FACT

FORTIFICATION ASSESSMENT COVERAGE TOOLKIT (FACT)

HOUSEHOLD QUESTIONNAIRE CUSTOMIZATION GUIDELINES

This document provides

- guidelines on how to adapt and customize the "FACT household questionnaire template";
- an explanation of how to read the household questionnaire; and
- instructions on how to adapt each module of the household questionnaire.

This document should be read in conjunction with the following accompanying tools:

- "FACT Household Questionnaire Template," which provides the standard household questionnaire template;
- "FACT Fieldwork Manual for the Household Assessment," which provides information on what each question in the standard questionnaire means and how it should be administered; and
- "FACT Indicators Definitions and Measurement Guidelines," which illustrates how the questions in the questionnaire are used to construct the key indicators of a FACT survey.

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1 The customization process

The standard FACT Household Questionnaire has been developed to meet the standard objectives of a FACT survey as specified in section 1.2 of the *Fortification Assessment Coverage Toolkit Manual*. Therefore, depending on the survey objectives, the questionnaire will need to be adapted and some modules might be deleted while others might be added. It is strongly recommended that the guidelines set out in this document be followed when customizing the household questionnaire. Furthermore, customizing the questionnaire without an understanding of what is being measured might result in questions that do not meet the survey objectives. That is why this document must be read together with the "FACT Fieldwork Manual for the Household Assessment" and the "FACT Indicators Definitions and Measurement Guidelines" so that the questionnaire designers develop a good understanding of what a FACT survey is trying to measure.

To adapt the questionnaire:

1. **Define the target population and study units of the household assessment**: This step must be done with the stakeholders during the very early stages of the survey design because it has implications for the questionnaire. The standard questionnaire included in this Toolkit assumes that the target populations of the household assessment are children under five and women of reproductive age. If the target population is different, then the respondent selection protocol in the household questionnaire and some particular modules (e.g., the individual food consumption, child feeding practices, dietary diversity, and health and nutrition modules) will need to be adapted to the new target population or deleted (e.g., the child feeding practices module).

2. **Define the food vehicles and nutrients that will be assessed by the FACT survey**: This step is equally important because it also has implications for the market assessment and the laboratory testing. The FACT survey is designed to assess coverage and utilization of food vehicles that are included in the national fortification program and/or food vehicles of interest that could potentially be included in the fortification program. The decision on which food vehicles and nutrients to assess must be made in conjunction with stakeholders.

3. **Decide which indicators of risk will be measured to determine their association with the coverage and consumption of fortifiable and fortified foods**: The standard questionnaire measures the following indicators of risk that are associated with poor micronutrient intakes and that highlight vulnerable subpopulation groups:

    a. *household living in rural area;*

    b. *household at risk of acute poverty* (measured by the following modules: household roster; household characteristics and assets; water, sanitation, and hygiene [WASH]; short birth history; and health and nutrition);

    c. *household with low socioeconomic status* (measured by the following modules: household characteristics and assets and WASH);

    d. *household at risk of food insecurity* (measured by the household hunger scale module);

    e. *women of reproductive age not meeting minimum dietary diversity* (measured by the dietary diversity module); and

    f. *household with poor infant and child feeding practices* (measured by the following modules: child feeding practices and dietary diversity).

Depending on the final choice of risk indicators to be measured by the survey, deletions, adaptations, and additions to these modules may be required.

4. **Adapt the full questionnaire to fit the context of the survey**: Section provides detailed instructions on how to adapt every module of the questionnaire, including when not to adapt. Indeed, there are several instances where the questions must be retained exactly the way they are.

5. **Translate the questionnaire**: The questionnaire will need to be translated into the local language(s) of the country of study. It is crucial to maintain quality control during this process as the wording of the questions will ultimately determine the quality of the data collected. Incorrect translations might result in changes to the original meaning of a question, which in turn can influence the interpretation of results. Translation should not be carried out word for word. Rather, there are two key criteria for proper translation: (1) ensuring that the wording is suitable to the context and the respondent can understand the questions; and (2) ensuring that the original meaning of the question is maintained. There are several methods for translation, and it is recommended that one of the following two approaches be adopted:

    a. **Forward translation from English into the local language and then back translation into English by a different translator.** The differences between the two versions can be compared and discussed and an agreement then made on the final translation.

    b. **The committee translation and assessment approach** (Harkness, Pennell, & Schoua-Glusberg, 2004). This involves a group of translators translating the instruments independently and then reconciling these independent translations in a group to agree on the most context-appropriate translations. This method centers on the idea that, because translations require an understanding of the environment in which the instruments will be rolled out, it is important to incorporate the subjective viewpoints of the translators.

