comparable to previous surveys. Any adjustments to the list of foods included in the food consumption module should be explained, and maintained for future surveys.

Food source

The food consumption module aims to obtain information about how each food group was acquired by the household. While this information is not used in the CARI methodology, it is useful for other elements of an assessment. This short section provides some background information about this non-CARI component of the module.

The food source column of the food consumption module is used to record the *main method* by which the household obtained each recorded food item/group. In situations in which a household states that a particular food group was sourced equally from two or more main sources, the enumerator must probe to determine which source provided the highest share of the foods belonging to that food group.

Table 16: Description of food sources

Food source	Description
1) Own production	Household mostly obtained this food from their own production of crops or animals.
2) Fishing, hunting, gathering	Household mostly obtained this food from activities such as fishing, hunting and/or gathering.
3) Loaned, borrowed	Household mostly obtained this food by borrowing. If a household reports having 'borrowed food' as a main food source, this reflects a situation in which the household must repay the lender at some future point in time (with food or money).
4) Purchased	Household mostly obtained this food through purchases at formal or informal markets using cash or credit.
5)Begged	Household mostly obtained this food through begging. If a household's main source of food is purchases but the cash used to purchase the food was obtained by begging, then the main source recorded should be 'begging'.
6) Exchange for labour	Household mostly obtained this food as payment for work.
7) Gift from family, friends	Household mostly obtained this food as gifts from friends and family.
8) Food aid from civil society, NGO, government	Household mostly obtained this food in the form of aid from civil society, NGOs, or government.
9) Other	Household mostly obtained this food from source/s not listed above.

6.2 Food quantity

To calculate **food energy shortfall,** a questionnaire containing a household 'food quantity' module is required. Module 2 provides an example. Such modules vary considerably in nature; they can differ in terms of the food items listed, the units of measurement and the reporting period. Many modules will be unsuitable for the CARI console.

Additionally, it is important the questionnaire captures information about the different members of each household. First, the number of household members is necessary. Other useful information for calorie analysis would include: members' age, sex, and whether members were home during the past 7 days. The analyst should use the IFPRI guide to help determine whether the questionnaire will generate sufficient data for making reliable calorie intake estimates: *'Measuring Food Security Using Household Expenditure Surveys'*[18].

Module 2: Example food quantity module

Within the **past 7 days** did household members eat/drink any […] within the household?	Yes =1 No =2 -> Next	How much in total did your household consume in the **past 7 days?**		How much came from purchases during the **past 7 days?**		How much did you spend?	How much came from own production?		How much came from gifts and other sources?	
		Unit	Quantity	Unit	Quantity	Local currency	Unit	Quantity	Unit	Quantity
Cereals and Cereal Products										
Rice (paddy)										
Rice (husked)										
Maize (green, cob)										
…										

6.3 Food basket value (food expenditure)

The food basket value module (**Module 3a**) –along with the household expenditures module (Module 4) – facilitates the construction of the food expenditure share indicator. This indicator is a measure of household economic vulnerability.

The food basket value module is designed to record a household's expenditure on food during the 30 days prior to the survey. It also asks households to estimate the cash value of foods which were consumed but not purchased. The value of all consumed foods –rather than the value of purchased foods only– is then used to determine how important food is with respect to the household budget.

[18] http://www.ifpri.org/sites/default/files/pubs/pubs/fspractice/sp3/sp3.pdf

By including home-produced foods –and other non-purchased foods, such as food aid– in the calculation of the food expenditure share indicator, households which are highly-dependent on non-purchased food still have the 'opportunity' to be classified as economically vulnerable. If we did not consider the value of non-purchased foods, many poor households which are highly dependent on own-produced foods would have a greatly reduced possibility to be classified as economically vulnerable[19].

For lighter questionnaires, and for monitoring purposes, a lighter food expenditures module is suggested (see **Module 3b**). This version does not distinguish between the different types of non-purchased foods (i.e. own-produced, aid, exchanged etc.)

[19] This is because very little of the foods consumed are actually purchased and therefore total purchases will comprise only a very small share of total expenditures.

