



NVITAL SIGNS

Field Manual

Survey Protocols

March 2014

MANUAL CONTENTS

1. HOUSEHOLD SURVEY PROTOCOL.....	2
2. AGRICULTURAL MANAGEMENT INTENSITY PROTOCOL	137
3. FARM FIELD SOIL SAMPLING AND PROCESSING PROTOCOL.....	258



Vital Signs Protocol

Household Survey

Version 2.0

March 2014

ACKNOWLEDGMENTS

This survey incorporates a subset of the questions from the World Bank Living Standards Measurement Survey - Integrated Survey of Agriculture. We would like to acknowledge their contributions towards this survey tool: <http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/EXTLSMS/0,,contentMDK:21610833~pagePK:64168427~piPK:64168435~theSitePK:3358997,00.html>

CONTENTS

1. INTRODUCTION	6
<u>1.1 Definitions of Key Technical Terms</u>	7
<u>1.2 Standard Conventions</u>	9
2. ROLES AND RESPONSIBILITIES	9
3. EQUIPMENT LIST	12
4. CONFIDENTIALITY AND CONSENT	14
5. SELECTING HOUSEHOLDS FOR SURVEY.....	14
6. CONDUCTING AN INTERVIEW	18
<u>6.1 Approaching a Household for the First Time</u>	18
<u>6.2 Responsibilities of the Interviewer</u>	19
7. COMPLETING THE HOUSEHOLD QUESTIONNAIRE	21
<u>7.1 Introduction to Sections and the Questionnaire</u>	22
<u>7.2 Section A-1: Household Identification</u>	27
<u>7.3 Section A-2: Survey Staff Details</u>	28
<u>7.4 Part 1 – Section B: Household Member Roster</u>	30
<u>7.5 Part 1 – Section C: Education</u>	33
<u>7.6 Part 1 – Section E: Labour</u>	34
<u>7.7 Part 1 – Section J: Housing, Water and Sanitation</u>	41
<u>7.8 Part 1 – Section L: Non-Food Expenditure, Past Week and Month</u>	44
<u>7.9 Part 1 – Section M: Non-Food Expenditure,</u>	

Vital Signs Household Survey Protocol 2.0

<u>12 Months</u>	44
<u>7.10 Part 1 – Section N: Household Assets</u>	45
<u>7.11 Part 1 – Section U: Anthropometry</u>	46
<u>7.12 Part 2 – Section HV1: Natural Resource Base – Fuelwood</u>	56
<u>7.13 Part 2 – Section HV2: Natural Resource Base</u>	57
<u>7.14 Part 2 – Section I: Food Security</u>	60
<u>7.15 Part 2 – Section J: Water and Sanitation</u>	63
<u>7.16 Part 2 – Section K: Consumption of Food over Past Week</u>	66
8. BIBLIOGRAPHY	70
9. ATTACHMENTS.....	71
<u>9.1 What is a Household?</u>	71
<u>9.2 Different Types of Toilets</u>	75
<u>9.3 Household Water Treatment</u>	78
<u>9.4 Vital Signs Household Questionnaire</u>	79
<u>9.5 Vital Signs Household Questionnaire Data Dictionary</u>	111

1. INTRODUCTION

The household survey aims at gathering information on human well-being to **provide basic indicators of livelihoods, agriculture, and natural resource management**. Vital Signs seeks to evaluate the tradeoffs and synergies between agricultural productivity, ecosystems services, and human well-being. The household data helps to provide the information needed to assess these tradeoffs and synergies.

This household questionnaire is a panel survey, and it is planned to revisit these households within an interval of 1 to 3 years. **The households that are selected are linked to the 10 x 10 km Vital Signs landscapes**, of which there are from 5 to 10 per country.

The main objective of the household questionnaire is to collect information at the household-level on education, health, employment, children living outside of the home, water and sanitary practices, food expenditures in and outside the household, nonfood expenditures, household resources and anthropometric status. This data will be used to build indicators of food security, poverty, nutrition, inclusive wealth, and water security. In addition to providing data for these indicators, this detailed fine resolution data will be used to validate remotely sensed data and other monitoring and census data that Vital Signs will use.

1.1 Definitions of Key Technical Terms

The following terms are used in this questionnaire and Vital Signs research:

Household¹: A household comprises the people who live together and share income and basic needs. Residents of a household share the same center of production, and consume from that center. Refer to Appendix A for more detailed instructions for what constitutes a household.

Head of Household: The head of household is the member of the household who occupies the role of decision maker. Other residents recognize this individual as their head, and in most cases, the household head takes part in the economy, control, and welfare of the household.

Household Housing: This refers to the dwelling owned by the household, regardless of appearance. It can be a room, a single building, or more than one building.

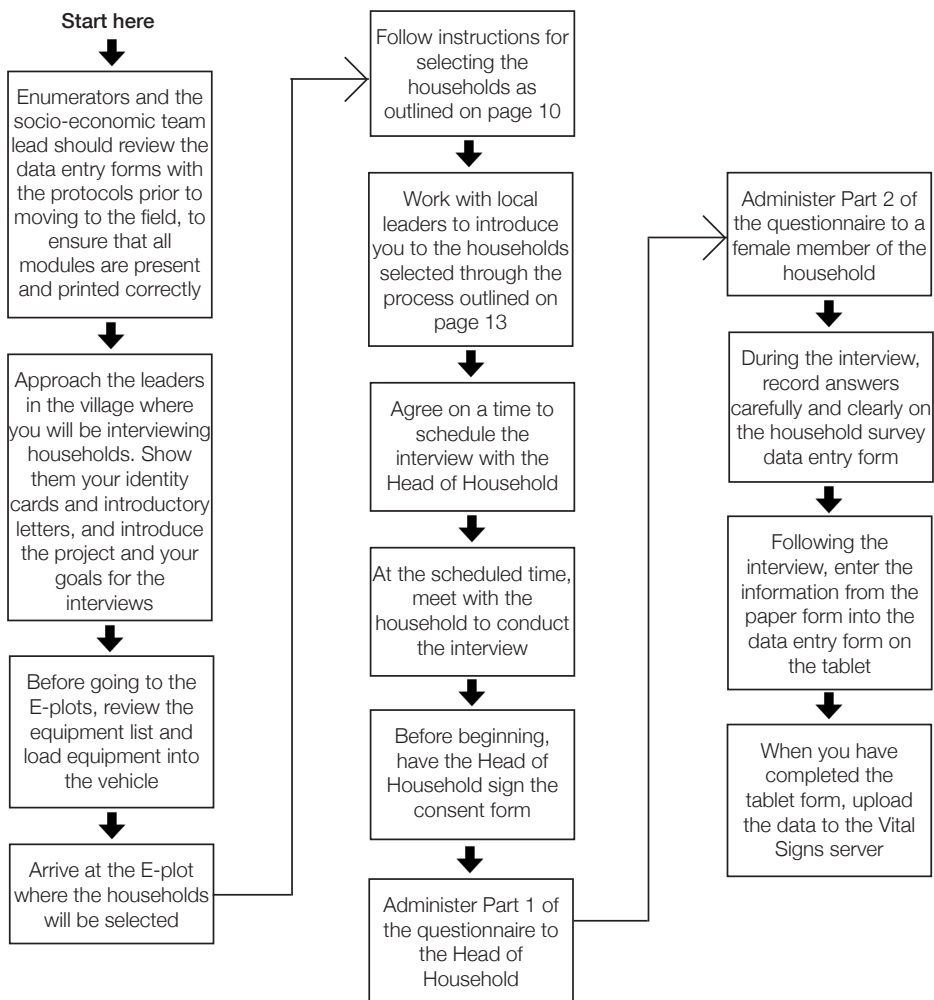
Household Income: Sources of household income include:

- Wages, salaries, and benefits earned by workers
- Profits from agricultural and non-agricultural activities
- Interest earned on investments or savings
- Loans, aid or pension-payments received

¹ See appendix for the complete definition of a household.

Vital Signs Household Survey Protocol 2.0

Workflow 1: Household Survey Protocol



- Income from the sale of property
- Other payments received from insurers, etc.

Household Expenditure: Household expenditures include:

- Resources used to buy items and services for daily living
- The price of items and services consumed by the household and the line item expenditure for these good and services
- Tax contributions, insurance payments, lottery tickets, interests for loans together with expenditure on items not used for consumption

1.2 Standard Conventions Used in this Document

The following conventions are used throughout this document:

- The use of bold in the text indicates a critical point. **Please pay special attention to terms, sentences and paragraphs marked in bold** as they are key to the understanding of the protocol.

2. ROLES AND RESPONSIBILITIES

The following section identifies the responsibilities of the Vital Signs team and enumerators conducting this household research. As in any other kind of work, unforeseen obstacles may develop during implementation of the research. To address these problems, it is

Vital Signs Household Survey Protocol 2.0

important that the supervisor remain in clear and frequent communication with the head office of Vital Signs and the Africa Field Director.

Role	Responsibility
Enumerators	<ul style="list-style-type: none">• Read protocols and survey material specific to each module• Conduct interviews• Complete household surveys and enter data onto tablet forms
Technical Manager	<ul style="list-style-type: none">• Coordinates and supervises all enumeration activities in the landscape during the data collection process• Monitors, checks, and assesses the quality of the work of the enumerators• Reviews the questionnaires for completeness, consistency, and accuracy.• Oversees the concurrent data entry effort in the field, and ensures that the errors identified by the data entry application are corrected prior to departing from a given landscape,• Uploads data to the server in a timely manner for each landscape that is completed in a given week

Vital Signs Household Survey Protocol 2.0

	<ul style="list-style-type: none"> • Assists the enumerators in the collection of anthropometric data from children less than 5 years old • Monitors the condition of survey equipment assigned to the enumerators and the data entry operator • Collects information from knowledgeable community members using the Community Questionnaire • Reviews all supplementary material sent from the NSO Headquarters (including manual updates and clarifications concerning technical or logistical issues) with the field staff in a timely manner.
Country Director	<ul style="list-style-type: none"> ● Reads and reviews all data entry forms and manuals/protocols sent by the African Field Director, and provides feedback to the director ● Instructs the supervisors on any changes or additions to protocols. ● Supports team with a complete understanding of the protocol manual ● Trains technicians ● Leads technicians in fieldwork

	and assists with measurements as required
Africa Field Director	<ul style="list-style-type: none"> ● Helps train technicians and ensure consistency of protocol implementation across Vital Signs countries ● Reviews data when uploaded ● Approves protocol updates and sends out update notifications to field teams
Protocol Manager	<ul style="list-style-type: none"> ● Receives and archives comments about the protocol from the field team ● Updates and re-circulates the protocol

3. EQUIPMENT LIST

The following equipment is required to carry out the activities described in this manual. Before traveling to the field, use this list to ensure you have all the equipment needed for the day.

Supervisors will be given the aforementioned items together with locations of the E-plots in the 10 x 10 landscapes. Interviewers and supervisors should ensure that the tools are cared for, as they cannot be obtained easily and there won't be extra tools issued for those that are destroyed.

If a tablet is being used to record data, at least one on-site backup and, preferably, at least one off-site backup should be made at the end of each day.

Each interviewer should have the following on their person:

- Identity card
- Letter of introduction
- Instructional book/manual (for interviewer and for questionnaire)
- Paper Questionnaire
- Tablet with form downloaded
- Pencil, rubber eraser, and sharpener
- Writing board and notebook
- Weighing sack
- Spring balance
- Beam Balance
- Infant Measuring Mat
- 1 Mid Upper Arm Circumference (MUAC) Measuring Tape
- Upper Arm Measuring Tape
- Meter rule
- Rain boots and raincoat
- GPS unit
- Adult digital scale (Anthropometry) with 9 v batteries
- Detailed VS map with location of the landscaped and E-plots

4. CONFIDENTIALITY AND CONSENT

Data collected from household members is confidential and should not be shown in paper or electronic form to unauthorized persons unrelated to this research. **Do not show the data to anyone until you have obtained clearance from the Vital Signs Africa Field Director.**

Personal identifying details will be removed before the data is released to researchers. This information will only be used for planning future surveys. It is necessary to assure respondents that the information they give will remain confidential and be used for research purposes only. The enumerators must inform the potential respondents of the confidentiality of information clause before administering the survey.

All of this information is detailed in the Consent Form that will be read to the potential respondent by the enumerator. If the participant agrees to be interviewed, they are requested to sign the consent form (or sign otherwise as indicated on the form). The signed form must be kept confidential and returned to the supervisor for safe storage.

5. SELECTING HOUSEHOLDS FOR SURVEY

Obtaining a representative sampling of the households is a very important part of the data collection. In every 10 x 10 landscape, 10 E-plots are randomly placed for vegetation and soil sampling. **Households to be surveyed are located near these E-plots, and are**

obtained from three corners of each E-plot. For the sampling procedure, household and agricultural management surveys and mapping of agriculture plots will be administered on three agricultural households near the E-plot. **Note that the households interviewed should be ones that participate in agricultural production.**

Figure 1 illustrates the method for selection of the households. The main reason for doing the selection this way is to ensure that different households are interviewed, and to avoid interviewing households that are situated close together and possibly related.

If there is a household within the E-plot, select this as the 1st household. It will be associated with the SE corner of the E-plot. Then move to the NE corner to select the 2nd household.

If there is no household within the E-frame, then proceed as follows:

- For the 1st household, stand at sampling point 1 (the SE corner) with your back pointed away from the E-plot and your arms extended in the direction of the dotted lines (as illustrated in Figure 1).
- Select the closest household in the area of vision in front of you and your extended arms.
- Repeat the procedure for the 2nd household at point 16 (NE corner).

Vital Signs Household Survey Protocol 2.0

- Repeat the procedure for the 3rd household at point 11 (NW corner).
- If you have not identified three households through this process, then you can go to the 4th corner (SW) and select a household.

In cases where there is no household within the E-plot and you can only access one or two households on corners of the E-plot, see detailed scenarios below.

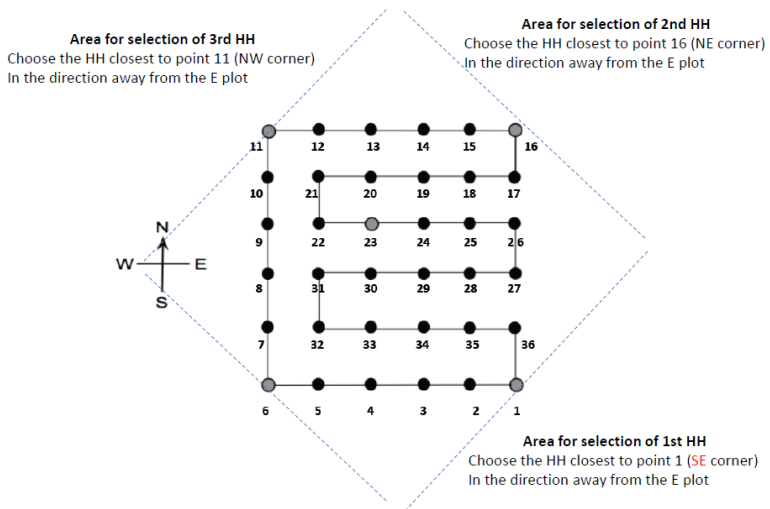


Figure 1: Household Selection near E-plots

In the case where agricultural households are accessible only on two corners:

Vital Signs Household Survey Protocol 2.0

- Choose two households from the first corner and one household from the second corner.
- To do this, randomly select a corner where you will choose two households from the two corners where you find households. At this corner where the two houses are selected, the first household is the one closest to the corner of the E-plot. The second household should be at least 500 m from the first household. (try to avoid households close to each other or that are very similar).

If the E-plot where households only exist at one corner of the E-plot:

- Randomly select three households from this corner.
- The first household selected should be the closest agricultural household to the corner of the E-plot facing away from the E-plot.
- From this household, select two more households: one household at least 500 m to the left and the second at least 500 m to the right.

If the E-plot is located in a forested area or place where no households are accessible at the four corners within 1 km or a time of 30 minutes:

- The enumerators should increase the number of households sampled at three of the nine E-plots to 4. This is the case where the E-plots that were

previously sampled have households accessible on all corners.

- This should be done in consultation with the country team manager and recorded on the second page of the household questionnaire in the notes.

6. CONDUCTING AN INTERVIEW

6.1 Approaching a Household for the First Time

Before you start work in any given landscape, make sure that you introduce yourselves to the appropriate village administrative officers or leaders [e.g., village executive officer, village chief or assemblyman] and they that they are aware of your presence. **Ensure that you follow local and governmental procedures, and you should show your identity card and introductory letter to the village leaders at this time.**

You will be responsible for explaining the purpose of the interview to each household. You should be neat, respectful, and dressed appropriately. Female interviewers should dress observing cultural norms of the area.

You should do your best to earn the maximum cooperation of the interviewed households, understanding that no person is obliged to accept the interview. Inform respondents in advance that the research is for the benefit of the country, and also seek help from village leaders to explain the importance of the surveys.

It is important that you establish a pre-agreement with the respondent about the time and place of the interview, and meet them promptly at the time and location that they prefer.

6.2 Responsibilities of the Interviewer

Before beginning the interview, go over the consent form with the head of household and have them sign the form. If a household refuses to participate in the survey, you should report this to the supervisor and select another household following the procedures outlined above.

Make sure you collect the data correctly and that you build a good relationship with the interviewed households in your area. Arrive promptly at each household. Follow the pre-instructions and procedures, bearing in mind that you will return to the household regularly.

As in many research projects, the interviewer is of fundamental importance. It is critical that you collect the necessary data/information accurately, as the research project depends on the way the interviewer fulfills his/her responsibilities:

- Follow instructions step-by-step to successfully accomplish your tasks.
- Generate warm relationships with your respondents, in order to receive accurate responses. Have confidence, and familiarize yourself with the traditions and customs of the given society you are working in.

Vital Signs Household Survey Protocol 2.0

- Consider your manner of speech and dress, as the first-impression that the interviewer makes to the respondent has great importance for the accuracy of the results. Do your best to look and act appropriately.
- Present yourself with confidence and as someone who knows what they are doing.
- Emphasize the confidentiality of the research, and obtain the consent form. **The interview should be conducted between you and the respondent only**; no other persons who do not pertain to the household should be present during the interview, unless allowed by the head of the household for an important reason.
- Remember that your role is to ask questions, whereas the respondent's role is to answer them. Therefore, you must not offer suggestions to the respondent. Do not express annoyance or any other reaction in response to the answers given by the respondent, as this may bias the data collected.
- If the respondent does not readily respond to a question, remind them of the objectives of the research, as well as the confidentiality of the information given. In no case should you force the respondent to answer.

- The survey includes a large number of questions, but **you must always follow the correct sequence and manage the process effectively**. If the respondent digresses during his/her responses, let the respondent do so and do not seek to interrupt. After listening to him/her to the end, try to politely direct them back to the original question in the questionnaire.
- If you have not finished the interview by the end of the allotted time, ask the participant if they have more time. If not, ask them when is a convenient time later that day or the next day and report to the supervisor immediately so that they can prepare the schedule for the next day.
- If you encounter any problem, petition help from your supervisor. It is important to remember that by collaborating in this way with the supervisor, the best data will be obtained.

7. COMPLETING THE HOUSEHOLD QUESTIONNAIRE

The survey is a household information questionnaire. The questionnaire includes information on demographics, education, labor/employment, housing, water and sanitation, food consumption in the last week, food consumption outside the household, non-food consumption (for the past week and month), non-food consumption (for the 12 past months), forest resource

base use, household assets, and anthropometric measurements.