6. **Pre-test the questionnaire**: The FACT Household Questionnaire must be tested before being administered. This is important not only because the changes made to the questionnaire will need to be tested (e.g., to check if the new/adapted questions are appropriately worded, response categories are comprehensive, the flow of the questionnaire is not affected) but also because the pre-test itself will inform the process of adaptation. The translation of the questionnaires must also be tested. Refer to section 3.5 of the *FACT Manual* for tips on how to pre-test a FACT survey.

2 Format of the household questionnaire

Before instructions on how to adapt the questions are provided, it is worth explaining how the standard household questionnaire should be read and what its different features are.

The format of the household questionnaire explained:

- Each module is presented in a table with a black shaded heading.
- Each table, with the exception of the household roster, has three or four columns: question number, question, answer, and skips. The last column for skips is not present in all tables as certain modules do not require any skips.
- For the household roster, the question number is in bold preceding the question text.
- Each question has a question number that is made up of two or three letters indicating the topic of the module and the sequence number of the question in that module. For example, HR2 refers to the second question in the household roster module.
- All text that should be read out to the respondent, including questions, appears in regular font, while interviewer instructions or questions that are not meant to be read out to the respondent appear in blue italics.
- The skips column includes skip rules as well as enabling rules. The former is when the answer to a question results in the following question(s) not being asked, while the latter is when asking a question depends on the answer to previous questions that are not directly preceding it. For example, in question HC8, if the respondent reports not owning any livestock, then question HC9 is skipped. Similarly, question HR8 is asked only if the age of the household member is ≥8 years, which is obtained from question HR5.
- In some question texts, there is bold text within brackets. This is meant to be replaced by a value by the interviewer or, if using CAPI, it will automatically be replaced by that value. For example, in the household roster, [**name**] will be replaced by the name of the household member.

- "Don't know" and "other" responses follow standard coding: 8, 98, 998, 9998 = Don't know; 6, 96, 996, 9996 = Other.
- All text in red represents notes to the people developing the questionnaire.
- In some question texts, there is uppercase text within parentheses. This is used to indicate when something needs to be inserted by the people developing the questionnaire.

3 Adapting the modules and questions of the FACT Household Questionnaire

Instructions on how to customize each module of the FACT Household Questionnaire are provided below. An essential element in the customization process is ensuring that the original meaning of each question is preserved.

If questions are added or deleted and the question numbers are changed, then it is important to revise the skip patterns.

3.1 Household identifying information

HH1 to HH6 will need to be updated according to the sampling design. For instance, HH1 could be states or provinces instead of regions while HH2 could be local government areas. The identifiers (IDs) must be recorded for all administrative levels at which the sample was drawn. The response categories for HH1 and HH2 should be replaced with the names of the geographical or administrative divisions.

The structure number in HH5 refers to the structure that the household's dwelling is within, and this comes from the listing data. Depending on how the household IDs from the listing data are generated, HH5 might not be needed.

To ensure the confidentiality of respondents, do not use the real codes from the sampling frame for the cluster and household IDs, but rather use randomly generated sequential numbers.

3.2 Visit information

All the questions in this module must be completed for each attempted visit of the household. This happens in cases when there is no eligible respondent available at home at the time of the visit. More visits could be added or some deleted depending on how many attempted visits are allowed in the protocol for each household.

3.3 Introduction and consent

The standard questionnaire asks for oral consent from the respondents. The consent statement must be adapted to reflect the changes made to the questionnaire content and to suit the social context in which the survey is being implemented.

Depending on the requirements of the ethics committee in the country of study, written consent from respondents might be required instead of oral consent. In that case, a written informed consent form must be developed whereby the signature of the respondents is sought. For a template of an informed consent form, refer to the Informed Consent for Qualitative Studies template produced by the Ethics Review Committee of the World Health Organization (WHO), which can be found at www.who.int/rpc/research_ethics/informed_consent/en/.

If any respondents under 18 years of age are to be interviewed, their assent to participate in the research must be sought as well as the consent of another household member who is at least 18 years of age.

3.4 Household roster

The definition of the household must be adapted to the local context (**introduction text** and **HR2**). The questionnaire designers are encouraged to see how a household is defined in the census or other standard household surveys conducted in the country of study such as the Demographic Health Survey (DHS), Malaria Indicator Survey, and Living Standards Measurement Survey. However, it is important to note that, for the purposes of the FACT survey, eating from the same pot of food is a central element to the

definition of a household, as the number of people typically eating from the same pot of food is central to the construction of the food vehicle consumption and micronutrient contribution key indicators.