Module 3a: Food Basket Value module

		3.01 - Did your household purchase any of the following items during the **last 30 days** for domestic consumption? If **'no'**, enter '0' and proceed to 3.02. If '**yes**', ask the respondent to estimate the total cash and credit expenditure on the item for **the 30 days.** *(register the expenses according to local currency)*		**3.02 -** During the **last 30 days** did your household consume the following foods **without purchasing** them? 0 = No → skip to next food group row. 1 = Yes	**3.03** - Estimated value of non-purchased items consumed during **the last 30 days** (*this question refers to the consumption reported in **3.02**)*	**3.04** - What was the **main source** of the *non-purchased* food group? 1=own production 2= gathering/hunting 3=donation/food aid/gift 4=received in exchange for labour/items (*this question refers to the consumption reported in **3.02**)*
		(cash, local currency)	**(credit, local currency)**		**(local currency)**	
1.	Cereals (maize, rice, sorghum, wheat, bread)			| __ |	| __ | __ | __ | __ | __ |	| __ |
2.	Tubers (sweet potatoes, cassava)			| __ |	| __ | __ | __ | __ | __ |	| __ |
3.	Pulses (beans, peas, groundnuts)			| __ |	| __ | __ | __ | __ | __ |	| __ |
4.	Fruits & vegetables			| __ |	| __ | __ | __ | __ | __ |	| __ |
5.	Fish/Meat/Eggs/poultry			| __ |	| __ | __ | __ | __ | __ |	| __ |
6.	Oil, fat, butter			| __ |	| __ | __ | __ | __ | __ |	| __ |
7.	Milk, cheese, yogurt			| __ |	| __ | __ | __ | __ | __ |	| __ |
8.	Sugar/Salt			| __ |	| __ | __ | __ | __ | __ |	| __ |
9.	Tea/Coffee			| __ |	| __ | __ | __ | __ | __ |	| __ |
10.	Other meals/snacks consumed outside the home			| __ |	| __ | __ | __ | __ | __ |	| __ |

It is important to note that when measuring **food expenditure share**:

1. The **food basket value** modules (**Module 3a and 3b**) are designed to collect data on the value of food consumption using local currency, not quantity (i.e. metric units).
2. Additional questions designed to collect aggregated household expenditure information should not be added to the expenditure modules (Module 3a and Module 3b). For instance, the module must not contain a question asking households *'What was your household's total food expenditure?*', or *'What share of household expenditures was on food?* Such questions would create confusion for both data collectors and analysts.

Module 3b: Food Basket Value module (light)

		3.01 - Did you purchase any of the following items during the **last 30 days** for domestic consumption? If **'no'**, enter '0' and proceed to next food-item. If '**yes**', ask the respondent to estimate the total cash and credit expenditure on the item for **the 30 days.** *(register the expenses according to local currency)*		**3.02** - During the **last 30 days** did your household consume the following foods **without purchasing** them? If so, estimated the value of the non-purchased food items consumed during **the last 30 days**
		(cash, local currency)	**(credit, local currency)**	**(local currency)**
1.	Cereals (maize, rice, sorghum, wheat, bread)			
2.	Tubers (sweet potatoes, cassava)			
3.	Pulses (beans, peas, groundnuts)			
4.	Fruits & vegetables			
5.	Fish/Meat/Eggs/poultry			
6.	Oil, fat, butter			
7.	Milk, cheese, yogurt			
8.	Sugar/Salt			
9.	Tea/Coffee			
10.	Other meals/snacks consumed outside the home			

Enumerator information

In cases where a household consumes a food item without purchasing it, the respondent must estimate the total value of the non-purchased consumed food.

The enumerator plays an important role in validating households' estimations of food value. They should do this by asking them to also estimate the corresponding food quantities consumed. While approximate quantities will not be recorded, discussing them will help households in estimating the food value. Additionally, if the '30 day' recall period is too large for respondents to confidently estimate the value of their consumption from non-purchased food items, the enumerator can shorten the recall period to 7 days. In such cases, the enumerator must then multiply the reported amount by '4.5' before it is entered into the questionnaire module.

6.4 Non-food expenditure

The module for non-food household expenditures is important for the construction of the food expenditure share indicator. It is the analyst's role to adjust (add/remove) items in this list to suit the country context. Collectively, the list should equate to the household's total expenditure.

The standard '**household expenditures'** module (**Module 4**) splits household expenditures into periods of 30 days, and 6 months. To avoid enumerator and respondent confusion regarding time periods, it is recommended the two modules are separated on the questionnaire. The analyst can include additional household expenditure items to the module when relevant.

Module 4: Household Expenditures

	3.04 - Did you purchase the following items during the **last 30 days** for domestic consumption? ***If none, write 0 and go to next item***	**3.05 -** Estimated expenditure during the **last 30 days** *(register the expenses according to the currency in which it was done)*	**3.06 -** In the past **6 months how** much money have you spent on each of the following items or service? ***Use the following table, write 0 if no expenditure.***		**3.07 -** Estimated expenditure during the **last six months**
		(local currency)			**(local currency)**
10.	Alcohol/Palma wine & Tobacco		**18.**	Medical expenses, health care	
11.	Soap & HH items		**19.**	Clothing, shoes	
12.	Transport		**20.**	Education, school fees, uniform, etc	
13.	Fuel (wood, paraffin, etc.)		**21.**	Debt repayment	
14.	Water		**22.**	Celebrations / social events	
15.	Electricity/Lighting		**23.**	Agricultural inputs	
16.	Communication (phone)		**24.**	Savings	
17.	Rent		**25.**	Constructions/house repairs	

6.5 Livelihood coping strategies

The livelihoods-based coping strategies module is used to better understand longer-term coping capacity of households. For each country, the module must be adapted to suit the local context. This requires the analyst to select relevant livelihood-coping strategies from the 'coping strategies master list' (see **Table 17**).