7.1 Introduction to Sections and Completing the Questionnaire

The survey is divided into two parts: **Part 1 is administered to the household head**, and **Part 2 is administered to a female member of the household** who is in charge of food preparation and household upkeep

The sections in these parts are presented as follows:

Part 1: Administered to Household Head

- **Section A** – Household identifier variables, supervisor and enumerator identification, and time and date of interview.
- **Section B** – A roster of people living in the household, age, gender, and relations to the household head.
- **Section C** – Education of the household members.
- **Section E** – Labor market participation during the last seven days, wage work, and non-farm enterprise activities.
- **Section J** – Dwelling characteristics, water source, sanitation facilities, and fuel use.

Vital Signs Household Survey Protocol 2.0

- **Section L** – Non-food expenditures during the last week or month.
- **Section M** – Non-food expenditures during the past 12 months.
- **Section N** – Data on household assets accumulated
- **Section U** – Anthropometric information on household members younger than 60 months and one adult female member.

Part 2: Administered to a female member of the household

- **Section A** – Fill in this information from Part I.
- **Section HV** – Data on wood fuel use and changes in access to it.
- **Section I** – Information on the household's diet and food intake.
- **Section K1** – Quantity and value of food consumed within the household during the last seven days by source.
- **Section K2** – The frequency of consumption of food items.

The most important thing to remember when completing the household questionnaire is to write clearly and accurately. All of the questions are written as they are to be read to the respondents. **You should not ask the questions according to your own criteria**, except in situations where the respondent does not understand the question. In such situations, you must explain the content without changing the meaning of the question. This is important to ensure that all respondents are answering the same questions.

The household questionnaire modules are organized according to two basic formats:

- **Columns (vertical):** In this format, the text area, response categories and response to each question are found organized sequentially in columns. An example of this is found in *Module J: Housing, Water and Sanitation*, where only one response is needed for information covering the entire household.
- **Columns and rows:** This format is used when there is information from multiple respondents in a single module. In this format, the questions are located in the columns and the responses are recorded in the rows.

The question codes are provided in this document and will also be available on the data tablet as a drop down menu. Read this manual carefully to help with enumerating the questions on the tablet.

Other Responses

If the respondent says 'other' as his/her response, you should record the response from a drop down menu on the tablet². You should select the 'code for others' and then write the specific response next to the number. In this example, the respondent was absent from school to visit family in Dar es Salaam. This is not an answer choice, so the interviewer selects "12" and writes the reason in words.

Zero Response

Responses that require a monetary figure have to be filled with '0' if there is not any amount used for the particular question. In the following example, the respondent says that he was not charged for being taken to the spiritual services or when taken to the witch doctor. The correct method of recording is to put "00". It is incorrect to leave the box blank.

It is never permissible to leave a question blank that is not intended to be blank from the skip patterns. If the respondent does not know, probe to get the necessary information. If the respondent still does not know after probing, indicate '99' on the questionnaire instead of leaving it blank.

Entering Dates

When entering the month or year of an event, follow these rules: Calendar month: Always enter 1 to 2 digits. Do not

² The hard copy of the questionnaire contains the 'codes' that are used as drop down options on the tablet. Please read these codes to get familiar with them.

write the name of the month. Calendar year: Always 4 digits (for example, 1980).

Last 7 Days

Questions that ask for information from “seven days ago” refer to the immediate last 7 days. Example: If the interview is on Monday, “seven days ago” refers to the previous Monday through Sunday (yesterday).

Decimals

If you need to report portions of a quantity less than 1, you should use decimals. Make sure that you write the decimal point in the questionnaire very prominently, such as 3.5. Do not write fractions (for example, do not write “3½”).

Monetary Amounts

When the response to be recorded is a monetary amount or figure, write the correct response in the corresponding cell. **Only record responses in local currency** (for example, Tanzania Shilling or Ghana Cedi). If a respondent says \$50 (US dollars), use the approximate exchange rate to convert that into local currency. If you are not sure, check with your supervisor. For any amounts over a value of 1,000, include a comma.

Comments

You should write any relevant/important comments in the Comment Box on the questionnaire. You can write small comments or notes to yourself on the other pages of the questionnaire (in the margin) to help you when you edit the questionnaire later. But do not expect your supervisor

to read these comments. Any comments you want your supervisor to read should go in the Comment Box.

NOTE: In the description of the sections and questions below some of the question numbering may not be sequential. After the initial data collection in Tanzania with a similar data entry form, and experience while training in Ghana using that data form, we modified the data entry but maintained the question numbering. We moved some question due to logic and ease of enumeration. You will find that in Part I section U questions 1 and 2 appear at the end of the module.

7.2 Section A-1: Household Identification

The household is placed into the administrative context by starting with the name of the region and the district - each with two digit codes (the regional and district codes are provided in the country specific surveys)³. Next are the names of the ward, if applicable (if not write '99'), landscape, and E-plot with their codes. Codes for landscapes and E-plots will be provided to the supervisor before start of the survey enumeration.

The household number will be five digits starting with the landscape number, then E-plot number, and household number. For example, if we are at landscape 'L6,' E-plot

³ All the codes are from the GLSS or Ghana Statistical service and Tanzania National Bureau of Statistics.

'01' and household '01,' the household number will be '60101'.

On the right side of the introduction of the household there is box. Put x in the box and the number of the forms used for the household interview below the box: for example, if you used two forms for this particular household and this is the first one then put Form 1 of 2 Total and so on if you use more forms such as Form 1 of 4.

FORM ____ OF ____ TOTAL

Question 7: You will write the name of the current household head.

7.3 Section A-2: Survey Staff Details

Question 8: *Name of enumerator.*

Here the interviewer writes their full name.

Question 9: *Enumerator code.*

Every interviewer (enumerator) will have a code; this is always filled in for each and every questionnaire he/she attends.

Question 10: *Time interview started.*

The interviewer should record the starting and finishing time of the interview. The start time should be recorded here (if in Tanzania the time should be in Swahili time), and the finishing time should be recorded in the box at the end of the questionnaire.

Question 11: *Date of the Interview.*

Write the date of the interview with the household member. Start with day, month and then year (DD/MM/YYYY).

Question 12, 13, & 14: These questions are for the supervisor to fill out with his/her name, number and the date of questionnaire inspection.

Question 15, 16, & 17: These questions are for data entry only. The data entry clerk should fill out with his/her name, number and the date of entering the data.

Question 18 & 19: These questions are for second data entry only. The second data entry clerk should fill out with his/her name, number and the date of entering the data.

On the right side of this page there is a big box where the interviewer should write their views on how the interview was conducted, and any other important information which may help the supervisor and the analysts of the questionnaire. Observations should be written at the end of the interview.

7.4 Part I - Section B: Household Member Roster

You should complete questions 1-5 for all household members before moving on to the remaining questions. You should also complete the household roster flap after question 5.

Question 1: List all household members, starting with the head, wife (if there is one), children, relatives, and servants. You have to list all those who share the meal in the household and contribute to the household income. After listing, read out the names to the household head to make sure that all household members are listed.

Question 2: Gender codes are 1 for men and 2 for women. This is an important question for all household members. Do not determine the gender by names, because some names are used by both genders – for example, Tumain/Kisi, Amoah/Bahati and Happy can be both men and women. Even for children, you have to make sure of the gender, because sometimes boys can look like girls, and girls like boys. The interviewer should be careful, because wrong coding of the household members can distort the data.

Question 3: Enter the code of the relationship of the household member with the household head. These are codes with only one figure (1 - 9). Servants to be included are those who share the meal and recognize the household head as their boss. Use the codes as indicated on the questionnaire.

Question 4: *When was (NAME) born?*

Vital Signs Household Survey Protocol 2.0

Fill in the month and year when (name) was born. Write year first, then month. If the respondent does not remember the month, you will write '99' on the month Column but you should try and probe to find out the month if at all possible.

It is possible that household members may not remember the year of his or her birth. The interviewer should use some historical events of that country to help the respondent to remember the year: in Tanzania, for example, the following dates are useful. Provide country specific lists for your team.

Events	Year
Start of First World War	1914
End of First World War	1918
Start of British rule in Tanganyika	1919
Start of Second World War	1938
End of Second World War	1945
Birth of TANU	1954
Independence of Tanganyika	1961
Zanzibar revolution and Zanzibar-Tanganyika Union	1964
Arusha Declaration	1967

Birth of CCM	1977
Kagera War	1978
Retirement of Tanzania's first President	1985

Question 5: *Age of (NAME).*

Enter the ages of all household members in two digits. If the age is below one year, write '00' and if it is '98' and above, enter '98'. You should verify that this is consistent with the year listed in the previous question. You should also compare this information with that on the preprinted tracking forms. If there are differences, you should probe to find out the real information from the respondent. Indicate the correct age on the new roster. You should also make a note on the observations box that the pre-printed date was incorrect.

At this point in the questionnaire, you should pause to complete the household roster flap. You should now ask the information for a single household member straight through to section E, before continuing with other household members.

Question 6: This question is to know if (NAME) shared the meal in the household for the past seven days. If yes, fill in 1, and if no, fill in 2

Question 7: *For how many days in the last month was [NAME] present?*

This includes the past 30 days.

7.5 Part 1 – Section C: Education

Question 1: This question is for the interviewer and should not be asked to the respondent. This questions asks you to identify household members who are 5 years old and above. Check the ages from Section B. If the household member is 5 years old and above code it 1, if no then code it 2.

Question 2: *Can [NAME] read and write?*

You have to identify who can read and write in the languages listed, without considering whether they have gone to school. All household members over age 5 should be asked this question. Code the answers from the list of the country in which the questionnaire is being administered. Code 5 if the respondent cannot read or write in any language, then go to question 3.

Question 3: *Did (NAME) ever go to school?*

You have to identify who has education in the household, without considering the grades. All household members should be asked this question. Code 1 for yes, and code 2 for no. If the answer is no, move to section E.

Question 4: *What is the highest grade completed by (NAME)?*

Record the highest grade that was completed by the person in question.

Vital Signs Household Survey Protocol 2.0

None	00	s1.....	27
Pre-School.....	01	s2.....	28
P1.....	11	s3.....	29
P2.....	12	s4.....	30
P3.....	13	s5.....	31
P4.....	14	l6.....	32
P5.....	15	u6.....	33
P6.....	16		
	Voc/Technical/computer/comm/agric.....		41
Jss1.....	17		
Jss2.....	18	Teacher Train....	42
Jss3.....	19	Nursing.....	43
M1.....	20	Polytechnic.....	51
M2.....	21	University.....	52
M3.....	22	Other Tertiary.....	53
M4.....	23	Other.....	61
Sss1.....	24	(specify)	
Sss2.....	25		
Sss3.....	26		

7.6 Part 1 – Section E: Labor

This section is about the work activities which members of the household do in order to sustain their livelihoods.

These questions should be asked to all household members 5 years and older. When possible, the household member should respond for him or herself. Follow the directives and the proper codes.

Please ensure that for persons below the age of 18, they not be interviewed directly by the enumerator. The household head may answer on their behalf and if he/she

is not sure of the answer, the household head can ask the respondent, and then (household head) answers the question.

A few definitions:

- **Work/Activities:** Work is any lawful activity that a person engages in order to sustain his livelihood.
- **Last 7 days:** This is an international measure on work remembrance; it has been used for many years. In these questions, the past 7 days is used to mean the seven days prior to the date of the interview. This period is very important for recording ongoing activities.

These questions should be asked for household members who are five years or older.

Question 1: This question is for the interviewer and should not be read to the respondent. The interviewer is supposed to verify all household members who are above 5 years. If yes you will write code 1, and if no, write code 2 and move to next section.

Question 4: *Did you do any work of any type for pay, profit, barter or home use during the last 7 days?*

This question is to find out if the household member is engaged in production for the household's expenditure in the past seven days. **If yes code it 1, and move to the next question.** If the answer is no code it 2 and continue with the following questions.

Question 8: This question asks if the respondent did any wage work during the last 12 months. If the answer is yes code it 1. If the answer is no, code it 2. Skip to Question 16.

Question 9: How much was your last payment? If the respondent has not yet been paid, then indicate the amount that they expect to receive. Also indicate the time unit for which the payment covers using the codes in the questionnaire. For example, if the respondent received 5,000 in local currency an hour, code 5,000 in the first vertical line and code 1 in the second. If the respondent received 2,000,000 (local currency) a month, code 2,000,000 in the first vertical row and code 5 in the second.

Question 7-15 concerns household members who are employed.

Question 10: This question is to know if the respondent does any extra duty, apart from his normal work, for which he receives payment that is not part of his salary. If the answer is yes fill in code 1, and if the answer is no fill in code 2 and move to question 12.

Question 11: *What is the value of those extra duty payments?*

Over what time interval were they received? Is it for hours...1, for days...2 for weeks...3, for 2 weeks...4, for month...5, for quarterly...6, for half a year...7, for whole

year...8? Fill in according to the answer. Record it in local currency with the code of the time unit.

Question 12: *How many hours did you work last week?*

Record also paid leave and sick leave. If he worked for two days, ask him to specify in hours.

Question 15: *During the last 12 months, how many hours per week do you usually work in this job?*

For the weeks when the respondent works in the job, write the average number of hours of work the respondent usually works.

Question 14: During the last 12 months, how many weeks per month do you usually work in this job? For the months when the respondent works in the job, write the average number of weeks of work the respondent usually works.

Question 13: *During the last 12 months, for how many months did you work in this job?*

Record also paid leave and sick leave. Write the total in months.

Questions 16-23 will concern household members who are self employed in non-agricultural business or enterprise.

This module collects detailed information on the ownership and operation of any income-generating

enterprises by the survey household that were in operation over the past 12 months. The main criterion for an enterprise to be listed in this module is that it operated at some point over the past 12 months, including those that operated over the past 12 months but are closed temporarily or permanently as of the interview date, and those that may not have operated full-time every month over the past 12 months.

Enterprise: An undertaking which is engaged in the production and/or distribution of some goods and/or services meant mainly for the purpose of sale whether fully or partly.

Household Enterprise: A Household Enterprise is run by one or more members of a household, or run jointly by two or more households on partnership basis, irrespective of whether the enterprise is located in the premises of the household(s) or not.

If a household runs a street corner stall, report it in this section. Likewise, if the household owns a major factory, report it in this section. If the women in the household make local drinks, straw mats, carpets or baskets, then the share of these activities that are used to generate income should be reported here. It also includes any trade (in food, clothes or various articles) or professional activity (like that of a private lawyer, a doctor, a carpenter, etc.) offering services for payment in cash or in-kind. Overall, all proprietary and partnership enterprises are household enterprises.

In fact, the module is interested in capturing seasonality in business activities, i.e. the fact that the nature of some businesses leads owners not to operate continuously through the last 12 months. Household non-agricultural income-generating enterprises include those that produce or trade goods or services, including owning a shop or operating a trading business, no matter how small. Enterprises might include, for example, making mats, bricks, or charcoal; working as a mason or carpentry; firewood selling; metalwork; tailoring; repair work; food processing, fish marketing, petty trading and so on. Examples of household enterprises to list in this section include:

- A tailor who repairs clothing and shoes at her stall in the market.
- A businesswoman who goes abroad to buy clothing, and then brings it to Dar es Salaam to sell in the market.
- A trader who buys maize from remote villages and transports it to the regional capital to sell.
- A bricklayer who works for different stores/shops in town when they need repairs
- An individual who makes charcoal and then carries it to sell along the road
- An individual who owns his own car and uses it as a taxi

- An architect who designs roads and consults with many different firms and the government sometimes for different projects

Question 16: Ask the respondent if the past week if s/he was engaged in non-agricultural business in the past 7 days, other than agriculture. Using the guidelines above, fill in code 1 if the answer is yes, **and move to question 22**. Fill in code 2 if the answer is no. Move to next question.

Question 17: This question wants to know if the respondent was engaged in personal business apart from agriculture for the past 12 months. If the answer is yes code it 1 and if the answer is no, code it 2 and **move to question 6**.

Question 22: *What gross income/takings did you get from your business or businesses last week/month?*

Find out what is the monthly income before paying taxes and the fixed costs. For weekly income fill in code 1, and for monthly income fill in code 2 for the period, and fill in the amount in the local currency.

Question 23: This question is to know the weekly/monthly income after taxes and fixed costs. For weekly income fill in code 1, and for monthly income fill in code 2 for the period, and fill in the amount in the local currency. The value for this question should be less than question 22, because it is taking into account the money spent for the business after earning income.

Question 6: This question should capture the activity on which the household member spends most of his time. If the household member does a few different activities for work, record the one which they spend the most time doing. Note that a housewife could be considered an unpaid family worker (non-agriculture) or unpaid family worker (agriculture) depending on if she has done any work in the fields over the last 7 days. Use the codes found in the questionnaire.

7.7 Part 1 – Section J: Housing, Water and Sanitation

This section is about the facilities that the household has in their home. It should be answered by the household member who is most knowledgeable on these subjects.

Question 1: This question is about the ownership of the building occupied by the household. The building can be the property of the household, rented (the whole building or a part of it), rented by employer etc. As it is shown in the questionnaire, fill in the code according to the answers from your respondent. Remember, when the code is 2 or 4 you will skip to question 3, and if the answer is 3, 5, or 6 you will skip to question 4.

Question 2: Ask the respondent to describe the title deed of the house. If the household is a tenant, then ask about the contract and remember the code 9. If it is a type of contract that is not included on the list, indicate “8” and write the type of contract in words.

Question 3: This question asks about the house rent, or how much the household pays a month for all buildings

occupied by the household. If the house rent is paid by the employer, record the amount of money which the employer pays for house.

Question 4: Here what is needed is the number of the rooms occupied by the household. Remember that the number of the rooms does not include stores, toilets, shower rooms, halls, and veranda. Include only the rooms being occupied by the household; including sitting rooms, dining rooms and the kitchen. If there is a main house and secondary houses, separate the total number of rooms as is shown in the column number. If there are multiple secondary houses, sum the total number of rooms in the secondary house.

Question 5: Materials for building a wall include trees, wood, soil, soil and trees, and brick layering, as it is shown in the questionnaire. If the respondent indicates a material that is not on the list, code it as “other” (code 7) and write the material in letters. In the last round, there were very many “other” answers to this question that really should have been included in one of the existing categories. This takes a long time to review and re-code. Therefore the interviewer should make an effort to use the existing codes, using “other” only if the response is truly not on the list.

Question 6: This question asks building materials for the roof; these include: grass, bamboo, tiles as coded in the questionnaire. Fill in the relevant code. If the respondent indicates a material that is not on the list, code it as “other” (code 7) and write it in letters.

Question 7: Indicate the main building material for the floor of all houses occupied by the household, including soil, concrete, cement etc. Look for the codes of the building materials as it is shown in the questionnaire. If the respondent indicates a material that is not on the list, code it as “other” (code 3) and write it in letters.

Question 9: This question asks about the type of the toilet used by the household. “No Toilet” refers to the use of bushes, grass/field and other open spaces as toilet facilities. “Flush toilet” refers to the type of toilet that is characterized by the draining of human excreta by rush of running water. “Pour flush” is similar to a flush toilet, but the water must be manually poured. “VIP (Ventilated Improved latrines)” is a ventilated pit latrine that is defined as an onsite means of human excreta disposal in a hygienic, low cost and more acceptable manner. KVIP is used in Ghana. “Unimproved pit latrine (slab not washable)” is a pit latrine built without health or hygienic related specifications. The floor of this latrine is made of soil or other material that cannot be readily cleaned. “Improved pit latrine (slab washable)” is a pit latrine that has a concrete (or similar material) floor. See the photos in the Attachments for more details on each of these types of toilet facilities.

Question 10: Ask if the household shares its toilet facility with other households. Record 1 for yes, and 2 for no.

Question 12: This question is about the light in the household (during the night), and what type of energy is used to provide light. Use the codes listed in the questionnaire. If the household uses a source for lighting

that is not included on the list, indicate “9” and record the source in words.