For **HR5** and **HR6**, it is important that age in completed years/months is recorded. Completed age refers to the number of months/years that have been lived in their entirety by an individual. Furthermore, given the importance of age data to the respondent selection protocol (i.e., in the standard questionnaire only children whose completed age is less than five years are eligible to be selected) and to the construction of the food vehicle consumption and micronutrient contribution key indicators, "don't knows" are not allowed in these two questions. Instead, interviewers should make their best effort to help respondents give their best estimates of the ages of different household members. Collecting accurate age data can be quite challenging in many contexts. As a result, it is strongly recommended that the questionnaire designers develop a local events calendar to assist in determining the age of individuals. The Food and Agriculture Organization (FAO) has detailed guidelines on how to measure the month and year of birth of young children, including how to develop a local events calendar (FAO, 2008).

Children under five are the main population of interest in the standard questionnaire, and information on the children's age in months is necessary for the analysis because the dietary requirements of young children differ greatly by age. If children under five are not a target population for the household assessment, then HR6 should be deleted.

HR7 and **HR8** are used to construct the education dimension of the Multidimensional Poverty Index (MPI), an international measure of acute poverty developed by Oxford Policy and Human Development Initiative (OPHI) with the United Nations Development Programme covering more than 100 developing countries. The deprivation indicators slightly differ from country to country, meaning the questionnaire designers must consult the OPHI website (http://ophi.org.uk/multidimensional-poverty-index/) to see how the MPI is measured in the country of study. Depending on how the education dimension deprivation conditions are defined by the OPHI for the country of study, HR7 and HR8 will need to be adapted.

HR9 is used to identify the caregiver of the randomly selected child under five. If children under five are not a target population, then HR9 should be deleted.

3.5 Respondent selection

HR11 to HR13 will need to be adapted depending on the defined target population and on the sampling protocol.

Similarly, the consent statement for the caregiver or other selected respondent should be adapted in line with the consent statement used in the introduction.

3.6 Household characteristics and assets

This module is used to construct the living standard dimension of the MPI as well as to construct the DHS wealth index.

If the MPI and DHS wealth index are to be retained as indicators to be measured by the household assessment, the questionnaire designers must consult the OPHI website (http://ophi.org.uk/multidimensional-poverty-index/) and DHS wealth index website (https://dhsprogram.com/topics/wealth-index/Wealth-Index-Construction.cfm) to see how these two indicators are measured in the country of study. Accordingly, existing questions should be adapted, some questions may need to be deleted, and some new questions may need to be added.

For **HC2 to HC6** and **HC9**, the response categories that are relevant to the local context need to be inserted. The DHS questionnaire for the country of study should be consulted as a first step to identify the response categories. The MPI measurement for the country of study should then be consulted to ensure that there are no missing response categories and that they are of the right level of disaggregation to ensure the construction of both indexes

3.7 Water, sanitation, and hygiene (WASH)

Similarly, this module is used to construct the living standard dimension of the MPI and DHS wealth index. Therefore, adaptations need to be made in the same manner as in section .

3.8 Short birth history

This module is used to construct the nutrition dimension of the MPI. Therefore, adaptations need to be made in the same manner as in section .

3.9 Household Hunger Scale (HHS)

This module is used to construct the household food insecurity key indicator, which is defined according to the HHS. The module was adapted from Deitchler *et al*. (2010) and Ballard *et al*. (2011).

If the HHS is not to be used in the analysis, then this module should be deleted from the questionnaire. Otherwise, it should be kept the way it is.

3.10 Child feeding practices

This module is used to construct the poor infant and young child feeding (IYCF) practices indicator. It follows the approach developed by Guevarra *et al*. (2014), which is a simplified and rapid method for estimating IYCF indicators suitable for surveys with a small sample.

The questionnaire designers may choose to use the full IYCF module that was developed by the WHO to measure IYCF indicators (guidelines on designing a questionnaire using the WHO method for measuring IYCF indicators can be found in WHO 2008). However, it should be noted that the WHO module is a much longer and more complex module than the one in Gueverra *et al*. (2014), and it may not be appropriate given that the poor IYCF practices indicator is not a core indicator of a FACT survey and is used only as a disaggregating factor.

If using the Guevarra *et al*. (2014) method, then no changes should be made to the module.