The master list includes suggested severity weightings for each livelihood coping strategy. However, country offices are responsible for assessing whether these weights are suitable and, if not, adapting them to their local context.

Module 5a provides an example '**Livelihood Coping strategies'** module containing 10 strategies from the master list. When selecting strategies to include in the module, the analyst must select a combination comprised of 4 *stress* strategies, 3 *crisis* strategies, and 3 *emergency* strategies (that is, 10 strategies in total). Additional insurance (or "neutral") strategies can be included in the module if relevant to the context, despite not influencing the indicator's result[20].

Module 5a: Livelihood-based coping strategies

	3.01	**3.02**
During the **past 30 days**, did anyone in your household have to engage in any following behaviours **due to a lack of food or a lack of money to buy food**?		If 'No', please clarify:
	1 = Yes	1 = No, because it wasn't necessary
	2 = No → clarify response in next column (3.02)	2 = No, because I already sold those assets or did this activity within the last 12 months and I cannot continue to do it
		3 = Not applicable
1.1 Sold household assets/goods (radio, furniture, refrigerator, television, jewelry etc..)	**[___]**	**[___]**
1.2 Reduced non-food expenses on health (including drugs) and education	**[___]**	**[___]**
1.3 Sold productive assets or means of transport (sewing machine, wheelbarrow, bicycle, car, etc..)	**[___]**	**[___]**
1.4 Spent savings	**[___]**	**[___]**
1.5 Borrowed money / food from a formal lender / bank	**[___]**	**[___]**
1.6 Sold house or land	**[___]**	**[___]**
1.7 Withdrew children from school	**[___]**	**[___]**
1.8 Sold last female animals	**[___]**	**[___]**
1.9 Begging	**[___]**	**[___]**
1.10 Sold more animals (non-productive) than usual	**[___]**	**[___]**

For lighter questionnaires, and for monitoring purposes, the following livelihood-based coping strategies module is suggested:

[20] Annex D provides an example list of neutral strategies.

Module 5b: Livelihood-based coping strategies (light)

2.02 - During the past **30 days**, did anyone in your household have to engage in any following behaviours **due to a lack of food or a lack of money to buy food**?	1 = No, because I did not face a shortage of food 2 = No, because I already sold those assets or have engaged in this activity within the last 12 months and cannot continue to do it 3= Yes 4=Not applicable
1.1 Sold household assets/goods (radio, furniture, refrigerator, television, jewelry etc..)	| __ |
1.2 Reduced non-food expenses on health (including drugs) and education	| __ |
1.3 Sold productive assets or means of transport (sewing machine, wheelbarrow, bicycle, car, etc..)	| __ |
1.4 Spent savings	| __ |
1.5 Borrowed money / food from a formal lender / bank	| __ |
1.6 Sold house or land	| __ |
1.7 Withdrew children from school	| __ |
1.8 Sold last female animals	| __ |
1.9 Begging	| __ |
1.10 Sold more animals (non-productive) than usual	| __ |

For all livelihood-based coping strategies, the recall period is set at the 'previous 30 days'. Unlike the consumption-based coping strategies module, it does not capture the number of times each strategy was undertaken.

The module collects additional information about households who did not undertake coping strategies. If a household states they did not employ a particular livelihood-coping strategy, the respondent is probed for additional information as to why they did not --- specifically, was it because they had already exhausted that strategy or lost everything and totally depended on external support? In such cases, during the analysis, such responses are recoded to 'yes'.