Question 13: This question is about the main source of energy used in the household. Use the codes listed in the questionnaire. If the household uses a source of electricity that is not included on the list, indicate “7” and record the source in words.

7.8 Part 1 – Section L: Non-Food Expenditure, Past Week and Month

One-Week Recall:

Questions 1 & 2: Read out to your respondent all items listed below with codes 101-107. Ask if out of these, some or all were consumed in the household for the past seven days. If the answer is yes, code it 1, and if the answer is no code it 2. Ask for each and every item. For yes, remember to record the total amount of money used to buy the item in column 2.

If after probing the respondent still does not know, indicate ‘99’ on the questionnaire instead of leaving it blank.

One-Month Recall:

Questions 1 & 2: This is the same question as the previous one. The difference is that here you ask for one month and the codes are 201-229.

7.9 Part 1 – Section M: Non-Food Expenditure, Past 12 Months

Questions 1 & 2: These questions are also the same as the previous two questions. The difference is that here you ask about 12 months and the codes are 301-320.

Non-food items that may not have been purchased.

Question 1: Ask your respondent if the household collected, bought or received items listed below in the past 12 month. For every item, if the answer is yes code it 1. If the answer is no, code it 2.

Questions 2 & 3: Columns 2 & 3 will depend on the answer to the previous question. If the answer in question 1 is yes, then in Column 2 you will record the estimated value of the item. Probe by asking how much it could cost if the same item was sold at the market. In Column 3, record the actual price that the household paid for the item. If the household did not pay for the item, write "0."

7.10 Part 1 – Section N: Household Assets

These questions ask about the ownership of resources and other valuable permanent assets as stipulated in the questionnaire. It is possible that your respondent could be hesitant to respond to these questions because they are very sensitive; this is information that one would not usually share with a stranger. Try to use polite language and again remind him of the confidentiality of the interview.

Question 1: (codes 401-460) Read out to your respondent the list of the assets; ask him what they own and record the total number of the assets in the box. If

there is none, record “0”. Be careful to record the number and not the value of the item. Households, no matter how wealthy, are unlikely to own 20,000,000 air conditioners. (For row 408: give the number of single chairs – do not state the number of “seti”).

7.11 Part 1 – Section U: Anthropometry

Anthropometry is the study of human body measurements, especially on a comparative basis. Measuring physical growth is essential to the Vital Signs project, to report cases of under nutrition where interventions may be needed.

These measurements will include all children in the household under the age of 5 years and one adult woman. The criteria for selecting the woman in the household is as follows; (1) mother of the children under 5, (2) between 15 to 49 years old, and (3) present at the time of the interview. In the case of measuring babies or small children, **the mother or guardian of the child should assist throughout anthropometric measurements**. When taking measurements, be sure that the mother or guardian understands what will be done to the child, and explain how the child will be weighed and height will be measured. Be sure to politely and thoroughly answer any questions or other concerns that the mother or guardian might have.

Enumerators should have the following materials with them:

- A height stick (in cm) for children 2-5 years old

Vital Signs Household Survey Protocol 2.0

- An adult digital scale that is light, electronic and accurate to at least one decimal point in kg
- A light plastic length mat for measuring children under 2 years old.
- 9 V batteries (4 for digital scales)
- 1 Leicester height measure
- 2 Length mats (for children under age 2 years)
- 1 Mid Upper Arm Circumference (MUAC) Measuring Tape

Questions and Measurement for Anthropometry

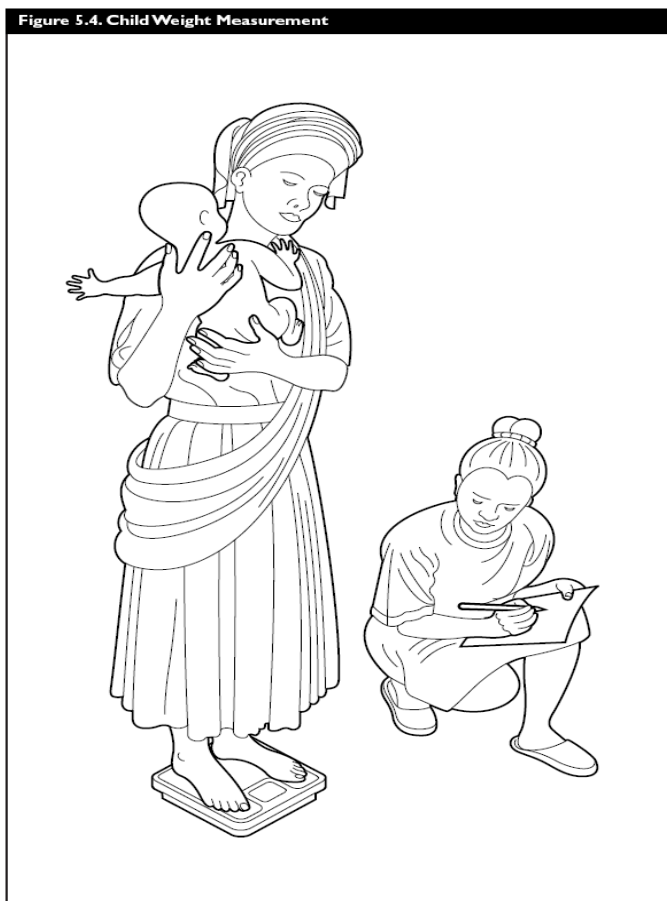
Question 1: These questions should not be asked to the respondent.

Question 2:

- The weight should be recorded in kilograms with a leading zero. For example, 3.2 kilograms should be recorded as “003.2”.
- Make sure that the scale is on a hard flat surface and properly zeroed before you begin your measurements.
- If a child is too small to stand on the scale on their own, you should record the weight of the mother and child together, then the mother alone, and subtract to find the weight of the child. Record the combined weight (mother and child) to the nearest 0.1 kg: for example, combined weigh 80.5 kg, weight of the mother 65.4 kg, therefore the child’s weight is 15.1 kg ($80.5 - 65.4 = 15.1$)

Vital Signs Household Survey Protocol 2.0

- With all measurements, you should look at the results to make sure they seem reasonable before writing them in the questionnaire. For example, if the scale shows a weight of 100 kilos for a small child, it likely has not been properly zeroed before beginning. Similarly, if after your subtraction, you have a weight of only 2 kilos for a child, it is likely that a mistake has been made.
- The data entry program will have consistency checks to test for unreasonable height/weight/age combinations. If the measurements are not accurately recorded, it will necessitate a callback to the household.



Source: "How to use the UNISCALE" UNICEF, 2000

Source: NBOS 2012

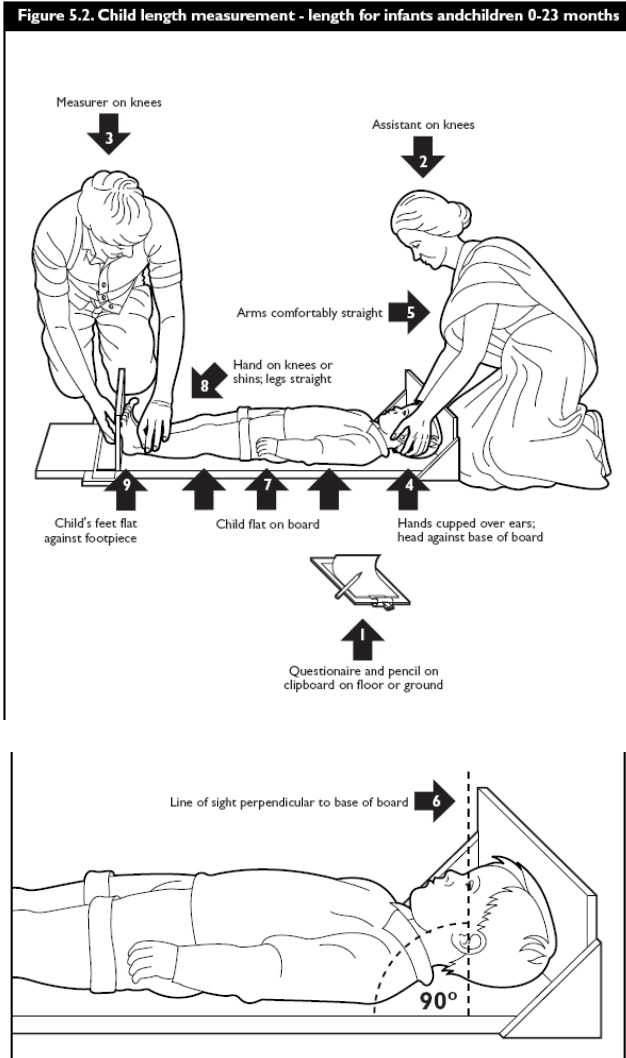
Question 3: This should be recorded in centimeters with leading zeros. For example 97 centimeters should be recorded as 097. Below are the steps for taking accurate height measurements for children

lying down and child/adults standing. Generally all children taller than 45 cm or older than 24 months should be measured standing up.

Measuring the length of the children lying down:

1. Place the measuring mat on a hard, flat section of the ground or floor.
2. The assistant should kneel with both knees behind the base of the board.
3. You should kneel on the right side of the child so that you can hold the foot piece with your right hand.
4. With the mother's help, lay the child on the board by supporting the back of the child's head with one hand and the trunk of the body with the other hand. Gradually lower the child onto the board. Ask the mother or guardian to kneel close on the opposite of the board facing the measurer, as this will help to keep the child calm.
5. The assistant should cup his or her hands over the child's ears. With arms comfortably straight, the assistant should place the child's head against the base of the board so that the child is looking straight up. The child's line of sight should be perpendicular to the ground. The assistant's head should be straight over the child's head, looking directly into the child's eyes.

Vital Signs Household Survey Protocol 2.0



Source: How to Weigh and Measure Children: Assessing the Nutritional Status of Young Children, UN 1986.

Source: NBOS 2012

29 |

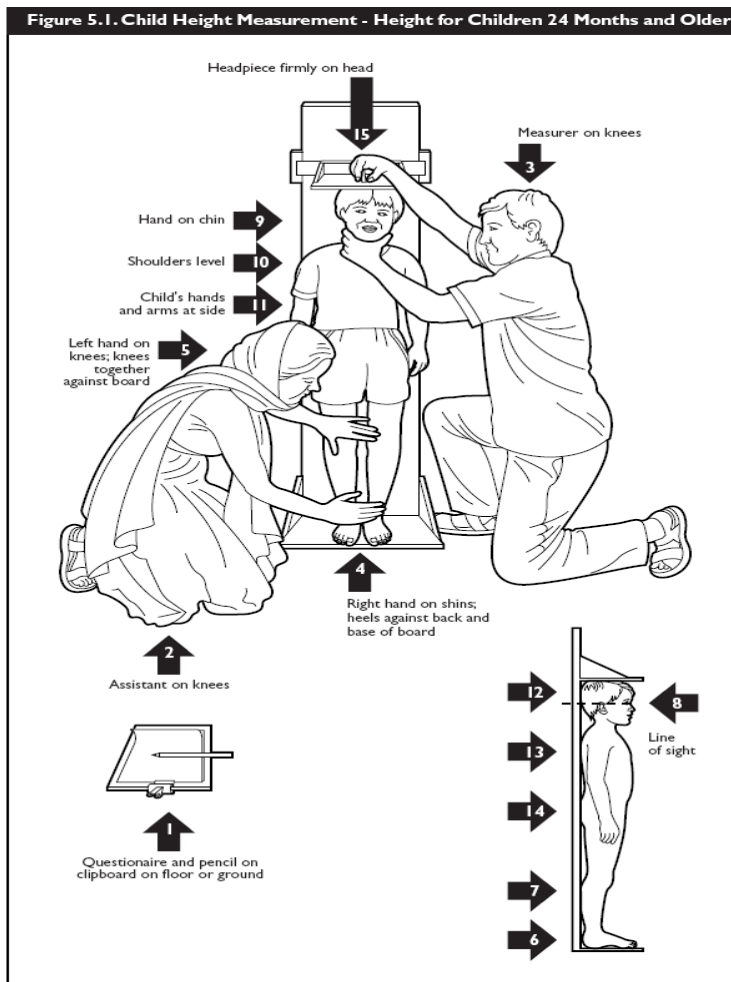
6. You should make sure the child is lying flat in the center of the board. Place your left hand on the child's shins (above the ankles) or on the knees. Press them firmly against the board. With your right hand, place the foot piece firmly against the child's heels.
7. When the child's position is correct, read and write down the measurement at the foot piece to the nearest 0.1 cm.

Measuring the height of adults or standing children:

1. Place the measuring board on a hard flat surface against a wall, table, tree, etc. Make sure the board is not moving.
2. Ask the mother/guardian to remove the child's shoes and unbraided any hair that would interfere with the height measurement. Ask her to walk the child to the board and to kneel in front of the child in order to reassure the child.
3. Place the child's feet flat and together in the center of and against the back and base of the board/wall. The assistant should place his or her right hand just above the child's ankles on the chin. Gradually close your hand. Do not cover the child's mouth or ears. Make sure the shoulders are level, the hands are at the child's side, and the head, shoulder blades, and buttocks are against the board/wall. With your right hand, lower the headpiece on top of the child's head. Make sure you push through the child's hair.

4. When the child's position is correct, read and write down the measurement at the headpiece to the nearest 0.1 cm.

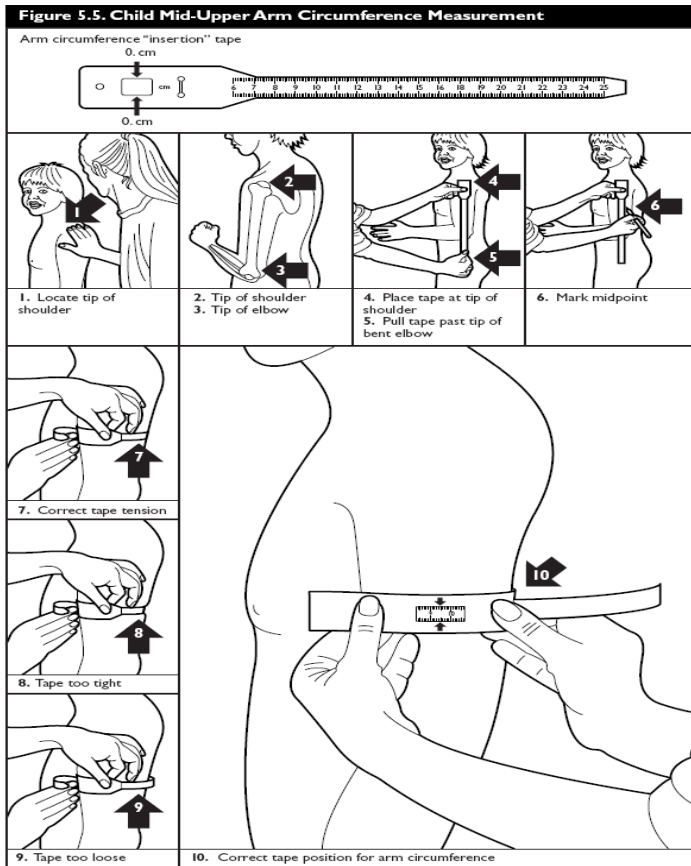
Question 4: All individuals taller than 45 cm and able to stand should be measured standing. Babies shorter than 45 cm or those unable to stand (generally those under 24 months) should be measured lying down. Indicate the position in which the respondent was measured. This should apply to all individuals, not just children.



Source: How to Weigh and Measure Children: Assessing the Nutritional Status of Young Children, UN 1986.

Source: NBOS 2012

Question 5: This question asks you to use the upper arm measuring tapes to measure the circumference of child's arm. Wrap the measuring tape around the arm above the elbow but below the shoulder. Record the measurement down to the nearest 0.1 cm.



Source: NBOS 2012

Questions 6 & 7: Code 1 for yes, and code 2 for no. If no, you should indicate the reason why they were not measured. If the reason is not on the list in the questionnaire, code 4 and write the reason in words.

7.12 Part 2 – Section HV1: Natural Resource Base-Fuelwood⁴

Part 2 should be administered to a senior female member of the household who knows answers to these questions; this senior female household member may be in charge of food preparation and household up-keep. If this senior female household member is not present, proceed with the household head or the person that responded to the questions in Part I.

Please note that the questions in Part II includes section HV1 that is asked for each individual, and the sections after should be asked to a female member of the household who is engaged in food preparation and household up keep. Make sure you fill out the Matching individual IDs from part one to section HV1.

This section on fuelwood will examine the use of forest/natural resources and firewood.

Question 3: *Does [NAME] collect fuelwood for household and/or commercial use?*

⁴ This survey section is modeled using contributions from the Poverty Environment Network questionnaire of the Center for International Forestry Research. We would like to acknowledge their contributions towards this survey tool. (CIFOR, 2008).

This question asks about the firewood collection by individuals in the household. If the answer is yes, code it 1, and if the answer is no code it 2. Ask for each individual in the household.

Question 4: *How frequently does [NAME] collect fuelwood?*

[SEE CODE BELOW] Please use the code to indicate the frequency.

Question 5: *How much does [NAME] collect during that collection period?*

Please number of bundles and use the unit codes to specify how they are carried. For example if the household member indicates that they carry fuelwood on the head, probe for how many bundles they carry.

Question 5a: *How many hours does [NAME] spend on each fuelwood collection trip?*

Indicate the time from when the household member leaves the house to collect fuel wood to the time they return. This is to get the time spent collecting and traveling to and from the collection area.

7.13 Part 2 – Section HV2: Natural Resource Base

Question 5b: *If you have purchased or sold a bundle of fuelwood in the year, what was the cost per bundle?* [SEE QUESTION 5]

Question 5c: *What is your primary source of fuelwood: for the household or commercial use?*

For this question, select one option that is the primary source of fuel wood use. Please look at the skip pattern to move on to the next questions.

Question 6: *In which direction is this primary source of fuelwood (only from the primary source in 5d)?*

[Record compass bearing in degrees from North]

Question 9: *Has the availability changed over the past 5 years?*

This question should be conversational with the household head to get an idea on whether there has been a decrease in amount of firewood or increase in time to get to the nearest natural area to collect firewood in the past 5 years. Please see code from questionnaire or drop down menu on tablet.

Question 9a: *What percentage of total fuelwood for the household comes from this primary source?*

Please use the ranges to match the response of the household head.

Question 9b: *In the last 12 months, have you been faced with a situation when your household did not have enough fuelwood for household and/or commercial use?*

Question 9c: *When did you experience this incident?*

Vital Signs Household Survey Protocol 2.0

Please mark with an X where the shortage occurred. You can mark multiple months.

Question 10: *Other than fuelwood, does your household use other materials from nearby fallow lands, forest, woodland, shrubland, rivers, creeks, or other area?*

Indicate in the list with a “1” on items that household used from the above listed areas.

This question is to find out how many often the respondent collects the items and how many times during that interval. Use the codes provided and indicate the number of times the respondent collects these items. If he says, I collect ‘nuts and seeds’ ‘weekly’, ask them how many times a week they collect the ‘nuts and seeds’.

Question 11: *During which season do you depend more on these items?*

Please use the codes to indicate the season.

Question 12: *Do you collect these items on a [SEE CODE BELOW] basis?*

Please indicate the period/frequency of collection of these items.

Question 13: *If you could no longer collect these materials, would you be willing to purchase them at the market?*

Question 14: *How much would you be willing to spend on each material?*

Use same frequency and unit as question 12 to answer this amount. Ask the respondent to indicate in local currency how much they would pay for those items at the market if they were to buy them. If they do not know, please code it '99'

Question 15: *Has the availability of these items changed over the past 5 years?*

This question should be conversational with the respondent to get an idea on whether there has been a decrease in amount of particular item or increase in the past 5 year. Please see code from questionnaire.