If IYCF practices are not being measured, then this module should be deleted.

3.11 Dietary diversity

This module is used to construct the poor IYCF practices indicator; see the instructions in section on how to adapt this indicator.

The module is also used to construct the minimum dietary diversity for women of reproductive age (MDD-W) indicator as defined by the FAO and FHI 360 (2016). It follows the "list-based" method of measuring dietary diversity as opposed to the "open-recall" method, both of which were developed by the FAO and FHI 360. Although the latter method might lead to more complete recall of all foods and beverages consumed, it is more difficult to train interviewers on, takes longer to administer, and requires interviewers to have a greater knowledge of the thematic area. Nonetheless, questionnaire designers can choose to use the "open-recall" method, in which case the module would need to be revised. The FAO and FHI 360 (2016) guide provides details on how to design and administer the "open-recall" module.

DD01 to DD19 should be adapted by inserting local foods where appropriate (this is indicated in the standard questionnaire). Appendix 2 of the FAO and FHI 360 guide provides extensive examples of foods in each food group. Furthermore, in Appendix 3 of that guide, there is a list of six additional optional food categories that are not needed for the construction of the MDD-W but that the questionnaire designers could decide to include. The different food groups in the module should not be changed or combined and the recall period (of 24 hours) should not be changed, as these two elements are central to the indicator construction.

If the IYCF indicator is not being measured, then the child column should be removed from this module. If the MDD-W indicator is not being measured, then the caregiver column should be removed.

3.12 Food vehicle fortification coverage

This module collects data on the household coverage and consumption of food vehicles that are included in the fortification program. The module should be repeated for each food vehicle assessed by the survey.

The module collects data on the consumption of food vehicles inside the household. It asks whether the household uses a food vehicle to prepare foods or to add to foods prepared at home, where they buy this food vehicle, what brand they purchase, the quantity purchased, and how long that amount usually lasts

in the household. Depending on survey design, food samples may also be collected from the household (see the *FACT Manual* for a discussion on how to decide where to collect food samples).

The data from this module will be used to construct the core indicators of a FACT survey: coverage, consumption, and micronutrient contribution. This module must be carefully pre-tested and adapted as necessary to ensure that the questions and response options are relevant to the local context.

FV2: The locally available types of the food vehicle should be inserted in the response categories. Note that this question is only asked for food vehicles that have different types such as oil and wheat flour and where the fortification standards in the country are different for the different types.

FV3: The purpose of this question is to determine whether the food vehicle the household consumes is fortifiable (i.e., industrially produced and covered under the large-scale food fortification program) or not. This question must be carefully pre-tested, and other response options may need to be added to be able to differentiate between fortifiable and nonfortifiable. It is important that the response options are comprehensive and distinctly distinguish between these two sources based on the definition of fortifiable used in the country. In some countries, nonfortifiable may be defined simply as being home-produced while in others it may also encompass food vehicles obtained from small-scale or informal producers who produce less than a specified volume annually. In those cases, the "purchased" response option would need to be expanded to include more options that can be used to ascertain the source with sufficient detail to make the necessary distinctions.

FV5: Locally available brands of a food vehicle should be inserted in the response options. To populate the list of brands, the questionnaire designers are encouraged to check with the business associations in the country for a list of the domestically produced and imported brands of each food vehicle that are available in the markets. Additional information on available brands in the market can be collected during pre-testing. The pre-populated list of brands is also important to help interviewers with probing. For instance, some brands might have very similar names, such as Golden Penny Granulated Sugar and Golden Penny Refined Sugar. If the respondent says "Golden Penny Sugar," then the interviewer can probe to find out which of the two brands the respondent is referring to. The brand purchased by the household is fundamental to the construction of the coverage of fortified foods and micronutrient contribution indicators. As a result, during the pre-test the questionnaire designers must identify the extent to which households would be able to report the brand they last purchased. This will require local knowledge on how foods are purchased in the country of study. For instance, do households mostly buy packaged products, or do they mostly buy from open source packages and are therefore less likely to know the brands of the foods they consume? If there are high levels of reporting of unknown brands for certain food vehicles, the use of criteria from other questions to link households to a fortification level can be explored during the analysis stage (e.g., food vehicle type, cost, source, and/or packaging), and additional questions may be added to the module. This is discussed in the document "FACT Indicators Definitions and Measurement Guidelines."