Table 17: Livelihood coping strategies master list

ID	Strategy	Category[1]	Rationale/discussion
1	Sold household assets/goods (radio, furniture, television, jewelry etc.)	Stress	Selling off household assets is equivalent to spending down savings – a sign of stress, or mild food insecurity
2	Spent savings	Stress	Incurring more debt to meet food needs or spending down savings are signs of stress, or mild food insecurity.
3	Sold more animals (non-productive) than usual	Stress	Items indicating reduced ability to deal with future shocks due to current reduction in resources or increase in debts
4	Sent household members to eat elsewhere	Stress	Incurring more debt to meet food needs or spending down savings are signs of stress, or mild food insecurity.
5	Purchased food on credit or borrowed food	Stress	Incurring more debt to meet food needs or spending down savings are signs of stress, or mild food insecurity.
6	Borrowed money	Stress	Incurring more debt to meet food needs or spending down savings are signs of stress, or mild food insecurity.
7	Move children to less expensive school	Stress	Used in Malawi, Gambia and other countries as a sign of stress.
8	Sold productive assets or means of transport (sewing machine, wheelbarrow, bicycle, car, etc.)	Crisis	Selling off productive assets is a crisis strategy, or moderate food insecurity.
9	Withdrew children from school	Crisis	This decreases human capital, a productive asset, so is considered a crisis strategy, or moderate food insecurity.
10	Reduced expenses on health (including drugs) and education	Crisis	This decreases human capital, a productive asset, so is considered a crisis strategy, or moderate food insecurity.
11	Harvested immature crops (e.g. green maize)	Crisis	
12	Consumed seed stocks that were to be saved for the next season	Crisis	This action decreases productive assets, affecting next year's harvest, which is a crisis strategy.
13	Decreased expenditures on fertilizer, pesticide, fodder, animal feed, veterinary care, etc.	Crisis	Items that directly reduce future productivity, including human capital formation
14	Sold house or land	Emergency	Items that affect future productivity and are more difficult to reverse, or more dramatic in nature
15	Begged	Emergency	Items that affect future productivity and are more difficult to reverse, or more dramatic in nature, includes loss of human dignity
16	Engaged in illegal income activities (theft, prostitution)	Emergency	Items that affect future productivity, but are more difficult to reverse, or more dramatic in nature, includes loss of human dignity
17	Sold last female animals	Emergency	Specific to livestock producers; Items that affect future productivity, and are more difficult to reverse
18	Entire household migrated	Emergency	Items that affect future productivity, but are more difficult to reverse, or more dramatic in nature

[1] Households are grouped according to their most severe strategy. Stress, crisis, and emergency strategies are ranked as 2, 3, and 4, respectively. Households not using any of these strategies are in group 1, or food secure.

Insurance strategies

A number of WFP country offices traditionally collect data on livelihood coping strategies which are considered part of a "normal" livelihood or do not affect the household's future ability to face a crisis. A list of such strategies is included below. As these strategies do not affect the outcome of the indicator, it is therefore suggested such strategies are not included. However, if the data are collected then the console simply includes them as insurance strategies, and they are assigned a score of '1' (i.e. food secure).

Example insurance strategies

Example strategies	Description
Increased casual labour	This is a typical income increasing strategy, not necessarily a sign of stress.
Some household members worked for food only	This is a typical exchange process, not necessarily a sign of stress.
Migration of one or more household members or sent an adult household member away to seek work (beyond usual seasonal migration)	This is a typical income increasing strategy, not necessarily a sign of stress.
'Increase the number of household members out of the village in search for work (migrants)'	This is a typical income increasing strategy, not necessarily a sign of stress.

6.6 Consumption-based coping strategies

Consumption-based coping strategies are not currently considered in the CARI methodology. However, the module generates the data required to calculate the *reduced coping strategies index* (rCSI) - an indicator used to compare the hardship faced by a country's households by measuring the frequency and severity of the food consumption behaviours they engage in when faced with shortages of food.

To enable meaningful cross-country comparisons, the analyst should ensure the module below is added to all WFP assessment tools in which the CARI console will be generated.

In the module, the first five consumption-based strategies (in bold) are mandatory and required to construct the Reduced CSI. The remaining two are optional and may be replaced by other country-specific consumption-based coping strategies.

Module 6: Consumption-based Coping Strategies

2.02 – During the **last 7 days**, were there days (and, if so, how many) when your household had to employ one of the following strategies (to cope with a lack of food or money to buy it)? **READ OUT STRATEGIES**	Frequency (number of days from 0 to 7)
1. Relied on less preferred, less expensive food	| __ |
2. Borrowed food or relied on help from friends or relatives	| __ |
3. Reduced the number of meals eaten per day	| __ |
4. Reduced portion size of meals	| __ |
5. Reduction in the quantities consumed by adults/mothers for young children	| __ |
6. Sent household members to eat elsewhere	| __ |
7. Went an entire day without eating	| __ |

For all coping strategies, the recall period is set at the previous seven days. For example, if today is Wednesday, we would be asking about the period from Tuesday last week to yesterday. The purpose is to capture the number of days (out of seven) that each strategy was employed by the household.

For each strategy, the column titled 'Number of days' requires a numeric value. If a household did not consume a particular food item/group in any days within the previous seven days, the enumerator should enter zero and then move on to the next line item. Table 18 provides a brief description of each of the five mandatory consumption coping strategies included.