7.14 Part 2 – Section I: Food Security

This module should be asked of the individual(s) primarily responsible for the preparation of food.

At the beginning of this section, a reminder to the respondent concerning the objective of the Vital Signs Household Survey may be necessary. The respondents may be thinking that exaggerating answers may enable them to receive a certain service/product as to have a positive impact on their living standards. It should be clear to the respondent that that is not the intent of these questions.

Question 1: This question seeks to find out if the household had any concerns as regards to the amount of food over the past seven days.

Question 2: Whether the response to question 1 is “yes” or “no”, question 2, parts A-H should still be asked.

- It is possible that the person says there were no worries in the past 7 days about having enough food (no in question 1) but the household still took action listed in question 2.

Question 3: This question asks whether a household consistently consumes some meals every day. The question further wishes to know whether under-five children eat the same number of meals compared to those above 5 years. If all the members of the household consume the same number of meals every day, then both columns will have the same number. The opposite is true if the household members have different number of meals a day.

Question 4: This question finds out what children under 5 ate for breakfast on the day before the interview. Use the codes on the right to fill out the breakfast food. If there are no children under 5 in the household, record “00.”

Question 5: *What did your children between 5 to 13 years old have for breakfast yesterday?*

Use the codes.

Question 6: Ask if all household members eat roughly the same diet. If one person in the household does not like to eat plantains and eats rice instead, then that still counts as “roughly” the same diet, and the answer to the question should be yes. If someone in the household has stomach problems so that she cannot eat fish and eats chicken instead, that still counts as “roughly” the same diet and the answer should be yes. If yes, code 1 and move to question 8. If no, code 2 and move to the next question.

Question 7: Record who in the household eats a greater variety of foods and a lesser variety of foods. A larger variety would include more foods from different food groups, like starches, proteins, vegetables, or sweets. Record whether men, women, and children (6-59 months) eat more, average, or less diverse diets.

Question 8: Ask whether the household has been faced with a situation when they did not have enough food to feed the family in the last 12 months. If yes, code 1. If no, code 2 and move to the next section.

Question 9: Here you should record in which months the household did not have enough food to feed the family. Only ask about the past 12 months, so if you are doing the interview in June 2013, start by asking about the circumstances in June 2013. If you are doing the interview in May 2014, start by asking about the circumstances in May 2013.

Question 10: Describe the reason for the lack of food in the household in the previous months. Use the codes on

the bottom of the page. Select up to 3 reasons, in order of importance.

7.15 Part 2 – Section J: Water and Sanitation

This section is about the facilities that the household has in their home. It should be answered by the household member who is most knowledgeable on these subjects.

Question 8: This is an environmental question. The aim is to know how they dispose their trash. If the household uses a method that is not on the list, indicate “8” and write it in words.

Question 11: This question is about the main energy the household uses to cook. Note that what is needed here is not the utensil but the energy used. If the household uses a type of energy that is not included on the list, indicate “8” and record the type of energy in words.

Question 14: This question identifies the main source of drinking water in the household during the rainy season. Use the codes found at the bottom of the page. If you put the code “14” make sure you write the main source of drinking water in words. If there are more than two sources, mention the one used most frequently by the household.

Question 15: For the source of drinking water during the dry season, use the codes found at the bottom of the page. If you put the code “14” make sure you write the main source of drinking water in words. If there are more

than two sources, mention the one used most frequently by the household.

Question 16: This question asks what type of treatment method the household usually uses to ensure their drinking water is safe. If they take no steps to ensure the safety of their water, use code '7'. Record up to 2 answers for this question. Photos of different methods of water purification are included in the Appendix C of this manual.

Question 17: Record the main source of water used for cooking during the rainy and the dry season. Fill out one answer for each season. If there are more than two sources for either of the seasons, mention the one used most frequently by the household. Use the codes found at the bottom of the page. If you put the code "14" make sure you write the main source of drinking water in words.

Question 18: Record the main source of water used for washing during the rainy and the dry season. Fill out one answer for each season. If there are more than two sources for either of the seasons, mention the one used most frequently by the household. Use the codes found at the bottom of the page. If you put the code "14" make sure you write the main source of drinking water in words.

Question 19: Record the main source of water used for gardening / horticulture during the rainy and the dry season. Fill out one answer for each season. If there are more than two sources for either of the seasons, mention the one used most frequently by the household. Use the codes found at the bottom of the page. If you put the

code “14” make sure you write the main source of drinking water in words. If the household does not have a garden, write “00.”

Question 20: Ask the respondent for their opinion on the quality of the water they receive for drinking from the water sources (Codes for 20). Ask about taste, smell, color, etc., and record one answer for their overall satisfaction, based on the codes in the questionnaire.

Question 20b: *In the last 12 months, have you been faced with a situation when your household did not have enough water to meet your family needs?*

If no, move to question 21.

Question 20c: *When did you experience this incident?*

Question 21: This question should not be asked out loud to the respondent. For each water source mentioned in questions 14, 15, 17, 18, 19, put an “X” in column 21. Then proceed through questions 22-24 for each source separately, reading from left to right, before moving on to the next water source. Some questions do not apply to all the answer choices and therefore have been blocked.

Question 22: Record the type of container that is typically used by the household to collect water from the source. Use the codes at the right of the page.

Question 23: Record the average number of containers fetched for each of the water sources, and the frequency with which they are filled. Use the codes on the right for

time periods. For example, if the household fills up 5 20L jerry cans per day, record the number as “5” and the frequency as “1.”

Question 24: Record the cost, in local currency, of filling a 20L jerry can of water from the source. If the household does not use jerry cans to gather water from that particular source, calculate what the price per 20L is.

7.16 Part 2 – Section K: Consumption of Food over Past Week

This section will examine household food expenditure; food crops (starch from roots), sugar, beans, horticultural crops, fruit, meat, milk and milk products, oil, spices, tea, soft drinks, and coffee. The questions ask if the household consumed any foods in the past seven days. It is important that you take your time on this section and ask the questions carefully. These measures will be used to construct poverty estimates.

NOTE: This section measures Consumption, not Expenditure. The questions focus on how much was eaten, not on how much was purchased or produced. Suppose, for example, that a household purchases a 50 kg bag of rice every month with a cost of 35,000 in local currency in Ghana, and eats approximately 1.5 kilos per day. In the 7 days prior to the interview, the household may have purchased no rice. However, they ate $7 \times 1.5 \text{ kg} = 10.5 \text{ kg}$ of rice. We care about the 10.5 kg eaten. When asked about the amount spent, you should calculate the cost of these 10.5 kg (example for local

currency $35,000/50\text{kg} = 700$ (in local currency)/kg. So for 10.5 kg, the cost was 73,500).

Note on local units: Respondents may give answers in local units. If they are unable to convert these into standard units (the options listed on the questionnaire), you should record the answer in local units. You are then responsible to weigh or measure these local units before you leave the village and convert all answers into standard units (where possible).

Also, be careful with option 5 in the units' question ("pieces"). This should only be used with items that have a fairly standard size that will not vary from village to village. For instance, eggs may be counted in pieces. Bread should not be counted in pieces.

Question 1: Read out to your respondent all items of food listed. Code 1 if the item is consumed, and code 2 if the item is not consumed. Remember to record the items consumed in the household and not outside the household. Ask this question for all items of food listed 101-1108 before moving on to Column 2.

Question 2: This question is asked only for those items that have a "1" question 1. Record the total amount the household consumed in the past seven days. This includes purchases, own production and gifts. And make sure to carefully code the units. While a household might eat 300 grams of sugar in a week, 300 kilos would make everyone sick.

Question 3: In this question, you should only list the purchases made by the household in the past 7 days. Again be careful to check the units.

Question 4: Record the total amount of money spent for this item in the past seven days.

Question 5: In this question, you should only list the own production of the household in the past 7 days. Again be careful to check the units.

Question 5a: *How much would you have spent at the market?*

Question 6: In this question, you should only list the gifts and transfers received by the household in the past 7 days. Again be careful to check the units.

At the end of the line, you should **perform a quick check that the total from question 2 is roughly equal to the sum of question 3, 5, and 6.** If there is a large difference in the amounts, you should ask the respondent to clarify. If the respondent says “Yes” to question 1, be sure that you have filled in all the appropriate columns for that food item. For instance, in the example below, the household said “Yes” they consumed raw maize. Even though all the raw maize came from own production (question 5) make sure you enter zeroes for questions 3 and 6. You do not need to enter units when entering zeroes. You do not need to enter local currency values in question 4 if none of the food item was purchased. See the example below.

Question 7: This question seeks to find out the number of days the food categories reported above were actually consumed. If a household has eaten mangoes each and every day of the past 7 days, then 7 will be recorded in line F – Fruits. If a household ate rice for 3 days and maize on 3 days, record 6 in row A – Cereals, Grains, and Cereal Products.

Question 8: Ask your respondent if any person who is not a member of their household was invited for food in the past seven days, even if it is only for one meal. If the answer is yes, code it 1 and move to question 9. If the answer is no, code it 2 and move to the next section.

Question 9: Ask the respondent to tell you the number of days they invited visitors for food. Remember to record this separating the visitors according to their age as it is itemized in A, B, C and D.

Question 10: Also ask the number of meals the household invited visitors. Record it the same way as you did in question 11.

8. BIBLIOGRAPHY

Center for International Forestry Research (CIFOR), 2008. *Poverty Environment Network Prototype Questionnaire*. Available at: <http://www.cifor.org/pen/research-tools/the-pen-prototype-questionnaire.html>

NBOS (National Bureau of Statistics). 2012. *Enumerator Manual*. National Panel Survey 2010-2011. Available at: http://siteresources.worldbank.org/INTLSMS/Resources/3358986-1233781970982/5800988-1286190918867/Interviewer_Manual_NPS_Y2_English_.pdf

9. ATTACHMENTS

Attachment 1: What is a household?⁵

A household consists of a person, or a group of persons, who live together in the same house or compound, share the same house-keeping arrangements and are catered for as one unit.

In general, a household consists of a man, his wife, children and some other relatives or house help who may be living with them. However, it is important to remember that members of a household are not necessarily related (by blood or marriage) because non-relatives (e.g. house helps) may form part of a household.

On the other hand, not all related persons living in the same house or compound are necessarily members of the same household. For example, two brothers who live in the same house with their wives and children may or may not form separate households depending on their catering arrangements. The same applies to a father and his married children. Thus in many cases, a house or compound may be divided into separate households.

Dividing a house into households:

⁵ This definition was a contribution from John Foster during out training in Ghana and closely follows the work/definition by the Ghana Statistical Services.

Dividing a house or compound into households may not be easy. However, the following examples must guide you in deciding who forms a household:

- a) In large family houses where you have more than two generations of people living in the same house, you must not automatically treat the grandfather, his married children and their families as forming one household. First, find out which members of his/her house have common catering arrangement and regard each such unit as a household. He/she may, for example, have four sons, each of whom has a separate arrangement for the preparation of food for their own "family." Each of these units must be treated as a household. If the father shares meals with one of his married children, he must be classified as part of that household. An exception to the above principle is where in a house or compound, a man has several wives with each wife and her children occupying their own set of rooms in the house. The man eats successively with each of his wives. In such a case, the man, his wives, their children, etc., must be treated as one household.

- b) You may also come across a married man who does not live in the same house as his wife or wives. The children may take their meals in their respective mothers' houses, but if the children sleep in their father's house, they must be considered as forming one household with the father (not the mother). In this case, living together in the same household takes priority over sharing

common catering arrangements. Each mother then constitutes a separate household.

- c) A lodger who sleeps and eats at least one meal a day with the household must be considered as a member of that household.
- d) A house help and his family who live in a house or in an out-house on the same compound as the employer but prepare their own food and eat separately must not be considered as members of the employer's household. They must be classified as forming a separate household. However, a house help who eats and sleeps with the family of the employer must be considered as a member of the employer's household.
- e) If two or more unrelated persons live together in one flat or in one room, they may or may not be regarded as one household depending on whether or not they have a common catering arrangement.
- f) There is a growing phenomenon where groups of students (who attend universities, polytechnics, etc., and who cannot find accommodation on campus) rent private houses. Such students should be enumerated as a household population and divided into separate households depending on their catering arrangements. If each student has his/her own catering arrangement, each student should be classified as a separate household. However, if two or more students have


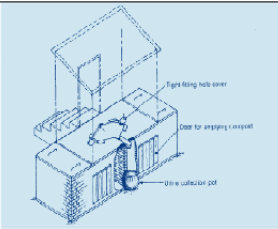




common catering arrangements then that group should be treated as one household. In this case, one of them should be identified as the head.

- g) It will be seen from example f) above that one person may constitute a household if that person lives alone in a house or part of a house. If the person lives with others in one room but prepares and eats his/her meals separately, he/she forms a one-member household.
- h) Members of staff of institutions must be treated as members of households. They must never be treated as inmates of institutions.



Attachment 2: Different Types of Toilets

<p>Flush toilet (with cistern)</p>	 <p>(Photo: not known)</p>	
<p>Pour flush toilet</p>	 <p>(Photo: Mwalimu Mjaka, Lindi)</p>	 <p>(Photo: Anet Anton, Shinyanga)</p>
<p>Ventilated Improved pit latrine</p>	 <p>Note the pipe in the top left hand corner</p> <p>(Photo by: EEPCO)</p>	 <p>Note the pipe with fly mesh</p> <p>(Photo: UNICEF)</p>

Vital Signs Household Survey Protocol 2.0

<p>Ecosan</p>	 <p>Note that there are doors to remove the feaces and a drum to collect that urine which is diverted (Photo: EEPCO)</p>	
<p>Improved pit latrine (slab is washable)</p>	 <p>(Photo: EEPCO)</p>	 <p>(Photo: EEPCO)</p>
<p>Improved pit latrine (slab is washable)</p>	 <p>Washable slab is inside (Photo by: EEPCO)</p>	 <p>(Photo by: EEPCO)</p>

Vital Signs Household Survey Protocol 2.0

<p>Unimproved pit latrine (slab is not washable)</p>	 <p>(Photo: WaterAid)</p>	 <p>(Photo: WaterAid)</p>
--	--	--

Attachment 3: Household Water Treatment

Photos of Household Water Treatment

The following are photos of different types of methods used to ensure water is safe to drink that are referred to in the Housing, Water and Sanitation section.

BOILING		TREAT WITH CHEMICALS	
			
USE WATER FILTER			
			

Vital Signs Household Questionnaire
PART I

THIS INFORMATION IS STRICTLY CONFIDENTIAL AND IS TO BE USED FOR STATISTICAL PURPOSES ONLY.

HOUSEHOLD AND INDIVIDUAL QUESTIONNAIRE

SECTION A-1: HOUSEHOLD IDENTIFICATION

CODE

1. REGION ID:	<input type="text"/>	<input type="text"/>		
2. DISTRICT	<input type="text"/>	<input type="text"/>		
3. WARD (IF APPLICABLE, IF NOT '99')	<input type="text"/>	<input type="text"/>	<input type="text"/>	
4. LANDSCAPE	<input type="text"/>	<input type="text"/>	<input type="text"/>	
4a. E-PLOT ID	<input type="text"/>	<input type="text"/>	<input type="text"/>	
5. TOWN/VILLAGE/COMMUNITY	.....			
6. HOUSEHOLD ID :	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
7. NAME OF HOUSEHOLD HEAD:	.....			
				
				

MARK BOX WITH AN 'X' AND
NUMBER FORMS BELOW IF YOU
USE MORE THAN THIS SINGLE
FORM TO COLLECT INFORMATION
FROM THIS HOUSEHOLD. IF SO,
BE SURE TO MARK IN THE SAME
WAY THE OTHER FORMS USED
FOR THIS HOUSEHOLD

FORM 1 OF TOTAL

SECTION A-2: SURVEY STAFF DETAILS

8. NAME OF ENUMERATOR:

.....

9. ENUMERATOR CODE:

--	--	--

10. TIME INTERVIEW START

--

11. DATE OF INTERVIEW:

/	/
---	---

(ENUMERATOR ►NEXT
PAGE)

12. NAME OF FIELD SUPERVISOR:

.....

13. FIELD SUPERVISOR CODE:

--	--	--

14. DATE OF QUESTIONNAIRE
INSPECTION:

/	/
---	---

15. NAME OF DATA ENTRY CLERK:

.....

16. DATA ENTRY CLERK CODE:

--	--	--

17. DATE OF DATA ENTRY:

/	/
---	---

18. DATA VERIFICATION CLERK CODE:

--	--	--

19. DATA VERIFICATION DATE:

/	/
---	---

OBSERVATIONS ON THE INTERVIEW

RECORD GENERAL NOTES ABOUT THE INTERVIEW AND RECORD ANY SPECIAL INFORMATION THAT WILL BE HELPFUL FOR SUPERVISORS AND THE ANALYSIS OF THIS QUESTIONNAIRE.

TABLE OF CONTENTS

SECTION A-1: HOUSEHOLD IDENTIFICATION
SECTION A-2: SURVEY STAFF DETAILS
SECTION B: HOUSEHOLD MEMBER ROSTER
SECTION C: EDUCATION
SECTION E: LABOUR

SECTION J1: HOUSING, WATER , AND SANITATION
SECTION L: NON-FOOD EXPENDITURE - Past one week & one month
SECTION M: NON-FOOD EXPENDITURES - Past twelve months
SECTION N: ASSETS
SECTION U: ANTHROPOMETRY

SECTION B: HOUSEHOLD MEMBER ROSTER

IN ORDER TO MAKE A COMPREHENSIVE LIST OF HOUSEHOLD MEMBERS, USE THE FOLLOWING PROBE QUESTIONS:

FIRST, ASK NAMES OF ALL THE MEMBERS OF THE IMMEDIATE (NUCLEAR) FAMILY WHO NORMALLY LIVE AND EAT THEIR MEALS TOGETHER HERE. WRITE DOWN NAMES, SEX, AND RELATIONSHIP TO THE HOUSEHOLD HEAD
FILL IN QUESTIONS 1 TO 5
 THEN, ASK NAMES OF ANY OTHER PERSONS RELATED TO THE HOUSEHOLD HEAD OR OTHER HOUSEHOLD MEMBERS WHO NORMALLY LIVE AND EAT THEIR MEALS TOGETHER HERE.
FILL IN QUESTIONS 1 TO 5
 ALSO ASK OTHER PERSONS NOT HERE NOW WHO NORMALLY LIVE AND EAT THEIR MEALS HERE? FOR EXAMPLE, HOUSEHOLD MEMBERS STUDYING ELSEWHERE OR TRAVELING.
FILL IN QUESTIONS 1 TO 3.
 THEN, ASK NAMES OF ANY OTHER PERSONS NOT RELATED TO THE HOUSEHOLD HEAD OR OTHER HOUSEHOLD MEMBERS, BUT WHO NORMALLY LIVE AND EAT THEIR MEALS TOGETHER HERE, SUCH AS LIVE-IN SERVANTS.
FILL IN QUESTIONS 1 TO 5
 IF MORE THAN 12 INDIVIDUALS, USE SECOND QUESTIONNAIRE. MAKE SURE TO MARK BOX ON FIRST PAGE OF BOTH QUESTIONNAIRES.