FV6: The units should be inserted depending on the food vehicle (g/kg versus l/ml) and the local context. In certain areas, households do not purchase foods by metric weight but rather use certain standard containers and bottles to purchase bulk/open source food products. In those instances, the questionnaire designers might want to identify these units and add them as response options to FV6. Additional conversion data will need to be collected to ascertain the volumes/weights in grams/liters of any unit that is added as a response option. This question should be carefully pre-tested.

3.13 FV12 and FV13:

These questions are only included in cases where food samples are collected from households. FV13 must be defined in such a way that the resulting sample identification (ID) number is unique for each food sample. In the standard questionnaire template, unique sample IDs can be constructed by combining other identifying variables, for example: region/district ID + cluster ID + structure ID + household ID. The number of digits required in the unique sample ID will depend on how other variables are defined and may need to be adjusted. Potential food vehicle fortification coverage

This module collects data on the household coverage and consumption of food vehicles that are not included in the fortification program but that have the potential to be fortified. It should be repeated for each potential food vehicle assessed by the survey.

The module is the same as the food vehicle fortification coverage module except it does not have questions FV9 to FV12. Section above gives the adaptation instructions.

3.14 Individual consumption

This module collects data on the consumption of food vehicles by individual target groups. The fortification coverage module collects consumption data at the household level and only accounts for foods consumed inside the household. The individual consumption module, on the other hand, collects consumption data at the individual level and accounts for foods consumed inside or outside the household.

The module is an individual assessment of consumption based on a seven-day food frequency recall of prepared food items made with the fortifiable food vehicle. This method is used only for food vehicles that are typically consumed in prepared forms made outside the household (e.g., wheat flour food items). For example, in certain countries households do not use a lot of wheat flour to prepare foods inside the household and instead mostly consume wheat flour through the prepared foods that they buy such as bread, pasta, and biscuits. As a result, in this context assessing consumption of wheat flour using the seven-day food frequency recall method will better reflect the total daily wheat flour intake than the household assessment method.

To adapt this module:

1. Determine which food vehicles being assessed are typically consumed in prepared forms made outside the household.

1. Adapt the target population if it does not include women of reproductive age or children under five. This module should be administered to each individual who is part of the target population and who is being assessed at the household level. For instance, if the target population is women of reproductive age and the sampling protocol calls for all women of reproductive age within a household to be interviewed, then this module should be administered to each woman of reproductive age in the household.

2. Identify the list of food items to be included in the module for all the food vehicles being assessed by this method. Annex A provides a detailed protocol on how to develop the lists of foods and their recipes.

3. Prepare the photograph catalogue showing pictures of different portion sizes of each food item to help respondents report the portion size they typically consumed in the past seven days. An example of the catalogue can be found in the annex of the standard questionnaire. This catalogue will need to be developed for each food item. The protocol in Annex A provides information on how to develop such a catalogue.

4. Pre-test the module. It is important to test the list of food items and the photograph catalogue to ensure that households are familiar with the foods on the list (sometimes households in different parts of the country might call a certain food vehicle by a different name or prepare it in a different way) and that there are no commonly consumed foods missing from the list.

3.15 Fortification knowledge

This module collects data about a household's awareness of fortified foods and their benefits.

There are two versions of this module in the standard questionnaire. The first should be asked in settings where there are no fortification logos being used in the country to put on fortified food packages or used in awareness campaigns. The second should be used in scenarios where fortification logos exist. In the latter case, the logos must be identified (there might be more than one), and questions FK1 to FK3 should be repeated for each fortification logo.

3.16 Health and nutrition

HN1 and **HN2** are needed to assess the micronutrient contribution to the diet of women of reproductive age from consumption of the fortified food vehicles, as a woman's nutrient requirements vary depending on pregnancy and lactation status (refer to the document "FACT Indicators Definitions and Measurement Guidelines" for an explanation of how this indicator is constructed). These two questions must be asked for each female above the age of 10 who is part of the target population.

HN3 to HN8 are used to construct the nutrition dimension of the MPI. Depending on how the deprivation conditions of the nutrition dimension are defined by the OPHI for the country of study, HN3 to HN8 will need to be adapted. Adaptations need to be made in the same manner as in section . These questions will also need to be adapted depending on whom the target population is.

If the mid-upper-arm circumference (MUAC) of the respondent is below a certain cutoff that indicates severe malnutrition, then the respondent must be referred to the nearest health facility for medical treatment. Annex B provides an example of a referral form that must be developed and adapted by the questionnaire designers. Multiple copies of the referral form should be given to each interviewer, who will then fill in the information on the form and hand it to all respondents who are severely malnourished.