Table 18: Description of five consumption-based coping strategies

Coping Strategy	Category Description
a) Rely on less preferred and less expensive foods	Household makes changes to types of foods consumed in order to manage the shortfall of food*. This question is concerned with the types of foods consumed rather than the quantities consumed.
b) Borrow food from a friend or relative	Household increases the short-term food availability by relying on help from friends or relatives in the form of food or money to buy food.
c) Reduce number of meals eaten in a day	A rationing strategy in which most household members consume fewer meals in the day to manage the shortfall of food.
d) Reduce portion size of meals	A rationing strategy in which the amount of food eaten at meals is reduced in order to manage the shortfall of food.
e) Reduce the quantities eaten by the (adults/ mothers of young children)	A rationing strategy in which the food consumption of adults is restricted so that small children will have enough to eat. In households without children, the answer should be zero.

7. ANNEXES:

Annex A: Indicator combinations for console

Final Food Security Outcomes for different indicator combinations

Indicator Combo	Current Status (CS)		Coping Capacity (CC)			Formula	Final FS Outcome for household (Overall WFP Food Insecurity Group)
	Food Consumption Score	Food Energy Shortfall	Poverty Status	Food Exp. Share	Livelihood Coping Strategy Categories		
	(example indicator results in parentheses)						
1	✓ (4)	✓ (3)	✓ (3)		✓ (2)	CS = (4+3)/2 = 3.5 CC= (3+2)/2 = 2.5	(3.5 + 2.5)/2 = 3 (Mod. Insecurity)
2	✓ (4)	✓(3)		✓(3)	✓(2)	CS = (4+3)/2 = 3.5 CC= (3+2)/2 = 2.5	(3.5 + 2.5)/2 = 3 (Mod. Insecurity)
3	✓ (4)		✓(3)		✓(2)	CS = 4 CC= (3+2)/2 = 2.5	(4 + 2.5)/2 = 3.25* (Mod. Insecurity)
4	✓ (4)			✓(3)	✓(2)	CS = 4 CC= (3+2)/2 = 2.5	(4 + 2.5)/2 = 3.25* (Mod. Insecurity)
5		✓(3)	✓(3)		✓(2)	CS = 3 CC= (3+2)/2 = 2.5	(3 + 2.5)/2 = 2.75* (Mod. Insecurity)
6		✓(3)		✓(3)	✓(2)	CS = 3 CC= (3+2)/2 = 2.5	(3 + 2.5)/2 = 2.75* (Mod. Insecurity)

*Revised to 3 after rounding (see Table 2 below).

Annex B: Food consumption score –annotated syntax

********FOOD CONSUMPTION SCORE ------Variable names:

R.6.4_a	Consumption past 7 days (Cereal and tubers)
R.6.4_b	Consumption past 7 days (Legumes/nuts/pulses)
R.6.4_c	Consumption past 7 days (Milk and other dairy products)
R.6.4_d	Consumption past 7 days (Meat, fish, eggs)
R.6.4_e	Consumption past 7 days (Flesh meat)
R.6.4_f	Consumption past 7 days (liver, kidney other organ meats)
R.6.4_g	Consumption past 7 days (Fish)
R.6.4_h	Consumption past 7 days (Egg)
R.6.4_i	Consumption past 7 days (Vegetables)
R.6.4_j	Consumption past 7 days (Orange vegetables)
R.6.4_k	Consumption past 7 days (Green leafy vegetables)
R.6.4_l	Consumption past 7 days (Fruit)
R.6.4_m	Consumption past 7 days (Orange fruits)
R.6.4_n	Consumption past 7 days (oil, fat butter)
R.6.4_o	Consumption past 7 days (sugar or sweet)
R.6.4_p	Consumption past 7 days (condiments, spices)

**********Food Consumption Score (FCS_1) sum days**********.

```
COMPUTE FCS_1=sum ((R.6.4_a *2), (R.6.4_b*3), (R.6.4_c*4), (R.6.4_d *4), (R.6.4_i *1), (R.6.4_l *1),
        (R.6.4_n*0.5), (R.6.4_o *0.5)).
EXECUTE.

RECODE FCS_1 (Lowest thru 21.00=1) (21.5 thru 35=2) (35.5 thru Highest=3) INTO FC_group.
EXECUTE.
```

**********Recode the food consumption groups into the 4-point scale. **********

*These categories recoded in reverse order from FCS: acceptable (=1), borderline (=3) and poor (=4) .

```
RECODE FC_group (1=4) (2=3) (3=1) INTO FCS_4pt.
VARIABLE LABELS  FCS_4pt '4pt FCG'.
EXECUTE.

FREQUENCIES VARIABLES=FCS_4pt
  /ORDER=ANALYSIS.

* Define Variable Properties.
*FCS_4pt.

VALUE LABELS FCS_4pt
  1.00 'acceptable'
  3.00 'borderline'
  4.00 'poor'.
EXECUTE.
```