INDIVIDUAL	1.	2.	3.	4.	5.	6.	7.
	NAME	Sex	What is [NAME]'s relationship to the head of household?	In what month and year was [NAME] born?	How old is [NAME]?	Did [NAME] eat meals in this house- hold in the last 7 days?	For how many days in the last 30 days was [NAME] present?
	LIST HOUSEHOLD HEAD ON LINE 1. MAKE A COMPLETE LIST OF ALL INDIVIDUALS WHO NORMALLY LIVE AND EAT THEIR MEALS TOGETHER IN THIS HOUSEHOLD, STARTING WITH THE HEAD OF HOUSEHOLD. (CONFIRM THAT HOUSEHOLD HEAD HERE IS SAME AS HOUSEHOLD HEAD LISTED ON COVER.)	M. . 1 F. . 2	HEAD.....1 SPOUSE.....2 SON/DAUGHTER....3 STEP SON / DAUGHTER.....4 SISTER/BROTHER...5 GRANDCHILD.....6 FATHER/MOTHER...7 OTHER RELATIVE (SPECIFY).....8 LIVE-IN SERVANT..9 OTHER NON-RELATIVES (SPECIFY) .....10	PUT "99" IF DON'T KNOW YEAR | MONTH	IF RESPONDENT DOESN'T KNOW, USE YEAR OF BIRTH TO CALCULATE AGE. CHECK THAT AGE IN QUESTION 4 AND YEAR OF BIRTH IN QUESTION 3 ARE CONSISTENT. YEARS	YES . . 1 NO . . . 2	DAYS
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							

SECTION C: EDUCATION

I N D I V I D U A L I D	1. IS [NAME] 5 YEARS OR ABOVE?	2. Can [NAME] read and write?	3. Has [NAME] ever attended school?	4. What is the highest grade completed by [NAME]?
	YES..1 NO...2 (▶3)	ANY LOCAL LANGUAGE...1 ENGLISH.....2 ANY LOCAL LANGUAGE AND ENGLISH .....3 ANY OTHER LANGUAGE...4 NO.....5	YES..1 NO...2 (▶NEXT SECTION)	USE CODES

GHANA	
NONE.....00	s1.....27
PRE-SCHOOL.....01	s2.....28
P1.....11	s3.....29
P2.....12	s4.....30
P3.....13	s5.....31
P4.....14	l6.....32
P5.....15	u6.....33
P6.....16	VOC/TECHNICAL/
Jss1.....17	COMPUTER/COMM/AGRIC..41
Jss2.....18	TEACHER TRAIN..42
Jss3.....19	NURSING.....43
M1.....20	POLYTECHNIC...51
M2.....21	UNIVERSITY....52
M3.....22	Other Tertiary.53
M4.....23	Other (SPECIFY)61
Sss1.....24	
Sss2.....25	

TANZANIA

PP.....1	ADULT.....2
PRIMARY	SECONDARY
D1.....11	F1.....21
D2.....12	F2.....22
D3.....13	F3.....23
D4.....14	F4.....24
D5.....15	'O'+COURSE.25
D6.....16	F5.....31
D7.....17	F6.....32
D8.....18	'A'+COURSE.33
	DIPLOMA...34
MS+COURSE.20	
UNIVERSITY	
U1.....41	U2.....42
U3.....43	U4.....44
	U5+.....45

1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

SECTION E: LABOUR

I N D I V I D U A L I D	1. IS THE HOUSEHOLD MEMBER 5 YEARS OR ABOVE?	4. Did you do any work of any type for pay, profit, barter or home use during the last 7 days? (includes farm activities)	8. Did you do any wage work during the last 12 months? (i.e. work for someone else for pay)	9. How much was your last payment? IF RESPONDENT HAS NOT YET BEEN PAID, ASK: What payment do you expect? What period of time did this payment cover?	10. Do you receive any payment for this work in any other form?	11. What is the value of those payments? Over what time interval?	12. How many hours did you work last week?	15. During the last 12 months, how many hours per week do you usually work in this job?	14. During the last 12 months, how many weeks per month do you usually work in this job?	13. During the last 12 months, for how many months did you work in this job?
	YES...1 NO...2 ▶NEXT	YES...1 NO...2	YES...1 NO...2 (▶16)	HOUR.....1 DAY.....2 WEEK.....3 FORTNIGHT..4 MONTH.....5 QUARTER...6 HALF YEAR..7 YEAR.....8 LOCAL CURRENCY | UNIT	YES...1 NO...2 (▶12)	HOUR.....1 DAY.....2 WEEK.....3 FORTNIGHT..4 MONTH.....5 QUARTER...6 HALF YEAR..7 YEAR.....8 LOCAL CURRENCY | UNIT	HOURS	IF Q4 < 3 (HOUR or DAY) HOURS	IF Q4 < 4 (HOUR, DAY, WEEK) WEEKS	MONTHS

1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										

SELF-EMPLOYMENT

RESPONDENTS 18 AND OLDER

I N D I V I D U A L I D	<p>16 Did you operate any business or do any self-employed activity during the last week, other than agriculture?</p> <p>YES...1 (▶ 22) NO...2</p>	<p>17 Did you operate any business or do any self-employed activity during the last 12 months, other than agriculture?</p> <p>YES...1 NO...2</p> <p>▶ 6</p>	<p>22. What gross income/takings did you get from your business or businesses in the last week/month?</p> <p>WEEK...1 MONTH...2</p> <p>PERIOD LOCAL CURRENCY</p>	<p>23. What was your net income (profit) from your business or businesses in the last week/month?</p> <p>[GROSS INCOME/TAKINGS (Q13) SHOULD BE GREATER THAN OR EQUAL TO NET INCOME/PROFIT (Q14)]</p> <p>WEEK...1 MONTH...2</p> <p>PERIOD LOCAL CURRENCY</p>	<p>6. The following question refers to the economic activity on which you spend most of your time even if you have more than one activity:</p> <p>Are you working as:</p> <p>ON YOUR OWN FARM.....6 UNPAID FAMILY HELPER/WORKER (AGRIC) ..5 UNPAID FAMILY HELPER (NON-AGRIC) .....4 SELF EMPLOYED (NON-AGRIC): WITH EMPLOYEES.....2 WITHOUT EMPLOYEES.....3 A PAID EMPLOYEE.....1</p>
---	---	--	---	---	--

1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						

I N D I V I D U A L I D	NAME	SEX	AGE	I N D I V I D U A L I D
--	------	-----	-----	--

1				1
2				2
3				3
4				4
5				5
6				6
7				7
8				8
9				9
10				10
11				11
12				12

SECTION J1: HOUSING, WATER AND SANITATION

<p>1. What is HH tenure status of main residence?</p> <p>OWNER OCCUPIED...1 EMPLOYER PROVIDED - SUBSIDIZED...2 ▶3 EMPLOYER PROVIDED - FREE.....3 ▶4 RENTED.....4 ▶3 RENT-FREE.....5 ▶4 NOMADS.....6 ▶4</p>	<p>2. Do you have any documentation of ownership of the dwelling?</p> <p style="text-align: center;">▶4</p> <p style="border: 1px solid black; padding: 5px; text-align: center;">USE CODES AT RIGHT</p>	<p>3. How much does this household pay per month to rent this dwelling?</p> <p>INCLUDE VALUE OF IN-KIND PAYMENTS FOR RENT</p> <p style="text-align: right;">LOCAL CURRENCY</p>	<p>4. How many habitable rooms in each unit does this household occupy?</p> <p style="text-align: center;">DO NOT COUNT BATHROOMS, TOILETS, STOREROOMS, OR GARAGE</p> <p style="text-align: center;">MAIN DWELLING</p>	<p style="text-align: center;">OTHER DWELLING(S)</p>	<p>5. The walls of the main dwelling are predominantly made of what materials?</p> <p>POLES (INCLUDING BAMBOO), BRANCHES, GRASS.....1 POLES AND MUD/MUD AND STONES.....2 MUD ONLY.....3 BAKED/BURNT BRICKS.....4 CONCRETE, CEMENT, STONES.....6 OTHER, (SPECIFY).....7</p>	<p>6. The roof of the main dwelling is predominantly made of what materials?</p> <p>GRASS (THATCH), LEAVES, BAMBOO.....1 THATCH AND WOOD.1a MUD AND GRASS...2 CONCRETE, CEMENT.....3 METAL SHEETS (GCI).....4 ASBESTOS SHEETS.....5 TILES.....6 OTHER, (SPECIFY)..7</p>	<p>7. The floor of the main dwelling is predominantly made of what materials?</p> <p>EARTH.....1 CONCRETE, CEMENT, TILES, TIMBER.....2 OTHER, (SPECIFY)....3</p>
--	--	---	---	--	--	---	--

<p>9. What is the main toilet facilities usually used in this household?</p> <p>NO TOILET.....1 ▶12 FLUSH TOILET...2 POUR FLUSH.....3 KVIP/VIP.....4 ECOSAN.....5 UNIMPROVED PIT LATRINE (SLAB NOT WASHABLE).....6 IMPROVED PIT LATRINE (SLAB WASHABLE).....7 OTHER, (SPECIFY)..8</p>	<p>10. Do you share this toilet facility with other households?</p> <p>YES...1 NO....2</p>	<p>12. Major fuel used for lighting?</p> <p style="text-align: center;">IF NO ELECTRICITY, GENERATOR OR SOLAR ▶ 13</p> <p>ELECTRICITY...1 SOLAR.....2 GAS.....3 ▶ SEC J2 GAS (BIOGAS)..4 ▶ SEC J2 LAMP OIL ....5 ▶ SEC J2 CANDLE .....6 ▶ SEC J2 FIREWOOD.....7 ▶ SEC J2 PRIVATE GENERATOR...8 OTHER, (SPECIFY)..9 ▶ SEC J2</p>	<p>13. What is HH main source of electricity?</p> <p>NATIONAL GRID .....1 COMMUNITY GENERATOR.....2 SOLAR PANELS.....3 OWN GENERATOR.....4 CAR BATTERY.....5 MOTORCYCLE BATTERY.....6 OTHER, (SPECIFY)..7</p>
---	--	--	---

<p>CODES FOR Q2</p> <p>OFFER OF THE RIGHT OF OCCUPANCY.....1 TITLE DEED FOR LAND.....2 LETTER OR ALLOCATION FROM VILLAGE GOV'T.3 SETTLEMENT PERMIT.....4 TRADITIONAL RIGHT OF OCCUPANCY.....5 LAND SALE AGREEMENT.....6 INHERITANCE LETTER.....7 OTHER TITLE (SPECIFY).....8 LEASE (FOR RENTERS).....9 NO DOCUMENTATION AT ALL.....10</p>
--

SECTION L: NON-FOOD EXPENDITURES – Past one week & one month

ONE WEEK RECALL

ITEM CODE	1. Over the past 7 days, did your HH or any member of your household purchase any [...]?		2. How much was paid in total? LOCAL CURRENCY	D E N U M B E R L I N E
	YES . . . 1 NO . . . 2 (▶NEXT ITEM)			
101	Cigarettes or tobacco			1
102	Matches			2
103	Public transport			3
199	Meals outside the home			4
204	Water			5
206	Phone expenditure (repair, airtime, charging)			6
207	Charcoal			7
207a	Newspapers			8

ITEM CODE	1. Over the past 30 days, did you purchase or pay for any [...]?		2. How much did you pay in total? TSH	D E N U M B E R L I N E
	YES . . . 1 NO . . . 2 (▶NEXT ITEM)			
201	Kerosene			9
202	Electricity, including electricity vouchers			10
203	Gas (for lighting/cooking)			11
203a	Medical fees (medication, visits)			12
203b	Mosquito repellent			13

ONE MONTH RECALL

ITEM CODE	1. Over the past 30 days, did your HH or any member of your household purchase or pay for any [...]?		2. How much was paid in total? LOCAL CURRENCY	D E N U M B E R L I N E
	YES . . . 1 NO . . . 2 (▶NEXT ITEM)			
205	Petrol or diesel			14
208	Milling fees, grain			15
209	Soap (body, clothes)			16
211	Toothpaste, toothbrush			17
212	Toilet paper			18
213	Glycerine, Vaseline, skin creams			19
214	Other personal products (shampoo, razor blades, cosmetics, hair products, etc.)			20
215	Household cleaning products (dish soap, toilet cleansers, detergents, etc.)			21
216	Light bulbs, lanterns			22
217	Internet, postage stamps or other postal fees			23
217a	Wedding, funeral attendance expense			24
218	Donation - to church, charity, beggar, etc.			25
219	Motor vehicle service, repair, or parts			26
220	Bicycle service, repair, or parts			27
221	Wages paid to servants			28
222	Mortgage - regular payment to purchase house			29
223	Repairs & maintenance to dwelling/House			30
224	Repairs to household and personal items (radios, watches, etc.)			31
224a	Spiritual expenses			32
224b	Hairdressing, haircuts, personal care (pedicures, manicures)			33

SECTION M: NON-FOOD EXPENDITURES – Past twelve months

ITEM CODE	1.	2.	
	Over the past twelve months, did your HH or any member of your household purchase any [...]?	YES...1 NO...2 (▶NEXT ITEM)	How much was paid in total?	LOCAL CURRENCY
301	Carpet, linoleum, rugs, drapes, curtains		
302	Linen - towels, sheets, blankets		
303	Mat - sleeping or for drying maize flour		
304	Mosquito net		
305	Mattress		
306	Sports & hobby equipment, musical instruments, toys		
307	Film, film processing, camera		
308	Building items - cement, bricks, timber, iron sheets, tools, etc.		
309	Council rates		
310	Insurance - health (NHIS, etc.), auto, home, life		
311	Losses to theft (value of items or cash lost)		
312	Fines or legal fees		
313	Bride price /Marriage costs		
314	Funeral costs		
315	Other costs not stated elsewhere		
316	Repairs to consumer durables		
317	Taxes for income, property, etc.		
320	Land Purchases		

Non-food items that may not have been purchased.

ITEM CODE	1.	2.	
	Over the past 12 months did your HH gather for any [...]?	YES...1 NO...2 (▶NEXT ITEM)	What was the estimated total value of [...] used?	LOCAL CURRENCY
318	Wood poles, bamboo		
319	Grass for thatching roof or other use		

SECTION N: HOUSEHOLD ASSETS

CODE	1. How many [ITEMS] does your household own? [IF NONE WRITE '0']	NUMBER
401	Radio and Radio Cassette	
402	Telephone(landline)	
403	Telephone(mobile)	
404	Refridgerator or freezer	
405	Sewing Machine	
406	TV set	
407	Video / DVD	
408	Chair	
409	Sofa	
410	Table	
411	Watch	
412	Bed	
413	Cupboards, chest-of-drawers, boxes, wardrobes,bookcases	
414	Lanterns	
415	Computer	
416	Cooking pots, Cups, other kitchen utencils	
417	Mosquito net	
418	Iron (Charcoal or electric)	
419	Electric/gas stove	
420	Other stove	
421	Water-heater	
422	Record/cassette player, tape recorder	
423	Complete music system	
424	Books (not school books)	
425	Motor Vehicle	
426	Motor cycle	
427	Bicycle	
453	Raincoat	
454	Umbrella	
455	Wellington Boots	
456	Waders Boots	
457	Oven (Traditional)	
458	Chorkor smoker	
459	Improved smoker (FRI food research institute)	

CODE	1. How many [ITEMS] does your household own? [IF NONE WRITE '0']	NUMBER
428	Carts	
429	Animal-drawn cart	
430	Boat/canoe	
431	Wheel barrow	
432	Livestock	
433	Poultry	
434	Outboard engine	
435	Donkey	
436	Fields/Land	
437	House(s)	
438	Fan/Airconditioner	
439	Dish antena/decoder	
440	Hoes	
468	Watering Can	
441	Spraying machine	
442	Water pumping machine	
455	Irrigation sprinklers	
443	Reaper	
444	Tractor	
445	Trailer for tractors etc.	
446	Plough etc.	
447	Harrow	
448	Milking machine	
449	Harvesting and threshing machine	
450	Hand milling machine	
451	Coffee pulping machine	
452	Fertilizer distributor	
460	Silos	
461	Sheds	
462	Storeroom	
463	Cutlass	
464	Axe	
465	"Soso" (used to dig holes/pluck plantains/harvest yams)	
466	Sickle (for cocoa harvesting)	
467	Sickle (grass cutting/threshing)	

SECTION U: ANTHROPOMETRY

INDIVIDUAL ID	6. IS [NAME] 0-60 MONTHS OLD?	3. WEIGHT	4. HEIGHT	5. HEIGHT / LENGTH MEASURED WITH CHILD STANDING OR LYING DOWN?	7. UPPER ARM CIRCUMFERENCE	1. WAS THE PERSON MEASURED?	2. WHY NOT? <input type="checkbox"/>
	YES...1 NO...2 ►NEXT	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> IF LESS THAN 100 KG, PUT LEADING ZEROS (3.2 KG = 003.2) (32 KG = 032.0) </div> KG	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> IF LESS THAN 100 CMS, PUT ZERO (0) ON PRECEEDING SPACE OF THIS COLUMN (97 CM = 097.0) </div> CM	STANDING...1 LYING DOWN.2	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> IF LESS THAN 10 CMS, PUT ZERO (0) ON PRECEEDING SPACE OF THIS COLUMN (9 CM = 09.0) </div> CM	YES...1 NEXT SECTION	CURRENTLY NOT HOME..1 TOO ILL...2 UNWILLING..3 OTHER SPECIFY...4

1	__ __ __ . __	__ __ __ . __	__ __ __ . __	__ __ . __		
2	__ __ __ . __	__ __ __ . __	__ __ __ . __	__ __ . __		
3	__ __ __ . __	__ __ __ . __	__ __ __ . __	__ __ . __		
4	__ __ __ . __	__ __ __ . __	__ __ __ . __	__ __ . __		
5	__ __ __ . __	__ __ __ . __	__ __ __ . __	__ __ . __		
6	__ __ __ . __	__ __ __ . __	__ __ __ . __	__ __ . __		
7	__ __ __ . __	__ __ __ . __	__ __ __ . __	__ __ . __		
8	__ __ __ . __	__ __ __ . __	__ __ __ . __	__ __ . __		
9	__ __ __ . __	__ __ __ . __	__ __ __ . __	__ __ . __		
10	__ __ __ . __	__ __ __ . __	__ __ __ . __	__ __ . __		
11	__ __ __ . __	__ __ __ . __	__ __ __ . __	__ __ . __		
12	__ __ __ . __	__ __ __ . __	__ __ __ . __	__ __ . __		

SECTION V-1: HOUSEHOLD RECONTACT INFORMATION

**GIVE DETAILS OF HOW TO FIND THE HOUSEHOLD, IF NO PHONE WRITE 98.
GPS**

____ ° ____ ' S

____ ° ____ ' E

PROBE AT LEAST FOR THE FOLLOWING:

1. PHONE NUMBER OF HOUSEHOLD HEAD : _____

2. PHONE NUMBERS FOR OTHER HOUSEHOLD MEMBERS:

A) NAME : _____ PHONE : _____

B) NAME : _____ PHONE : _____

C) NAME : _____ PHONE : _____

3. REFERENCE PERSON (WITH COMMUNITY)

A) NAME : _____

B) RELATIONSHIP TO HEAD : _____

C) MAIN OCCUPATION : _____

D) LOCATION : _____

E) OTHER : _____

F) PHONE : _____

4. REFERENCE PERSON (OUTSIDE COMMUNITY)

A) NAME : _____

B) RELATIONSHIP TO HEAD : _____

C) MAIN OCCUPATION : _____

D) LOCATION : _____

E) OTHER : _____

F) PHONE : _____

9. END TIME

	:	
--	---	--

10. END DATE

--	--	--

Region Code	Region Name	District Code	District Name	Region Code	Region Name	District Code	District Name
05	Morogoro	02	Morogoro	11	Iringa	01	Iringa Rural
05	Morogoro	03	Kilombero	11	Iringa	02	Mufindi
05	Morogoro	04	Ulanga	11	Iringa	03	Iringa Urban
05	Morogoro	05	Morogoro Urban	11	Iringa	04	Kilolo
05	Morogoro	06	Mvomero	11	Iringa	05	Mafinga Township
05	Morogoro	07	Gairo				
				12	Mbeya	01	Chunya
06	Pwani	01	Bagamoyo	12	Mbeya	02	Mbeya Rural
06	Pwani	02	Kibaha	12	Mbeya	03	Kyela
06	Pwani	03	Kisarawe	12	Mbeya	04	Rungwe
06	Pwani	04	Mkuranga	12	Mbeya	05	Ileje
06	Pwani	05	Rufiji	12	Mbeya	06	Mbozi
07	Pwani	06	Mafia	12	Mbeya	07	Mbarali
06	Pwani	07	Kibaha Urban	12	Mbeya	08	Mbeya Urban
				12	Mbeya	09	Momba
				12	Mbeya	10	Tunduma
10	Ruvuma	01	Tunduru				
10	Ruvuma	02	Songea Rural				
10	Ruvuma	03	Mbinga	15	Rukwa	01	Kalambo
10	Ruvuma	04	Songea Urban	15	Rukwa	02	Sumbawanga Rural
10	Ruvuma	05	Namtumbo	15	Rukwa	03	Nkasi
10	Ruvuma	06	Nyasa	15	Rukwa	04	Sumbawanga Urban