References

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Annex A Protocol for the development of lists of foods and their recipes for the individual consumption module

Introduction

A staple food is a food item that is eaten regularly and that contributes to a large portion of the standard diet of a population. It is typically an easily available food that is cheap and provides energy. Typical staples are oil, flour, sugar, and rice. Since staple foods are consumed in relatively constant and significant quantities by the whole population and consumed by poorer population groups in even larger quantities, they are often chosen as food vehicles for fortification.

To determine individual or household consumption of these food vehicles, different methodologies exist. These run from very detailed and resource-intensive methods (e.g., 24-hour recall) to less precise and less resource-intensive methods (e.g., household purchase patterns). Frequently, dietary assessments are not included in surveys owing to their resource-intensive nature and/or the cost entailed. In the context of the FACT surveys, the goal was to develop approaches that allow programs to overcome such challenges while still being able to assess coverage and consumption (utilization) of the fortified staple food(s).

Depending on people's purchasing and consumption habits, staple foods can be classified in two groups:

1. Staple foods that are mainly bought in a "raw" form at the market and then prepared and/or cooked at the household level (e.g., rice in Vietnam is typically bought raw and cooked every day in individual households); and

2. Staples that are prepared at the market level and bought by the households already prepared (e.g., bread is mainly prepared by bakeries in Senegal).

The present protocol deals with the latter case.

The objective of the protocol is to guide the end user through the steps of developing lists of foods made with food staples and the compilation of their recipes. These lists and recipes will then be used to assess the individual consumption of foods made from a specific staple food.

A consultant or local partner with expertise in nutrition and good knowledge of local consumption habits should be contracted or partnered with to complete the work. This could be, for example, a university with a nutrition department, a local nongovernmental organization working in the nutrition sector, the organization implementing the survey, or a local nutrition consultant. Henceforth, this entity/person shall be referred to as the "lead" for development of the food lists and photo catalogues.

Step-by-step instructions

Step 1: Review of available information

The first preparatory step is to obtain as much information as possible on the purchase and consumption habits of the population of interest from already available sources, such as local food composition databases, consumption surveys, and food balance sheets. This will give a first idea of the foods that are consumed as staples in the population of interest and how they are purchased and consumed.

Step 2: Recruitment of key informants

For the development of the lists and recipes, five to seven key informants will be recruited. The key informants need to be representative of the range of geographical areas/regions and socioeconomic groups of the study population. Moreover, they should be articulate and familiar with the topic of the purchase, preparation, and consumption of the staples of interest. These key informants are typically nutrition students, local nutrition experts, community leaders, community health workers, or women in the community who are responsible for food planning and preparation for the household.

Step 3: Arrange key informant interviews (KIIs) and/or organize focus group discussions (FGDs)

The key informants can be interviewed independently or organized into an FGD, depending on the context. For KIIs, anticipate at least a one-hour meeting with the key informant. FGDs may take two to four hours and will be led and moderated by the designated lead. If FGDs are determined to be an appropriate approach, invite the key informants in advance, book a room, and procure materials (such as flip charts, notepads, and pens and pencils).

Step 4: List all possible foods made from selected staple (first part)

During the KII or FGD, the priority will be on putting together a list of foods and dishes made from the selected staple. In creating the list, the key informants should explore different types of food items (e.g., main meat dishes, vegetable dishes, snacks, porridges, breads, and beverages), so that the whole range of possible foods is considered. The goal is to develop as comprehensive a list of *commonly* consumed food items containing the staple of interest as possible.

Step 5: Complete information for all foods listed (second part)

In the second part of the KII or FGD, the key informants will list in a table all the foods mentioned and complete information on where each food is typically bought, how it is prepared, whether it has alternative names, whether it is consumed only in certain areas or by certain population groups, and any other useful information (see Table 1: Example of a list of foods and beverages that contain the staple food).

Step 6: Collect information on portion sizes (third part)

In the third part of the KII or FGD, the key informants will discuss and list the portion sizes typically consumed by the target group of the survey (e.g., women of reproductive age).

Step 7: Sort, refine, and reduce the list of foods (and their corresponding portions), and enter the final list of foods in Excel

The designated lead will sort this list of food items and reduce it to a list of only the food items that contain significant amounts of the staple and are consumed regularly and in significant quantities (at least once a week and at least 100 g per week) by the population of interest (e.g., croissants that are eaten less than once a month should not be included, but baguettes that are consumed daily should be). This list will be entered in Excel using the template in Table 1: Example of a list of foods and beverages that contain the staple food.