Annex C: Livelihood coping strategies–annotated syntax

********Livelihood coping strategies:

********------Variable names:

***3.01: *Did anyone in your household have to engage in any following behaviours due to a lack of food or a lack of money to buy food?(1=Yes; 2= no)*

Q.1_3.01	Sold household assets/goods (radio, furniture, refrigerator, television, jewelry etc..)
Q.2 _3.01	Reduced non-food expenses on health (including drugs) and education
Q.3_3.01	Sold productive assets or means of transport (sewing machine, wheelbarrow, bicycle, car, etc..)
Q.4_3.01	Spent savings
Q.5_3.01	Borrowed money/food from a lender, from bank
Q.6_3.01	Sold house or land
Q.7_3.01	Withdrew children from school
Q.8_3.01	Sold last female animals
Q.9_3.01	Begging
Q.10_3.01	Sold more animals (non-productive) than usual

*****3.02: If answer to question 3.01 was 'no', what is the reason? (1 = No, because it wasn't necessary; 2 = No, because I already sold those assets or did this activity within past 12 months and I cannot continue to do it; 3 = Not applicable)*

Q.1_3.02	Sold household assets/goods (radio, furniture, refrigerator, television, jewelry etc..)
Q.2_3.02	Reduced non-food expenses on health (including drugs) and education
Q.3_3.02	Sold productive assets or means of transport (sewing machine, wheelbarrow, bicycle, car, etc..)
Q.4_3.02	Spent savings
Q.5_3.02	Borrowed money/food from a lender, from bank
Q.6_3.02	Sold house or land
Q.7_3.02	Withdrew children from school
Q.8_3.02	Sold last female animals
Q.9_3.02	Begging
Q.10_3.02	Sold more animals (non-productive) than usual

****

*stress strategies

```
do if (Q.1_3.01= 1 or Q.4_3.01=1 or Q.5_3.01= 1 or Q.10_3.01=1).
compute  stress_coping = 1.
ELSE.
compute  stress_coping = 0.
end if.
EXECUTE.

do if (Q.1_3.01=2 and Q.1_3.02=2) or (Q.4_3.01=2 and Q.4_3.02=2) or (Q.5_3.01=2 and Q.5_3.02=2) or (Q.10_3.01=2 and
Q.10_3.02=2).
compute  stress_coping = 1.
end if.
execute.
```

*crisis strategies

```
do if (Q.2_3.01= 1 or Q.3_3.01=1 or Q.7_3.01=1).
compute  crisiscoping = 1.
```

```
ELSE.
compute  crisiscoping = 0.
end if.
EXECUTE.

do if (Q.2_3.01=2 and Q.2_3.02=2) or (Q.3_3.01=2 and Q.3_3.02=2) or (Q.7_3.01=2 and Q.7_3.02=2).
compute  crisiscoping = 1.
end if.
execute.

*emergency strategies

do if (Q.6_3.01= 1 or Q.8_3.01=1 or Q.9_3.01=1).
compute emergencycoping = 1.
ELSE.
compute  emergencycoping = 0.
end if.
EXECUTE.

do if (Q.6_3.01=2 and Q.6_3.02=2) or (Q.8_3.01=2 and Q.8_3.02=2) or (Q.9_3.01=2 and Q.9_3.02=2).
compute  emergencycoping = 1.
end if.
execute.

* Define Variable Properties.

VARIABLE LABELS  stress_coping 'did HH engage in stress coping strategies?'.
VARIABLE LABELS  crisiscoping 'did HH engage in crisis coping strategies?'.
VARIABLE LABELS  emergencycoping 'did HH engage in emergency coping strategies?'.
EXECUTE.

RECODE stress_coping (0=0) (1=2).
EXECUTE.

RECODE crisiscoping (0=0) (1=3).
EXECUTE.

RECODE emergencycoping (0=0) (1=4).
EXECUTE.

COMPUTE Max_coping_behaviour=MAX(stress_coping,crisiscoping,emergencycoping).
EXECUTE.

RECODE Max_coping_behaviour (0=1).
EXECUTE.

Value labels Max_coping_behaviour 1 'HH not adopting coping strategies' 2 'Stress coping strategies '  3 'crisis coping strategies ' 4
'emergencies coping strategies'
EXECUTE.

Variable Labels Max_coping_behaviour 'summary of asset depletion'.
```