WESTERN REGION CODE			CENTRAL REGION CODE		
No	District name	District code	No.	District name	District code
		01			02
	Jomoro	01		Komenda / Edina / Eguafo / Abirem	01
	Ellembelle	02		Cape Coast	02
	Nzema East	03		Abura / Asebu / Kwamankese	03
	Ahanta West	04		Mfantsiman	04
	Sekondi-Takoradi	05		Ajumako / Enyan / Essiam	05
	Shama	06		Gomoa West	06
	Mpohor-Wassa East	07		Effutu	07
	Tarkwa Nsuaem	08		Gomoa East	08
	Prestea / Huni Valley	09		Ewutu Senya	09
	Wassa Amenfi East	10		Agona East	10
	Wassa Amenfi West	11		Agona West	11
	Aowin / Suaman	12		Asikuma / Odoben / Brakwa	12
	Sefwi-Akontombra	13		Assin South	13
	Sefwi-Wiawso	14		Assin North	14
	Sefwi-Bibiani-Ahwiaso-B	15		Twifo / Heman / Lower Denkyira	15
	Juabeso	16		Upper Denkyira East	16
	Bia	17		Upper Denkyira West	17

GREATER ACCRA REGION			VOLTA REGION		
District name	District code		District name	District code	
		03			04
Weija (Ga South)	01		South Tongu	01	
Ga West	02		Keta Municipal	02	
Ga East	03		Ketu South	03	
A M A	04		Ketu North	04	
Adenta	05		Akatsi	05	
Ledzokuku / Krowor	06		North Tongu	06	
Ashaiman	07		Adaklu Anyigbe	07	
Tema	08		Ho	08	
Dangbe West	09		South Dayi	09	
Dangbe East	10		North Dayi	10	
			Hohoe	11	
			Biakoye	12	
			Jasikan	13	
			Kadjebi	14	
			Krachi East	15	
			Krachi West	16	
			Nkwanta South	17	
			Nkwanta North	18	

EASTERN REGION		ASHANTI REGION	
05		06	
District name	District code	District name	District code
Birim South	01	Atwima Mponua	01
Birim Municipal	02	Amansie West	02
West Akim	03	Amansie Central	03
Suhum / Kraboa Coaltar	04	Adansi South	04
Akwapem South	05	Obuasi Municipal	05
Akwapem North	06	Adansi North	06
New Juaben Municipal	07	Bekwai Municipal	07
Yilo Krobo	08	Bosome Freho	08
Lower Manya	09	Asante Akim South	09
Asuogyaman	10	Asante Akim North	10
Upper Manya	11	Ejisu Juaben	11
Fanteakwa	12	Bosumtwi	12
East Akim	13	Atwima Kwanwoma	13
Kwaebibirem	14	K M A	14
Akyem Mansa	15	Atwima Nwabiagya	15
Birim North	16	Ahafo Ano South	16
Atiwa	17	Ahafo Ano North	17
Kwahu West	18	Offinso Municipal	18
Kwahu South	19	Afigya Kwabre	19
Kwahu East	20	Kwabre East	20
Kwahu North (Afram Plains)	21	Sekyere South	21
		Mampong Municipal	22
		Sekyere East	23
		Sekyere Afram Plains	24
		Sekyere Central	25
		Ejura Sekye Dumasi	26
		Offinso North	27

BRONG AHAFO REGION**07**

District name	District code
Asunafo South	01
Asunafo North	02
Asutifi	03
Dormaa Municipal	04
Dormaa East	05
Tano South	06
Tano North	07
Sunyani Municipal	08
Sunyani West	09
Berekum	10
Jaman South	11
Jaman North	12
Tain	13
Wenchi	14
Techiman	15
Nkoranza South	16
Nkoranza North	17
Atebubu	18
Sene	19
Pru	20
Kintampo South	21
Kintampo North	22

NORTHERN REGION**08**

District name	District code
Bole	01
Sawla / Tuna / Kalba	02
West Gonja	03
Gonja Central	04
East Gonja	05
Kpandai	06
Nanumba South	07
Nanumba North	08
Zabzugu Tatali	09
Yendi	10
Tamale Metro	11
Tolon Kumbugu	12
Savelugu Nanton	13
Karaga	14
Gushiegu	15
Saboba	16
Chereponi	17
Bunkpurugu Yonyo	18
Mamprusi East	19
Mamprusi West	20

UPPER EAST REGION**09**

District name	District code
Builsa	01
Kasena Nankana West	02
Kasena Nankana East	03
Bolgatanga Municipal	04
Talensi Nabdam	05
Bongo	06
Bawku West	07
Garu Tempane	08
Bawku Municipal	09

UPPER WEST REGION**10**

District name	District code
Wa West	01
Wa Municipal	02
Wa East	03
Sissala East	04
Nadowli	05
Jirapa	06
Sissala West	07
Lambussie	08
Lawra	09

OBSERVATIONS ON THE INTERVIEW

RECORD GENERAL NOTES ABOUT THE INTERVIEW AND RECORD ANY SPECIAL INFORMATION THAT WILL BE HELPFUL FOR SUPERVISORS AND THE ANALYSIS OF THIS QUESTIONNAIRE.

CODES FOR FOOD AND AGRICULTURE SECTIONS

UNIT	CODE
Kilograms	1
Grams	2
Litre	3
Millilitre	4
Pieces	5

END DATE

--	--	--

END TIME

	:	
--	---	--

Vital Signs Household Questionnaire PART II

This section should be administered to a senior female member of the household who knows answers to these questions. If this senior female member is not present, proceed with the household head.

THIS INFORMATION IS STRICTLY CONFIDENTIAL AND IS TO BE USED FOR STATISTICAL PURPOSES ONLY.

HOUSEHOLD AND INDIVIDUAL QUESTIONNAIRE

SECTION A-1: HOUSEHOLD IDENTIFICATION

	CODE						
1. REGION ID:	<table border="1"><tr><td></td><td></td></tr></table>					
2. DISTRICT	<table border="1"><tr><td></td><td></td></tr></table>					
3. WARD (IF APPLICABLE, IF NOT '99')	<table border="1"><tr><td></td><td></td><td></td></tr></table>					
4. LANDSCAPE	<table border="1"><tr><td></td><td></td><td></td></tr></table>					
4a. E-PLOT ID	<table border="1"><tr><td></td><td></td><td></td></tr></table>					
5. TOWN/VILLAGE/COMMUNITY						
6. HOUSEHOLD ID :	<table border="1"><tr><td></td><td></td><td></td><td></td><td></td></tr></table>					
7. NAME OF RESPONDENT:						

MARK BOX WITH AN 'X' AND NUMBER FORMS BELOW IF YOU USE MORE THAN THIS SINGLE FORM TO COLLECT INFORMATION FROM THIS HOUSEHOLD. IF SO, BE SURE TO MARK IN THE SAME WAY THE OTHER FORMS USED FOR THIS HOUSEHOLD

--

FORM 1 OF TOTAL

SECTION A-2: SURVEY STAFF DETAILS

8. NAME OF ENUMERATOR:

.....

9. ENUMERATOR CODE:

--	--	--

10. TIME INTERVIEW START

--

11. DATE OF INTERVIEW:

	/		/	
--	---	--	---	--

(ENUMERATOR ►NEXT
PAGE)

12. NAME OF FIELD SUPERVISOR:

.....

13. FIELD SUPERVISOR CODE:

--	--	--

14. DATE OF QUESTIONNAIRE
INSPECTION:

	/		/	
--	---	--	---	--

15. NAME OF DATA ENTRY CLERK:

.....

16. DATA ENTRY CLERK CODE:

--	--	--

17. DATE OF DATA ENTRY:

	/		/	
--	---	--	---	--

18. DATA VERIFICATION CLERK CODE:

--	--	--

19. DATE VERIFICATION DATE:

	/		/	
--	---	--	---	--

<p align="center">OBSERVATIONS ON THE INTERVIEW</p> <p align="center">RECORD GENERAL NOTES ABOUT THE INTERVIEW AND RECORD ANY SPECIAL INFORMATION THAT WILL BE HELPFUL FOR SUPERVISORS AND THE ANALYSIS OF THIS QUESTIONNAIRE.</p>

TABLE OF CONTENTS

SECTION HV1: NATURAL RESOURCE BASE

SECTION HV2: NATURAL RESOURCE BASE

SECTION I: FOOD SECURITY

SECTION J2: WATER AND SANITATION

SECTION K1: CONSUMPTION OF FOOD OVER PAST ONE WEEK

SECTION HV1. NATURAL RESOUCE BASE - FUELWOOD

I N D I V I D U A L I D	NAME	3. Does [NAME] collect fuelwood for household and/or commercial use?	4. How frequently does [NAME] collect fuelwood ? [SEE CODE BELOW]	5. How much does [NAME] collect during that collection period? (response from QUESTION 4) [BUNDLES]	5a How many hours does [NAME] spend on each fuelwood collection trip? (From home departure to return)
	MATCH ID FROM HH SURVEY PART 1	YES..1 NO...2 ▶ NEXT PERSON	WEEKLY.....1 MONTHLY.....2 SEASONALLY.....3 ANNUALLY.....4	BUNDLE CARRIED ON HEAD .....1 BACK.....2 BIKE .....3 OTHER [SPECIFY] . 4	_____ HOURS
				NUMBER | UNIT CODE	

1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					

I N D I V I D U A L I D	NAME	SEX	AGE	I N D I V I D U A L I D
--	-------------	------------	------------	--

1				1
2				2
3				3
4				4
5				5
6				6
7				7
8				8
9				9
10				10
11				11
12				12

ASK SENIOR FEMALE HOUSEHOLD MEMBER. IF THIS SENIOR FEMALE HOUSEHOLD MEMBER IS NOT PRESENT PROCEED WITH HOUSEHOLD HEAD.

<p>5b If you have purchased or sold a bundle of fuelwood in the year, what was the cost per bundle? [SEE QUESTION 5]</p>	<p>5c What is your primary source of fuelwood for the household or commercial use ?</p> <p>1 FOREST ▶ 7 1a WOODLAND ▶ 7 1b SHRUBLAND ▶ 7 2 GRASSLAND ▶ 7 3 FROM THE FARM FIELDS, BOUNDARIES, FALLOW LANDS OWNED/OPERATED BY THE HOUSEHOLD ▶ 10 4 FROM THE FARM FIELDS, BOUNDARIES, FALLOW LANDS OWNED BY NEIGHBORS ▶ 10 5 FROM PRIVATE OR COMMUNITY WOODLOTS ▶ 10 6 FROM ROADSIDES ▶ 7 7 PURCHASE FROM NEIGHBORS ▶ 10 8 PURCHASE FROM NEARBY TOWN/VILLAGE ▶ 10 9 OBTAINED BY EXCHANGE FOR OTHER ITEMS (BUT NOT PURCHASED) ▶ 10 10 RECEIVED AS A GIFT 11 WASTE FROM NON-FARM WORK (e.g. CARPENTRY, BUILDING, etc.)</p>	<p>7. In which direction is this primary source of fuelwood (only from the primary source in 5d)? [Record compass bearing in degrees from North]</p> <p>DEGREES FROM N _____</p>	<p>9. How has availability changed over the past 5 years? USE CODE BELOW</p> <p>DECREASED .....1 ABOUT THE SAME.....2 INCREASED .....3</p>	<p>9a What percentage of total fuelwood for the household comes from this primary source ?</p> <p>0% .....1 1-25% ....2 26-50% .....3 51-75% .....4 76-100% .....5</p>
--	---	--	---	--

--	--	--	--	--

<p>9b In the last 12 months, have you been faced with a situation when your household did not have enough fuelwood for household and/or commercial use?</p> <p>YES...1 NO....2 ▶ 10</p>	<p>9c. When did you experience this incident ?</p> <p>MARK X IN EACH COLUMN WHEN SHORTAGE OCCURRED</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Jan</td><td>Feb</td><td>Mar</td><td>Apr</td><td>May</td><td>June</td><td>July</td><td>Aug</td><td>Sep</td><td>Oct</td><td>Nov</td><td>Dec</td> </tr> </table>	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec		

--	--	--	--	--	--	--	--	--	--	--	--

SECTION HV2. NATURAL RESOUC E BASE

	<p>NATURAL RESOURCE PRODUCT/ITEMS</p>	<p>10. Other than fuelwood, does your household use other materials from nearby fallow lands, forest, woodland, shrubland, rivers, creeks, or other area? (see list)</p> <p>YES -- 1 NO --2 ▶ Next Item</p>	<p>11. During which season do you depend more on these items?</p> <p>WET.....1 DRY.....2</p>	<p>12. Do you collect these items on a [SEE CODE BELOW] basis?</p> <p>WEEKLY.....1 MONTHLY.....2 SEASONALLY.....3 ANNUALLY .....4</p> <p>PERIOD</p>	<p>13. If you could no longer collect these materials, would you be willing to purchase them at the market?</p> <p>YES--1 NO --- 2 (▶ 15)</p>	<p>14. How much would you be willing to spend on each material? (Use same frequency and unit as question 12 to answer this amount)</p> <p>LOCAL CURRENCY</p>	<p>15. How has the availability of these items changed over the past 5 years? USE CODE BELOW</p> <p>DECLINED.....1 ABOUT THE SAME..2 INCREASED .....3</p>
--	---------------------------------------	---	--	---	---	--	--

1	Wild meat						
2	Wild insects						
3	Fish from local rivers/creeks						
4	Nuts or seeds						
5	Building materials (e.g. wood that is not used as a fuel source)						
6	Medicinal Plants						
7	Items for special ceremonies						
8	Honey						
9	Other [SPECIFY]						

SECTION I: FOOD SECURITY

1 In the past 7 days, did you worry that your household would not have enough food? YES...1 NO...2 ▶ 3	2 In the past 7 days, how many days have you or someone in your household had to: IF NO DAYS, RECORD ZERO.								3 How many meals, including breakfast are taken per day in your household? A Adults (over 5 years) B Children (6-59 months) LEAVE BLANK IF NO CHILDREN	4 What did your children less than 5 years of age (0-59 months) have for breakfast yesterday? USE CODES BELOW. IF NO CHILDREN UNDER AGE 5, RECORD "00"			5 What did your children between 5 to 13 years old have for breakfast yesterday? USE CODES BELOW. IF NO CHILDREN 5-13, RECORD "00"		
	A	B	C	D	E	F	G	H		NUMBER	NUMBER	1ST	2ND	3RD	1ST	2ND

6 Do all household members eat roughly the same diet? YES...1 ▶ 8 NO...2 ▶ 7	7 Who in the household usually eats a more diverse variety of foods, a less diverse variety of foods? MORE DIVERSE....1 LESS DIVERSE....2 AVERAGE.....3		8 In the last 12 months, have you been faced with a situation when you did not have enough food to feed the household? YES...1 NO...2 ▶ NEXT MODULE	9 When did you experience this incident ? MARK X IN EACH COLUMN FOR 2013, AND 2014												10 What was the cause of this situation? LIST UP TO 3 IN ORDER OF IMPORTANCE; USE CODES ON THE BOTTOM.			
	A	B		C	2013 Jan Feb Mar Apr May June July Aug Sep Oct Nov Dec 2014 Jan Feb Mar Apr May June July Aug Sep Oct Nov Dec												A	B	C

CODES FOR 4 AND 5

TEA/DRINK WITH SUGAR.....1
 MILK/MILK TEA WITH SUGAR.....2
 SOLID FOOD ONLY.....3
 TEA/DRINK WITH SOLID FOOD.....4
 PORRIDGE WITH GROUND NUT FLOUR.....5
 PORRIDGE WITH SOLID FOOD.....6
 PORRIDGE WITH SUGAR.....7
 PORRIDGE WITH MILK.....8
 PORRIDGE WITHOUT SUGAR.....9
 PORRIDGE WITH MILK & SUGAR.....10
 BREASTMILK.....10
 NOTHING.....11

CODES FOR 10A, 10B & 10C

INADEQUATE HOUSEHOLD STOCKS DUE TO DROUGHT/POOR RAINS.....1
 INADEQUATE HOUSEHOLD FOOD STOCKS DUE TO CROP PEST DAMAGE.....2
 Inadequate household food stocks due to small land size.....3
 Inadequate household food stocks due to lack of farm inputs.....4
 Food in the market was very expensive.....5
 Not able to reach the market due to high transportation costs...6
 No food in the market.....7
 Floods/water logging/hailstorm.....8
 NO MONEY.....9
 Other, (Specify).....10

SECTION J2: WATER AND SANITATION

<p>8. How does the household dispose of its garbage?</p> <p>COLLECTED BY GOVERNMENT..1 COLLECTED BY PRIVATE FIRM.....2 GOVERNMENT BIN.....3 DISPOSAL WITHIN COMPOUND....4 UNAUTHORISED HEAP.....5 DESIGNATED DISPOSAL SITE .....5a BURNING.....5b OTHER, (SPECIFY) ....8</p>	<p>11. Major fuel used for cooking?</p> <p>FIREWOOD.....1 PARAFFIN/KEROSINE..2 ELECTRICITY..3 GAS (LPG) .....4 CHARCOAL.....5 ANIMAL RESIDUAL....6 GAS (BIOGAS)..7 OTHER, (SPECIFY) .....8</p>	<p>14. What is the household's main source of drinking water in the rainy season?</p> <p style="text-align: center;">USE CODES FROM BELOW</p>	<p>15. What is the household's main source of drinking water in the dry season?</p> <p style="text-align: center;">USE CODES FROM BELOW</p>	<p>16. What measures does this household take to ensure the safety of drinking water?</p> <p>BOIL.....1 USE WATER FILTER.2 STRAIN THROUGH A CLOTH.....3 TREATED WITH CHEMICALS.....4 BOTTLED WATER..5 SACHET [PURE WATER] .....5a OTHER, (SPECIFY) .6 NONE .....7</p> <p style="text-align: center;">MARK UP TO 2</p> <p style="text-align: center;">1 2</p>	<p>17. What is the household's main source of water for cooking?</p> <p style="text-align: center;">USE CODES FROM BELOW</p> <p style="text-align: center;">RAINY SEASON DRY SEASON</p>	<p>18. What is the household's main source of water for washing (for example laundry, bathing, etc)?</p> <p style="text-align: center;">USE CODES FROM BELOW</p> <p style="text-align: center;">RAINY SEASON DRY SEASON</p>	<p>19. What is the household's main source of water for gardening/ horticulture?</p> <p style="text-align: center;">USE CODES FROM BELOW</p> <p style="text-align: center;">WRITE '00' IF NO</p> <p style="text-align: center;">RAINY SEASON DRY SEASON</p>	<p>20. How satisfied are you in terms of water quality of water for drinking (taste, smell color, etc)</p> <p style="text-align: center;">USE CODES FROM BELOW</p> <p>VERY SATISFIED.....1 SOMEWHAT SATISFIED.....2 NEITHER SATISFIED NOR UNSAT.....3 SOMEWHAT UNSAT..4 VERY UNSAT.....5</p>
--	--	--	--	--	---	---	--	---