Each food item in the final list will be broken down into typical portions (six to eight different portions, or more if it is a very large item). Where possible, logical portions will be chosen. For example: 1/16 baguette, ¼ baguette, ½ baguette, 1 baguette (see Table 2).

Step 8: Collect recipes

Once the list is refined, the lead will obtain common recipes for each food item from each source listed. For each food item, at least three recipes from three different sources should be collected (e.g., baguette recipe from bakery A, supermarket B, and home C). More recipes might be needed to adequately represent regional variations in recipes. It may be possible to obtain this information without moving to the different regions of the country, but instead interviewing people in the area that come from the different regions. The information on sources, common names, and where the food items are found should be tabulated as shown in Table 3.

The recipe should contain information on the food item described and the source of the recipe (e.g., home, bakery, supermarket). Then, each ingredient should be listed, with individual amounts given in grams (see Table 4). The main ingredient of interest is the staple food, and therefore if some individuals are not willing to or cannot provide exact amounts for the other ingredients, estimates are sufficient. Information on the preparation is not needed. However, information on the number of servings or units made from that recipe is important (e.g., a baker produces X baguettes with Y flour), as it will allow for the calculation of the amount of the staple food in each serving or unit. It is also important to record the weight in grams of one serving or unit. Therefore, when collecting the recipes, it is advisable to bring

along a scale that is precise to one gram. The total weight from each ingredient (including water) can be calculated to double-check the number and size of servings or units reported.

If the food item is a packaged or branded product, the content of the staple of interest should be calculated from the composition on the label, and any mention of whether the product is made locally or imported (and from where) should be recorded. If the label does not permit the estimation of the quantity of the staple added, the producer or vendor should be contacted for more information.

Step 9: Collate all collected recipes in Excel, and compile one standard recipe per food item

Enter all of the recipes completely in Excel—i.e., three recipes or more for each food item, each on a separate tab in the Excel workbook. Check to ensure that the data collected and entered are coherent (e.g., comparing serving or unit sizes and amount of staple food). Then, average all the recipes of each food item into one "standard" recipe for each food item (see Table 5 for an example of one recipe).

Step 10: Collect food items for photograph catalogues

Purchase each food item in the list in its most "standard" form. These "standard" items will be used to create one photograph catalogue per food item (see Figure 1). These catalogues will be used during the interview to facilitate the estimation of the portions eaten.

Step 11: Reproduce and photograph typical portions of each food item

From these "standard" foods, re-create all the different portions that are typically consumed by the target population group, from the largest (e.g., one big serving of spaghetti or one baguette) to the smallest (e.g., a very small serving of spaghetti or a slice of baguette).

Measure each typical portion, and record it as a percentage or portion of the largest portion (e.g., ¼ of a baguette). Take a color photo of each portion on a white background. To facilitate the representation of the actual size, use a reference object and include it in the photo (e.g., items on a standard plate or bowl, item in hands, or items next to a coin or ruler).

Step 12: Create photograph catalogue

From these pictures, create a one- to two-page catalogue per food item with the name of the food item, the pictures of all the portions in increasing order, their portions, and their codes for the recording of the answer in the questionnaire (examples are shown in Figure 1 and Figure 2). These will be put together into one booklet that will be printed in color and provided to each of the survey interviewers.

Step 13: Pre-test

The list of foods and the photograph catalogues need to be pre-tested before being finalized, a task that can be conducted either by the designated lead or by another entity, as appropriate to the survey design. Recruit a sample of 10 to 15 respondents with the same characteristics of the study population (e.g., women of reproductive age living in rural and urban settings of selected provinces). The team of interviewers will visit the selected respondents and ask each respondent individually if they have eaten any food containing relevant amounts of the staple food of interest over the past seven days. Then, the interviewer will ask the respondent to recall the number of times he/she has eaten each food item mentioned. The interviewer will then show the pictures of the different portion sizes and ask the respondent to estimate the portion that he/she typically consumes on each eating occasion (e.g., three slices of baguette). The interviewer will record the frequency, amount, and portion size in the questionnaire. The interviewer will also take special note if other foods or portions are mentioned, as well as if very different recipes were used.

Step 14: Finalize food lists, recipes, and photograph catalogues

Based on the pre-test, the designated lead will revise the food list, recipes, and photograph catalogues as needed and finalize them.