Annex D: Food expenditure share–annotated syntax

*********Food expenditure share:

********------Variable names:

3.01a Cash expenditures on Cereals (maize, rice, sorghum, wheat, bread)
3.01b Credit expenditures on Cereals (maize, rice, sorghum, wheat, bread)
3.01c Estimated value of non-purchased Cereals
3.02a Cash expenditures on Tubers (sweet potatoes, cassava)
3.02b Credit expenditures on Tubers (sweet potatoes, cassava)
3.02c Estimated value of non-purchased Tubers
3.03a Cash expenditures on Pulses (beans, peas, groundnuts)
3.03b Credit expenditures on Pulses (beans, peas, groundnuts)
3.03c Estimated value of non-purchased Pulses
3.04a Cash expenditures on Fruits & vegetables
3.04b Credit expenditures on Fruits & vegetables
3.04c Estimated value of non-purchased Fruits and vegetables
3.05a Cash expenditures on Fish/Meat/Eggs/poultry
3.05b Credit expenditures on Fish/Meat/Eggs/poultry
3.05c Estimated value of non-purchased Fish/meat/eggs/poultry
3.06a Cash expenditures on Oil, fat, butter
3.06b Credit expenditures on Oil, fat, butter
3.06c Estimated value of non-purchased oil, fat, butter
3.07a Cash expenditures on Milk, cheese, yogurt
3.07b Credit expenditures on Milk, cheese, yogurt
3.07c Estimated value of non-purchased Milk, cheese, yogurt
3.08a Cash expenditures on Sugar/Salt
3.08b Credit expenditures on Sugar/Salt
3.08c Estimated value of non-purchased sugar/salt
3.09a Cash expenditures on Tea/Coffee
3.09b Credit expenditures on Tea/Coffee
3.09c Estimated value of non-purchased Tea/coffee

**1 month non-food expenditures

3.05.10 Alcohol/Palma wine & Tobacco
3.05.11 Soap & HH items
3.05.12 Transport
3.05.13 Fuel (wood, paraffin, etc.)
3.05.14 Water
3.05.15 Electricity/Lighting
3.05.16 communication

**6 month non-food expenditures

3.07.17 Medical expenses, health care
3.07.18 Clothing, shoes
3.07.19 Education, school fees, uniform, etc
3.07.20 Debt repayment
3.07.21 Celebrations / social events
3.07.22 Agricultural inputs
3.07.24 Constructions/house repairs

COMPUTE food_monthly=sum(3.01a, 3.01b, 3.01c, 3.02a, 3.02b, 3.02c, 3.03a, 3.03b, 3.03c, 3.04a, 3.04b, 3.04c, 3.05a, 3.05b, 3.05c, 3.06a, 3.06b, 3.06c, 3.07a, 3.07b, 3.07c, 3.08a, 3.08b, 3.08c, 3.09a, 3.09b, 3.09c).

```
VARIABLE LABELS  food_monthly 'HH food expenditure over month'.
EXECUTE.

COMPUTE nonfood1_monthly=sum(3.05.10, 3.05.11, 3.05.12, 3.05.13, 3.05.14, 3.05.15, 3.05.16).
VARIABLE LABELS  nonfood1_monthly 'HH nonfood short term expenditures over month, '.
EXECUTE.

COMPUTE nonfood2_monthly=sum(3.07.17, 3.07.18, 3.07.19, 3.07.20, 3.07.21, 3.07.22, 3.07.24)/6.
VARIABLE LABELS  nonfood2_monthly 'HH nonfood long term expenditures over month, '.
EXECUTE.

COMPUTE FoodExp_share= food_monthly/sum(food_monthly, nonfood1_monthly, nonfood2_monthly).
VARIABLE LABELS FoodExp_share 'household food expenditure share'
EXECUTE.

RECODE FoodExp_share (Lowest thru .49=1) (.50 thru .649=2) (.65 thru .749=3) (.75 thru Highest=4)
    INTO Foodexp_4pt.
VARIABLE LABELS  Foodexp_4pt 'food expenditure share categories'.
EXECUTE.
```

Annex E: Food security console–annotated syntax

*********Food expenditure share:

********------Variable names:

Max_coping_behaviour	4 point scale indicator measuring asset depletion (constructed in Annex F)
share_exp_cat	4 point scale indicator measuring economic vulnerability (constructed in Annex G)
FCS_4pts	4 point scale indicator measuring food consumption (constructed in Annex E)

```
COMPUTE Mean_coping_capacity=MEAN(Max_coping_behaviour, Foodexp_4pt).
EXECUTE.

COMPUTE FS_class_unrounded=MEAN(FCS_4pt,Mean_coping_capacity).
EXECUTE.

COMPUTE FS_final=RND(FS_class_unrounded).
EXECUTE.

* Define Variable Properties.
*FS_final.

VALUE LABELS FS_final
  1.00 'food secure'
  2.00 'Marginally food secure '
  3.00 'moderately food insecure'
  4.00 'severely food insecure'.
EXECUTE.
```