<p>20b In the last 12 months, have you been faced with a situation when your household did not have enough water to meet your family needs?</p> <p style="text-align: right;">YES...1 NO....2 ▶ 21</p>	<p>20c When did you experience this incident ? MARK X IN EACH COLUMN WHEN THE SHORTAGE OCCURRED</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Jan</td><td>Feb</td><td>Mar</td><td>Apr</td><td>May</td><td>Jun</td><td>Jul</td><td>Aug</td><td>Sep</td><td>Oct</td><td>Nov</td><td>Dec</td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec												
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec														

	21 MARK X FOR EACH WATER SOURCE REPORTED IN QUESTIONS 14,15,17,18, 19. THEN ASK 22-24 FOR EACH OF THESE SOURCES.	22 What type of container is used to collect water from (SOURCE)?	23 What is the average number of containers fetched from [SOURCE]? USE CODES AT RIGHT		24 What is the average price for a 20 liter jerry can from [SOURCE]?
			NUMBER	FREQUENCY	LOCAL CURRENCY
1 Piped water inside dwelling					
2 Private outside standpipe/tap					
3 Public standpipe/tap					
4 Neighbouring household					
5 Water vendor					
6 Subsidized water vending station					
7 Water truck/Tanker service					
8 Protected well with pump					
9 Unprotected well with pump					
10 Protected well without pump					
11 Unprotected well without pump					
12 River, lake, spring, pond					
13 Rainwater					
14 Other, (Specify)					

CODES FOR 14, 15, 17, 18, & 19

PIPED WATER INSIDE DWELLING.....1
PRIVATE OUTSIDE STANDPIPE/TAP....2
PUBLIC STANDPIPE/TAP.....3
NEIGHBOURING HOUSEHOLD.....4
WATER VENDOR.....5
SUBSIDIZED WATER VENDING STATION.6
WATER TRUCK/TANKER SERVICE.....7
PROTECTED WELL WITH PUMP.....8
UNPROTECTED WELL WITH PUMP.....9
PROTECTED WELL WITHOUT PUMP....10
UNPROTECTED WELL WITHOUT PUMP..11
RIVER, LAKE, SPRING, POND.....12
RAINWATER.....13
OTHER, (SPECIFY).....14

CODES FOR 23

DAY....1
WEEK...2
MONTH...3

CODES FOR 22

OVERHAED TANK.....1
UNDERGROUND TANK.....2
DRUMS/TANKS (METAL OR PLASTIC)3
BUCKETS/JERRYCAN...4
OTHER, (SPECIFY).....5

SECTION K: CONSUMPTION OF FOOD OVER PAST ONE WEEK

QUESTIONS 3, 5, 6: USE CODES FROM QUESTION 2 NS 3, 5, 6: USE CODES FROM QUESTION 2

I T E M C O D E	1. Within the <u>past 7 days</u> , did the members of this household eat/drink any [. . .] within the household? PLEASE ONLY LIST ITEMS CONSUMED WITHIN THE HOUSEHOLD AND EXCLUDE FOOD CONSUMED OUTSIDE THE HOUSEHOLD. ASK THIS QUESTION FOR ALL ITEMS, BEFORE MOVING ON TO THE NEXT QUESTIONS FOR ITEMS WITH YES YES . . . 1 NO . . . 2 (▶NEXT)		2. How much in total did your household consume in the <u>past 7 days</u> ? IF 'DON'T KNOW' WRITE '99' IN QUANTITY AND LEAVE UNIT BLANK UNIT CODES IN COMMENTS		3. How much came from purchases during the <u>past 7 days</u> ? IF NONE WRITE 0 FOR QUANTITY AND LEAVE UNIT BLANK UNIT CODES IN COMMENTS SECTION		4. How much did you spend? THIS QUESTION REFERS TO THE QUANTITY IN QUESTION 3		5. How much came from own-production? IF NONE WRITE 0 FOR QUANTITY AND LEAVE UNIT BLANK UNIT CODES IN COMMENTS		5a. How much would you have spent at the market? THIS QUESTION REFERS TO THE QUANTITY IN		6. How much came from gifts and other sources? EXCLUDE FOOD TAKEN OUTSIDE THE HOUSEHOLD IF NONE WRITE 0 FOR QUANTITY AND LEAVE UNIT BLANK	
			UNIT	QUANTITY	UNIT	QUANTITY	LOCAL CURRENCY	UNIT	QUANTITY	LOCAL CURRENCY	UNIT	QUANTITY		

Cereals and Cereal products

0101	Rice (paddy)										
0102	Rice (husked)										
0103	Maize (green, cob)										
0104	Maize (grain)										
0105	Maize (flour)										
0106	Millet (grain)										
0106a	Sorghum (grain)										
0107	Millet (flour)										
0107a	Sorghum (flour)										
0108	Wheat										
0108a	Barley grain										
0108b	Other cereals										
0109	Bread										
0110	Buns										
0110a	Cakes										
0110b	Biscuits										
0111	Macaroni, spaghetti										
0112	Other cereal products										

Starches

0201	Cassava fresh										
------	---------------	--	--	--	--	--	--	--	--	--	--

I T E M C O D E	1. Within the <u>past 7 days</u> , did the members of this household eat/drink any [. . .] within the household? PLEASE ONLY LIST ITEMS CONSUMED WITHIN THE HOUSEHOLD AND EXCLUDE FOOD CONSUMED OUTSIDE THE HOUSEHOLD. ASK THIS QUESTION FOR ALL ITEMS, BEFORE MOVING ON TO THE NEXT QUESTIONS FOR ITEMS WITH YES YES . . . 1 NO . . . 2 (▶NEXT)	2. How much in total did your household consume in the <u>past 7 days</u> ? IF 'DON'T KNOW' WRITE '99' IN QUANTITY AND LEAVE UNIT BLANK UNIT CODES IN COMMENTS		3. How much came from purchases during the <u>past 7 days</u> ? IF NONE WRITE 0 FOR QUANTITY AND LEAVE UNIT BLANK ▶ UNIT CODES IN COMMENTS SECTION		4. How much did you spend? THIS QUESTION REFERS TO THE QUANTITY IN QUESTION 3	5. How much came from own-production? IF NONE WRITE 0 FOR QUANTITY AND LEAVE UNIT BLANK ▶ UNIT CODES IN COMMENTS		5a How much would you have spent at the market? THIS QUESTION REFERS TO THE QUANTITY IN	6. How much came from gifts and other sources? EXCLUDE FOOD TAKEN OUTSIDE THE HOUSEHOLD IF NONE WRITE 0 FOR QUANTITY AND LEAVE UNIT BLANK	
		UNIT	QUANTITY	UNIT	QUANTITY	LOCAL CURRENCY	UNIT	QUANTITY	LOCAL CURRENCY	UNIT	QUANTITY
0202	Cassava dry/flour										
0203	Sweet potatoes										
0204	Yams/cocoyams										
0205	Irish potatoes										
0206	Cooking bananas, plantains										
0207	Other starches										
Sugar and Sweets											
0301	Sugar										
0302	Sweets										
0303	Honey										
0303a	Syrups										
0303b	Jams										
0303c	Marmalade										
0303d	Jellies										
0303e	Canned Fruits										
Pulses, Dry											
0401	Peas										
0401a	Beans										
0401b	Lentils										
0401c	Other pulses										
Nuts and Seeds											
0501	Groundnuts in shell/shelled										

I T E M C O D E	1. Within the <u>past 7 days</u> , did the members of this household eat/drink any [. . .] within the household? PLEASE ONLY LIST ITEMS CONSUMED WITHIN THE HOUSEHOLD AND EXCLUDE FOOD CONSUMED OUTSIDE THE HOUSEHOLD. ASK THIS QUESTION FOR ALL ITEMS, BEFORE MOVING ON TO THE NEXT QUESTIONS FOR ITEMS WITH YES	2. How much in total did your household consume in the <u>past 7 days</u> ? IF 'DON'T KNOW' WRITE '99' IN QUANTITY AND LEAVE UNIT BLANK UNIT CODES IN COMMENTS		3. How much came from purchases during the <u>past 7 days</u> ? IF NONE WRITE 0 FOR QUANTITY AND LEAVE UNIT BLANK UNIT CODES IN COMMENTS SECTION		4. How much did you spend? THIS QUESTION REFERS TO THE QUANTITY IN QUESTION 3	5. How much came from own-production? IF NONE WRITE 0 FOR QUANTITY AND LEAVE UNIT BLANK UNIT CODES IN COMMENTS		5a How much would you have spent at the market? THIS QUESTION REFERS TO THE QUANTITY IN	6. How much came from gifts and other sources? EXCLUDE FOOD TAKEN OUTSIDE THE HOUSEHOLD IF NONE WRITE 0 FOR QUANTITY AND LEAVE UNIT BLANK	
		YES . . 1 NO . . . 2 (▶NEXT)	UNIT	QUANTITY	UNIT	QUANTITY	LOCAL CURRENCY	UNIT	QUANTITY	LOCAL CURRENCY	UNIT	QUANTITY
0502	Coconuts (mature/immature)										
0503	Cashew										
0503a	Almonds										
0503b	other nuts										
0504	Seeds and products from nuts/seeds (<i>excl.</i> cooking oil)										
Vegetables											
0601	Onions										
0601a	Tomatoes										
0601b	Carrots										
0601c	Green peppers										
0602	Spinach										
0602a	Cabbage										
0602b	Other green vegetables										
0603	Canned										
0603a	Dried vegetables										
0603b	Wild vegetables										
0601d	Other vegetables										
Fruits											
0701	Ripe bananas										
0702	Citrus fruits (oranges, lemon, tangerines, etc.)										
0703	Mangoes										

I T E M C O D E	1. Within the <u>past 7 days</u> , did the members of this household eat/drink any [. . .] within the household? PLEASE ONLY LIST ITEMS CONSUMED WITHIN THE HOUSEHOLD AND EXCLUDE FOOD CONSUMED OUTSIDE THE HOUSEHOLD. ASK THIS QUESTION FOR ALL ITEMS, BEFORE MOVING ON TO THE NEXT QUESTIONS FOR ITEMS WITH YES YES . . . 1 NO . . . 2 (▶NEXT)	2. How much in total did your household consume in the <u>past 7 days</u> ? IF 'DON'T KNOW' WRITE '99' IN QUANTITY AND LEAVE UNIT BLANK UNIT CODES IN COMMENTS		3. How much came from purchases during the <u>past 7 days</u> ? IF NONE WRITE 0 FOR QUANTITY AND LEAVE UNIT BLANK ▶ UNIT CODES IN COMMENTS SECTION		4. How much did you spend? THIS QUESTION REFERS TO THE QUANTITY IN QUESTION 3	5. How much came from own-production? IF NONE WRITE 0 FOR QUANTITY AND LEAVE UNIT BLANK ▶ UNIT CODES IN COMMENTS		5a How much would you have spent at the market? THIS QUESTION REFERS TO THE QUANTITY IN	6. How much came from gifts and other sources? EXCLUDE FOOD TAKEN OUTSIDE THE HOUSEHOLD IF NONE WRITE 0 FOR QUANTITY AND LEAVE UNIT BLANK	
		UNIT	QUANTITY	UNIT	QUANTITY	LOCAL CURRENCY	UNIT	QUANTITY	LOCAL CURRENCY	UNIT	QUANTITY
0703a	Avocados										
0703b	Other fruits										
0704	Sugarcane										
Meat, meat products, fish											
0801	Goat meat										
0802	Beef including minced sausage										
0803	Pork including sausages and bacon										
0804	Chicken										
0804a	Other Poultry										
0805	Wild birds										
0805a	Wild insects										
0806	Other domestic meat products										
0806a	Other wild meat products										
0807	Eggs										
0808	Fresh fish and seafood										
0809	Dried/salted fish and seafood										
0810	Package/Canned fish										
Milk and milk products											
0901	Fresh milk										
0902	Milk products (like cream, cheese, yoghurt etc)										
0903	Canned milk										
0903a	Powder milk										

I T E M C O D E	1. Within the <u>past 7 days</u> , did the members of this household eat/drink any [. . .] within the household?		2. How much in total did your household consume in the <u>past 7 days</u> ?		3. How much came from purchases during the <u>past 7 days</u> ?		4. How much did you spend?		5. How much came from own-production?		5a. How much would you have spent at the market?		6. How much came from gifts and other sources?	
	PLEASE ONLY LIST ITEMS CONSUMED WITHIN THE HOUSEHOLD AND EXCLUDE FOOD CONSUMED OUTSIDE THE HOUSEHOLD.		IF 'DON'T KNOW' WRITE '99' IN QUANTITY AND LEAVE UNIT BLANK		IF NONE WRITE 0 FOR QUANTITY AND LEAVE UNIT BLANK ▶		THIS QUESTION REFERS TO THE QUANTITY IN QUESTION 3		IF NONE WRITE 0 FOR QUANTITY AND LEAVE UNIT BLANK ▶		THIS QUESTION REFERS TO THE QUANTITY IN		EXCLUDE FOOD TAKEN OUTSIDE THE HOUSEHOLD IF NONE WRITE 0 FOR QUANTITY AND LEAVE UNIT BLANK	
ASK THIS QUESTION FOR ALL ITEMS, BEFORE MOVING ON TO THE NEXT QUESTIONS FOR ITEMS WITH YES		YES . . . 1 NO . . . 2		UNIT CODES IN COMMENTS		UNIT CODES IN COMMENTS SECTION				UNIT CODES IN COMMENTS				
		(▶NEXT)		UNIT	QUANTITY	UNIT	QUANTITY	LOCAL CURRENCY	UNIT	QUANTITY	LOCAL CURRENCY	UNIT	QUANTITY	

Oil and fats

1001	Cooking oil												
1002	Butter												
1002a	Margarine												
1002b	Ghee												
1002c	Other fat products												

Spices and other foods

1003	Salt												
1004	Other spices												

Beverages

1101	Tea dry												
1102	Coffee												
1102a	Cocoa												
1103	Other raw materials for drinks												

Beverages

1104	Bottled/canned soft drinks (soda, juice, water)												
1105	Prepared tea												
1105a	Prepared coffee												
1106	Bottled beer												
1107	Local brews												
1108	Wine and spirits												

7. Over the past one week (7 days), how many days did you or others in your household consume any [...]?	NUMBER OF DAYS
A. Cereals, Grains and Cereal Products (Maize Grain/Flour; Green Maize; Rice; Finger Millet ; Pearl Millet; Sorghum; Wheat Flour; Bread; Pasta; Other Cereal)	
B. Roots, Tubers, and Plantains (Cassava Tuber/Flour; Sweet Potato; Irish Potato; Other Tuber/Plantain)	
C. Nuts and Pulses (Bean; Pigeon Pea; Macadamia Nut; Groundnut; Green Bean; Cow Pea; Other Nut/Pulse)	
D. Vegetables (Onion; Cabbage; Wild Green Leaves; Tomato; Cucumber; Other Vegetables/Leaves)	
E. Meat, Fish and Animal Products (Egg; Dried/Fresh/Smoked Fish (Excluding Fish Sauce/Powder); Beef; Goat Meat; Pork; Poultry; Other Meat)	
F. Fruits (Mango; Banana; Citrus; Pineapple; Papaya; Guava; Avocado; Apple; Other Fruit)	
G. Milk/Milk Products (Fresh/Powdered/Soured Milk; Yogurt; Cheese; Other Milk Product - Excluding Margarine/Butter or Small Amounts of Milk for Tea/Coffee)	
H. Fats/Oil (Cooking Oil; Butter; Margarine; Other Fat/Oil)	
I. Sugar/Sugar Products/Honey (Sugar; Sugar Cane; Honey; Jam; Jelly; Sweets/Candy/Chocolate; Other Sugar Product)	
J. Spices/Condiments (Tea; Coffee/Cocoa/Milo; Salt; Spices; Yeast/Baking Powder; Tomato/Hot Sauce; Fish Powder/Sauce; Other Condiment - Including Small Amounts of Milk for Tea/Coffee)	

8. Over the past one week (7 days), did any people that you did not list as household members [READ LIST FROM HH ROSTER] eat any meals in your household?			
YES...1 <input type="checkbox"/>			
NO...2 (▶NEXT SECTION) <input type="checkbox"/>			
IF NOT SHARED, RECORD ZERO IN BOTH COLUMNS.	9 What was the total number of days in which any meal was shared with people [...]?	10 What was the total number of meals that were shared over past 7 days with [...]?	
	NUMBER OF DAYS	NUMBER OF MEALS	
	A Children 0-5 years		
	B Children 6-15 years		
	C Adults 16-65 years		
D People over 65 years old			

OBSERVATIONS ON THE INTERVIEW

RECORD GENERAL NOTES ABOUT THE INTERVIEW AND RECORD ANY SPECIAL INFORMATION THAT WILL BE HELPFUL FOR SUPERVISORS AND THE ANALYSIS OF THIS QUESTIONNAIRE.