Examples of food list forms, recipe forms, and photograph catalogues

Table 1: Example of a list of foods and beverages that contain the staple food

Number	Food	Type of wheat flour	Quantity (g)	Serving/Unit	Number of servings/units	Flour per serving/unit (g)	Variable	Description
1	Doughnut		200	1 doughnut	8	25	Number	Food item number
2							Food	Type of food
3							Type of wheat flour	Type of wheat flour used in recipe
4							Quantity	Quantity of wheat flour used in recipe
5							Serving/Unit	Definition of what a serving/unit is for the recipe
6							Number of servings/units	Number of servings/units the recipe makes
7							Flour per serving/unit (g)	Quantity of wheat flour per serving/unit in the recipe (autocalculated)
8								
...							Fill in all areas of green	
N							This is an example of what the data will look like for 1 item	

Table 2: Example of portion sizes for a given food item

Number	Food	Portion size number	Flour per serving/unit (g)	Portion size	Flour per portion size (g)	Type of wheat flour	Variable	Description
1	Doughnut	1	25	0.25	6.25		Number	Food item number
1	Doughnut	2	25	0.5	12.5		Food	Type of food
1	Doughnut	3	25	0.75	18.75		Flour per serving/unit (g)	Quantity of wheat flour per serving/unit in the recipe (take from column G in Flour_g_recipe spreadsheet)
1	Doughnut	4	25	1	25		Portion size number	Number of photogrid corresponding to this portion size - insert rows as needed based on the number of portions in the photogrid
1	Doughnut	5	25	1.5	37.5		Portion size	Portion size relative to one serving/unit for the recipe
1	Doughnut	6	25	2	50		Flour per portion size (g)	Quantity of wheat flour per portion size (autocalculated - Flour per serving/unit* Portion size)
1	Doughnut	7	25	3	75		Type of wheat flour	Type of wheat flour used in recipe
1	Doughnut	8	25	4	100		Fill in all areas in green and insert rows as needed based on number of portions in photogrid	
							This is an example of what the data would look like if there were 8 photos on the photogrid with the portions ranging from 0.25 to 4 donuts. Update accordingly.	

Table 3: Example of list of foods and beverages that contain flour and their sources and common names

Food Item	Source (check all that apply)					Common name	Other names used for this food item or brands (if applicable)	Specify region, if the food item is only eaten in certain regions
	Home-made	Bakery	Super-market	Open market /kiosk	Other			
Baguette		X	X	X		Baguette		
Round bread		X		X		Pain rond	Pain plat et rond	
Wholemeal bread		X	X			Pain complet	Pain brun	
Plain cake (oven)	X		X	X		Cake	Gâteau	Cake recipe is different in north and south
Coconut cake			X			Cake à la noix de coco	Cake au coco, gâteau au coco	In north of country
Biscuits			X	X		Biscuits	Petit Beurre	
Pizza			X		Restau-rant	Pizza		In urban areas

Table 4: Recipe form template

RECIPE FORM	
Name of food item	
Pattern of use	
Source of recipe (e.g., homemade, bakery, market)	
Ingredient	**Quantity (grams)**
Total weight of individual ingredients	
Serving or unit definition	
Serving/unit size (g)	
Number of servings/units	
Wheat flour per serving/unit (g)	

Table 5: Example of recipe

RECIPE FORM	
Name of food item	Doughnut
Pattern of use	Snack
Source of recipe (e.g., homemade, bakery, market)	Caterer
Ingredient	**Quantity (grams)**
Wheat flour	200
Butter	50
Sugar	25
Salt	5
Water	125
Yeast	7.5
Total weight of individual ingredients	412.5
Serving or unit definition	Whole doughnut
Serving/unit size (g)	76.6
Number of servings/units per recipe	8
Wheat flour per serving/unit (g)	25

Figure 1: Example of food catalogue from the Philippines

EXAMPLE1: Monay (Philippines bread bun)

1. 1/8 bun

2. 1/4 bun

3. 1/2 bun

4. 3/4 bun

5. 1 bun

6. 2 buns

Figure 2: Example of food catalogue from Pakistan

Annex B Referral form example

Referral Form (Patient Copy)

FACT SURVEY IN [INSERT COUNTRY AND YEAR]

Date: ☐☐ / ☐☐ / ☐☐

Village/cluster: _____

Name of individual referred: _____

Age: ☐☐ years and ☐☐ months (months only for children

Sex: _____

MUAC: ☐☐☐mm

Referral center :

Name: _____

Address: _____

Contact number: _____

[INSERT AS APPROPRIATE: We kindly advise that you attend an appropriate follow-up at a health facility / We kindly thank you for taking the referred child for appropriate follow-up at a health facility].