Annex F: Description of IPC Phases and CARI Classifications

IPC Phase	IPC Household Group Condition
Minimal	Able to meet essential food and non-food needs without engaging in atypical, unsustainable strategies to access food and income, including any reliance on humanitarian assistance.
Stressed	Even with any humanitarian assistance, has minimally adequate food consumption, but unable to afford some essential nonfood expenditures without engaging in irreversible coping strategies.
Crisis	Even with any humanitarian assistance, has food consumption gaps with high or above usual acute malnutrition, OR, Marginally able to meet minimum food needs only with accelerated depletion of livelihood assets that will lead to food consumption gaps.
Emergency	Even with any humanitarian assistance, has large food consumption gaps resulting in very high acute malnutrition and excess mortality, OR, Has extreme loss of livelihood assets that will lead to large food consumption gaps in the short term.
Famine	Even with any humanitarian assistance, has extreme lack of food and/or other basic needs even with full employment of coping strategies. Starvation, death, and destitution are evident.

CARI Food Security Group	CARI Household Food Security Description
Food Secure	Able to meet essential food and non-food needs without depletion of assets.
Marginally food secure	Has minimally adequate food consumption, but unable to afford some essential non-food expenditures without depletion of assets
Moderately food insecure	Has food consumption gaps, OR, Marginally able to meet minimum food needs only with accelerated depletion of livelihood assets.
Severely food insecure	Has large food consumption gaps, OR, Has extreme loss of livelihood assets that will lead to large food consumption gaps, OR worse.

Annex G: Food Security Consoles in French and Spanish

Domaine		indicateur	sécurité alimentaire (1)	légèrement sécurité alimentaire (2)	insécurité alimentaire modérée (3)	insécurité alimentaire sévère (4)
statut actuel	La consommation de nourriture	score de consommation alimentaire	*Acceptable* **45%**		*Limite* **27%**	*Pauvre* **28%**
		déficit énergétique alimentaire	*n/a*	*n/a*	*n/a*	*n/a*
la capacité d'adaptation	vulnérabilité économique	La part des dépenses alimentaires	*Part <50%* **1%**	*50% - 65%* **3%**	*65% - 75%* **7%**	*Part >75%* **89%**
		état de la pauvreté	*n/a*	*n/a*	*n/a*	*n/a*
	épuisement des actifs	Strategies desurve	**33%**	*Stress* **23%**	*Crise* **15%**	*Urgence* **29%**
classification d global			**27%**	**59%**	**10%**	**3%**

zona		indicador	la seguridad alimentaria (1)	ligeramente la Seguridad Alimentaria (2)	moderada inseguridad alimentaria (3)	una grave inseguridad alimentaria (4)
estado actual	Consumo de alimento	puntuación relativa al consumo de alimentos	45%		27%	28%
		déficit de energía alimentaria	*n/a*	*n/a*	*n/a*	*n/a*
adaptabilidad	vulnerabilidad económica	La proporción del gasto en alimentos	1%	3%	7%	89%
		estado de pobreza	*n/a*	*n/a*	*n/a*	*n/a*
	agotamiento de los activos	Estrategias desurve	33%	23%	15%	29%
Clasificación global de			**27%**	**59%**	**10%**	**3%**

Annex H: Console indicator combination scores

Console scores for all possible combinations of the three components used in Table Y of guide, coloured by final classification.

Scores for all possible combinations		Food Consumption Score Groups											
		ACCEPTABLE (1)				BORDERLINE (3)				POOR (4)			
		Livelihood Coping Strategies groups				Livelihood Coping Strategies groups				Livelihood Coping Strategies groups			
		1	2	3	4	1	2	3	4	1	2	3	4
Economic Vulnerability Groups (% exp on food)	1	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	2.50	2.75	3.00	3.25
	2	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	2.75	3.00	3.25	3.50
	3	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.00	3.25	3.50	3.75
	4	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.25	3.50	3.75	4.00

This table shows for *Indicator Combo 4* (see Annex A), the various possible final console scores. Such a table can be recreated regardless of which Indicator combo is used. It is important to note For indicator combo 4 (consisting of the food consumption score, livelihood coping strategies and food expenditure share indicators), there are 48 possible cells which households can fall into. Households which received a score of 3.5 or more are considered severely food insecure (their score is rounded to 4); households scoring 2.5 to 3.25 are considered moderately food insecure (their score is rounded to 3), and so on.

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