CODES FOR FOOD AND AGRICULTURE SECTIONS

UNIT	CODE
Kilograms	1
Grams	2
Litre	3
Millilitre	4
Pieces	5

END DATE

--	--	--

END TIME

	:	
	:	

Vital Signs Household Survey Protocol 2.0

Household Survey Metadata
Version: 1.0

	Form Value	Definition	Data Type	Values List	Example	Empty Value
Household Identification	Country	The VS country three-letter abbreviation	String	None	TZA or GHA	Required
	Region ID	Two figure assigned to each region	numeric	none	01	Required
	District	A unique number assigned to each district	numeric	{1-54}	1	Required
	Ward	The Ward name	String	None	IHM	Required
	Landscape	Three figures assigned to each landscape	numeric	none	001	Required
	E-Plot ID	A unique number assigned to each E-Plot	numeric	None	none	Required
	Town/Village/Community	Provide full name	String	None	none	Required
	Household ID	5 Digits combination of landscape, E-Plot, and house number	numeric	None	none	Required
	Household Head	List first and last name of the household head	String	None	none	Required
or Details	Name of Enumerator	First and Last Name of person interviewing household head	string	None	none	Required
	Time Interview	Time taken to complete interview will be recorded in hours	numeric	None	2	Required
	Date Interview	State the month (mm) and year (yy)	string	None	12/2013	Required
	Field Supervisor	First and Last Name of Socio-economic manager	string	none	none	Required
	Questionnaire inspection	Date the questionnaire was inspected; (Month/Year)	string	None	none	Required

Enumerat	Data Entry Clerk	First and Last Name of data entry clerk	string	None	none	Required
	Entry Clerk Code	Write the code assigned to the clerk	numeric	None	none	Required
	Date Data Entry	State the month (mm) and year (yy)	numeric	None	none	Required
	2nd Entry Clerk Code	Write the code assigned to the clerk	numeric	None	none	Required
	Date 2nd Data Entry	State the month (mm) and year (yy)	numeric	None	none	Required

Vital Signs Household Survey Protocol 2.0

Household Survey
Version: 2.0

	Description	Number	Form Value	Definition	Data Type	Format	Width	Decimals	Range
Section A: Household Identification & Survey Staff Details	This file contains data related to section A of the Household questionnaire - household identifier variables, cluster identification, region identification, 2013-2014 household id, enumerator, supervisor, data entry clerk identifiers and data and time of interview.	v1	region	region	Continuous	numeric	2	0	1-55
		v2	district	district	Discrete	numeric	1	0	1-8
		v3	vs_cluster	Cluster ID	Continuous	numeric	3	0	001-010
		v4	vs_landscape	Landscape/EA	Continuous	numeric	3	0	1-999
		v5	hh_a05	Kitongoji or Mtaa name	Discrete	character	24		
		v6	y2_hhid	Household ID	Discrete	character	16		
		v10	hh_a16	Enumerator code	Continuous	numeric	2	0	5-94
		v11	intwlnth_hr	Length of interview -- hour	Discrete	numeric	2	0	0-11
		v12	intwlnth_min	Length of Interview -- minutes	Continuous	numeric	2	0	0-59
		v13		Date of interview					
		v14	hh_a18_mon	Month	Discrete	numeric	2	0	1-12
		v15	hh_a18_year	Year	Discrete	numeric	4	0	2013-2014
		v17	hh_a20	Field supervisor code	Continuous	numeric	3	0	1-100
		v18	hh_a21	Date of questionnaire inspection	Continuous	numeric	8	0	1012011-31102011
		v20	hh_a23	Data entry clerk code	Continuous	numeric	2	0	1-96
		v21	hh_a24	Date of data entry	Continuous	numeric	8	0	1022011-31122010
		v22	hh_a25	Data verification clerk code	Continuous	numeric	2	0	1-85
		v23	hh_a26	Data verification date	Continuous	numeric	8	0	1022011-31052011
		v1	y2_hhid	Unique Year HH ID	Discrete	character	16		

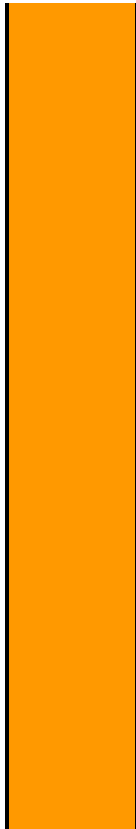
Vital Signs Household Survey Protocol 2.0

Section B: Household Member Roster	This file contains data related to section B of the Household questionnaire - roster of individuals living in the household, relationship to the household, gender, year of birth, variable to link individuals between survey rounds, marital status, spouse identification, parental status, and place of birth.	v2	hhid_2013	Full household identification	Discrete	character	14		
		v3	indidy2	Individual ID	Continuous	numeric	2	0	1-55
		v4	hh_b02	Sex	Discrete	numeric	1	0	1-2
		v5	hh_b03_1	In what year was [NAME] born?	Discrete	numeric	4	0	99-2011
		v6	hh_b03_2	In what month was [NAME] born?	Discrete	numeric	2	0	1-99
		v7	hh_b04	How old is [NAME]?	Continuous	numeric	3	0	0-105
		v8	hh_b05	What is [NAME]'s relationship to the head of household?	Discrete	numeric	2	0	1-10
		v9	hh_b07	Did [NAME] eat meals in this household in the last 7 days?	Discrete	numeric	1	0	1-2
		v10	hh_b08	For how many days in the last month was [NAME] present?	Continuous	numeric	2	0	0-31
		v11	hh_b09_1	For the last 12 months has [NAME] stayed in this household for 3 month or more?	Discrete	numeric	1	0	1-2
		Section C: Education	This file contains data from section C of the Household questionnaire - educational attainment, school characteristics, and expenditures	v1	y2_hhid	Unique Year HH ID	Discrete	character	16
v2	indidy2			Individual ID	Continuous	numeric	2	0	1-55
v3	hh_c01			Is [NAME] 5 years or above?	Discrete	numeric	1	0	1-2
v4	hh_c02			Can [NAME] read and write?	Discrete	numeric	1	0	1-5
v5	hh_c03			Has [NAME] ever attended school?	Discrete	numeric	1	0	1-2

Vital Signs Household Survey Protocol 2.0

Set	expenditures.		v6	hh_c07	What is the highest grade completed by [NAME]?	Discrete	numeric	2	0	1-45
	v1	y2_hhid	Unique Year HH ID	Discrete	character	16				
	v2	indidy2	Individual ID	Continuous	numeric	2	0			1-55
	v3	hh_e01	Is the household member 5 years or above?	Discrete	numeric	1	0			1-2
	v6	hh_e04	Did you do any work of any type for pay, profit, barter or home use during the last 7 days?	Discrete	numeric	1	0			1-2
	v9	hh_e12	Did you do any wage work during the last 7 days (i.e. work for someone else for pay)	Discrete	numeric	1	0			1-2
	v10	hh_e13	Did you do any wage work during the last 12 months (i.e. work for someone else for pay)	Discrete	numeric	1	0			1-2

Vital Signs Household Survey Protocol 2.0



v11	hh_e22_1	How much was your last payment? IF RESPONDENT HAS NOT YET BEEN PAID, ASK: What payment to do you expect? What period of time did this payment cover?	Continuous	numeric	8	0	0-16050000
v12	hh_e22_2	What period of time did this payment cover?	Discrete	numeric	1	0	1-8
v13	hh_e23	Do you receive any payment for this work in any other form?	Discrete	numeric	1	0	1-2
v14	hh_e24_1	What is the value of those payments?	Continuous	numeric	8	0	200-11000000
v15	hh_e24_2	Over what time interval?	Discrete	numeric	1	0	1-8
v16	hh_e25	How many hours did you work last week?	Continuous	numeric	3	0	0-168
v19	hh_e28	During the last 12 months, how many hours per week do you usually work in this job?	Continuous	numeric	3	0	0-168
v18	hh_e27	During the last 12 months, how many weeks per month do you usually work in this job?	Discrete	numeric	1	0	0-4

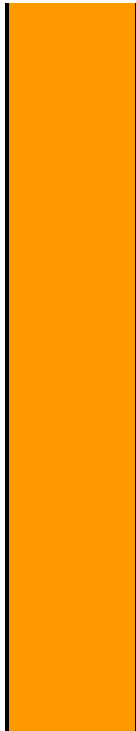
Vital Signs Household Survey Protocol 2.0

Section E: Labour

This file contains data related to section E of the Household questionnaire - labor market participation during the last seven days, wage work, non-farm enterprise activity, and domestic activities within the home.

v17	hh_e26	During the last 12 months, for how many months did you work in this job?	Discrete	numeric	2	0	0-12
v20	hh_e51	Did you operate any business or do any self-employed activity during the last week, other than agriculture?	Discrete	numeric	1	0	1-2
v20a	hh_e52	Did you operate any business or do any self-employed activit (hh_e52)	Discrete	numeric	1	0	1-2
v21	hh_e59_1	What was the 1ST main source of start-up capital for this in income-generating activity?	Discrete	numeric	2	0	1-11
v22	hh_e59_2	What was the 2ND main source of start-up capital for this in income-generating activity?	Discrete	numeric	2	0	1-11
v23	hh_e59_3	What was the 3RD main source of start-up capital for this in income-generating activity?	Discrete	numeric	2	0	1-11

Vital Signs Household Survey Protocol 2.0



v24	hh_e61	What is the total value of your physical capital stock, including all tools, equipment, buildings, land, vehicles for the business?	Continuous	numeric	9	0	0-200000000
v25	hh_e62	What is the total value of your current stock of inputs or supplies?	Continuous	numeric	7	0	0-8725000
v26	hh_e63	What is the total value of your current stock of finished merchandise (goods for sale)?	Continuous	numeric	9	0	0-500000000
v27	hh_e64_1	What gross income/takings did you get from your business or businesses in the last week?	Discrete	numeric	1	0	0-5
v28	hh_e64_2	What gross income/takings did you get from your business or businesses in the last month?	Continuous	numeric	9	0	0-217500000

Vital Signs Household Survey Protocol 2.0

	v29	hh_e65_1	What was your net income (profit) from your business or businesses in the last week?	Discrete	numeric	1	0	0-5
	v30	hh_e65_2	What was your net income (profit) from your business or businesses in the last month?	Continuous	numeric	8	0	0-74500000
	v8	hh_e06	The following question refers to the economic activity on which you spend most of your time if you have more than one activity: Are you working as:	Discrete	numeric	0	0	1-6
	v1	y2_hhid	Unique Year HH ID	Discrete	character	16		
	v2	hh_j01	What is HH tenure status of main residence?	Discrete	numeric	1	0	1-6
	v3	hh_j02	Do you have any documentation of ownership of the dwelling?	Discrete	numeric	2	0	1-10
	v4	hh_j03	How much does this household pay per month to rent this dwelling?	Continuous	numeric	6	0	0-800000

Vital Signs Household Survey Protocol 2.0

Section J1 : Housing, Water, and Sanitation

This file contains data related to section J of the Household questionnaire - dwelling characteristics, water source usage, sanitation facilities, and use of fuel and electricity.

v5	hh_j04_1	How many habitable rooms in each unit does this household occupy? (Main dwelling)	Discrete	numeric	2	0	0-12
v6	hh_j04_2	How many habitable rooms in each unit does this household occupy? (Other dwelling)	Discrete	numeric	2	0	0-12
v7	hh_j05	The walls of the main dwelling are predominantly made of what materials?	Discrete	numeric	1	0	1-7
v8	hh_j06	The roof of the main dwelling is predominantly made of what materials?	Discrete	numeric	1	0	1-3
v9	hh_j07	The floor of the main dwelling is predominantly made of what materials?	Discrete	numeric	1	0	1-3
v13	hh_j10	What is the main toilet facilities usually used in this household?	Discrete	numeric	1	0	1-8
v14	hh_j15	Do you share this toilet facility with other households?	Discrete	numeric	1	0	1-2
v15	hh_j17	Major fuel used for lighting?	Discrete	numeric	1	0	1-9

Vital Signs Household Survey Protocol 2.0

		v16	hh_j18	What is HH main source of electricity?	Discrete	numeric	1	0	1-7
SECTION L: Non-Food Expenditures	This file contains data related to section L of the Household questionnaire - non-food expenditure during the last week or last month	v1	y2_hhid	Unique Year HH ID	Discrete	character	16		
		v2	itemcode	Item Code	Discrete	numeric	3	0	101-224
		v3	hh_i01_2	Over the past 7 days, did you purchase any [...]?	Discrete	numeric	1	0	1-2
		v4	hh_i02	How much did you pay in total?	Continuous	numeric	8	0	0-20000000
Section M: Non-Food Expenditures	This file contains data related to section M of the Household questionnaire - non-food expenditure during the past 12 months.	v1	y2_hhid	Unique Year HH ID	Discrete	character	16		
		v2	itemcode	Item Code	Discrete	numeric	3	0	301-319
		v3	hh_m01_2	Over the past 12 months did you gather, purchase, or pay for any [...]?	Discrete	numeric	1	0	1-2
		v4	hh_m02_1	How much was paid in total?	Continuous	numeric	8	0	0-60000000
		v5	hh_m02_2	What was the estimated total value of [] used?	Continuous	numeric	6	0	0-720000
Section N: Household Assets	This file contains data related to section N of the Household questionnaire - household assets.	v1	y2_hhid	Unique Year HH ID	Discrete	character	16		
		v2	itemcode	Item Code	Discrete	numeric	3	0	401-452
		v3	hh_n01_2	How many [ITEMS] does your household own?	Continuous	numeric	4	0	0-1000
Anthropometry	This file contains data related to section U of the	v1	y2_hhid	Unique Year HH ID	Discrete	character	16		
		v2	indidy2	Individual ID	Continuous	numeric	2	0	1-55
		v8	hh_u06	Is [name] 0-60 months old?	Discrete	numeric	1	0	1-2
		v5	hh_u03	Weight	Continuous	numeric	6	2	2.099 -703.90
		v6	hh_u04	Height	Continuous	numeric	6	2	0 - 201.199

Vital Signs Household Survey Protocol 2.0

Section U: Anthro	related to section C of the Household questionnaire - anthropometric information on household members aged over 7 months.	v7	hh_u05	height / length measured with child standing or lying down?	Discrete	numeric	1	0	1-2
		v9	hh_u07	Upper arm circumference	Continuous	numeric	3	0	20-195
		v3	hh_u01	was [name] measured?	Discrete	numeric	1	0	1-2
		v4	hh_u02	Why not	Discrete	numeric	1	0	1-4

PART II

		v1	y2_hhid	Unique Year HH ID	Discrete	character	16		
		v2	hh_vs_r_1	Is this person answering for himself/ herself?	Discrete	numeric	1	0	
		v3	hh_vs_r_3	Does [NAME] collect fuelwood for household and/or commercial use	Discrete	numeric	1	0	1-2
		v4	hh_vs_r_4	How frequently does [NAME] collect fuelwood ?	Discrete	numeric	1	0	1-4
		v5	hh_vs_r_5_1	How much does [NAME] collect during that collection period?	Continuous	numeric	3	0	0-300
		v6	hh_vs_r_5_2	How much does [NAME] collect during that collection period?	Discrete	numeric	1	0	1-4

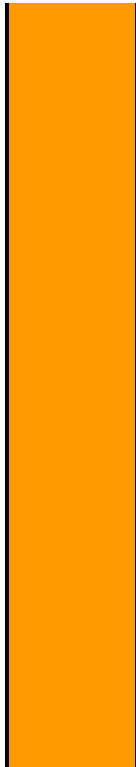
Vital Signs Household Survey Protocol 2.0

Section V_H: Natural Resource base

This section V_H will examine the use of forest resources and fuelwood.

v7	hh_vs_r_5a	How many hours does [NAME] spend on each fuelwood collection trip?	Continuous	numeric	3	1	1-100
v8	hh_vs_r_5b	If you have purchased or sold a bundle of fuelwood in the year, what was the cost per bundle?	Continuous	numeric	8	0	1-60000000
v9	hh_vs_r_5c	What is your primary source of fuelwood for the household or commercial use ?	Discrete	numeric	2	0	1-11
v10	hh_vs_r_7	In which direction is this primary source of fuelwood (only from the primary source in 5d)?	Continuous	numeric	8	2	1-60000000
v11	hh_vs_r_9	How has availability changed over the past 5 years?	Discrete	numeric	1	0	1-3
v12	hh_vs_r_9a	What percentage of total fuelwood for the household comes from this primary source ?	Discrete	numeric	1	0	1-5

Vital Signs Household Survey Protocol 2.0

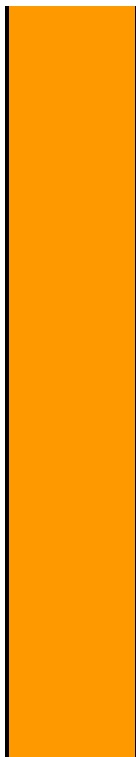


v13	hh_vs_r_9b	In the last 12 months, have you been faced with a situation when your household did not have enough fuelwood for household and/or commercial use?	Discrete	numeric	1	0	1-2
v14	hh_vs_r_9c	When did you experience this incident ?	Discrete	numeric	2	0	1-12
v15	hh_vs_r_10	Items	Discrete	numeric	1	0	1-2
	hh_vs_r_11	During which season do you depend more on these items?	Discrete	numeric	1	0	1-2
	hh_vs_r_12	Do you collect these items on a basis	Discrete	numeric	1	0	1-4
v16	hh_vs_r_13	If you could no longer collect these materials, would you be willing to purchase them at the market?	Discrete	numeric	1	0	1-2
v15	hh_vs_r_14	How much would you be willing to spend on each material?	Continuous	numeric	8	0	1-60000000

Vital Signs Household Survey Protocol 2.0

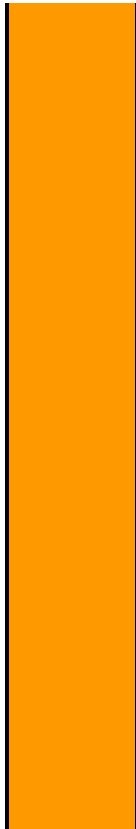
	v16	hh_vs_r_15	How has the availability of these items changed over the past 5 years?	Discrete	numeric	1	0	1-3
	v1	y2_hhid	Unique Year HH ID	Discrete	character	16		
	v2	hh_i01	In the past 7 days, did you worry that your household would not have enough food?	Discrete	numeric	1	0	1-2
	v3	hh_i02_1	2A Rely on less preferred foods?	Discrete	numeric	1	0	0-7
	v4	hh_i02_2	2B Limit the variety of foods eaten?	Discrete	numeric	1	0	0-7
	v5	hh_i02_3	2C Limit portion size at meal-times?	Discrete	numeric	1	0	0-7
	v6	hh_i02_4	2D Reduce number of meals eaten in a day?	Discrete	numeric	1	0	0-7
	v7	hh_i02_5	2E Restrict consumption by adults for small children to eat?	Discrete	numeric	1	0	0-7
	v8	hh_i02_6	2F Borrow food, or rely on help from a friend or relative?	Discrete	numeric	1	0	0-7
	v9	hh_i02_7	2G Have no food of any kind in your house-hold?	Discrete	numeric	1	0	0-7
	v10	hh_i02_8	2H Go a whole day and night without eating anything?	Discrete	numeric	1	0	0-7

Vital Signs Household Survey Protocol 2.0



v11	hh_i031	How many meals, including breakfast are taken per day in your household?	Discrete	numeric	1	0	0-5
v12	hh_i032	How many meals, including breakfast are taken per day in your household? (children 6-59 months)	Discrete	numeric	1	0	0-9
v13	hh_i04	What did your children below 5 years old (0-59 months) have for breakfast yesterday?	Discrete	numeric	2	0	0-12
v14	hh_i05	What did your children between 5 to 13 years old have for breakfast yesterday?	Discrete	numeric	2	0	0-12
v15	hh_i06	Do all household members eat roughly the same diet?	Discrete	numeric	1	0	1-2
v16	hh_i07_1	Who in the household usually eats a more diverse variety of foods, a less diverse variety of foods? (men)	Discrete	numeric	1	0	1-2

Vital Signs Household Survey Protocol 2.0



v17	hh_i07_2	Who in the household usually eats a more diverse variety of foods, a less diverse variety of foods? (women)	Discrete	numeric	1	0	1-2
v18	hh_i07_3	Who in the household usually eats a more diverse variety of foods, a less diverse variety of foods? (children 6-59 months)	Discrete	numeric	1	0	1-2
v19	hh_i08	In the last 12 months, have you been faced with a situation when you did not have enough food to feed the household?	Discrete	numeric	1	0	1-2
v20	hh_i10_1	What was the cause of this situation? 1ST	Discrete	numeric	2	0	1-10
v21	hh_i10_2	What was the cause of this situation? 2ND	Discrete	numeric	2	0	1-10
v22	hh_i10_3	What was the cause of this situation? 3RD	Discrete	numeric	2	0	1-10
v23	y2_hhid	Unique Year 2 HH ID	Discrete	character	16		
v24	hh_i09_1_01	When did you experience this incident ? - 2010	Discrete	character	1		

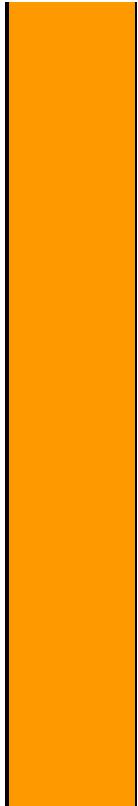
Vital Signs Household Survey Protocol 2.0

Section I: Food Security

This file contains data related to section I of the Household questionnaire - information on the household's diet and food intake.

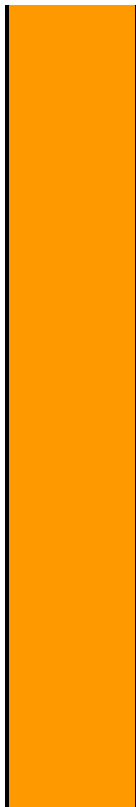
v24	hh_i09_1_02	When did you experience this incident ? - 2010	Discrete	character	1		
v25	hh_i09_1_03	When did you experience this incident ? - 2010	Discrete	character	1		
v26	hh_i09_1_04	When did you experience this incident ? - 2010	Discrete	character	1		
v27	hh_i09_1_05	When did you experience this incident ? - 2010	Discrete	character	1		
v28	hh_i09_1_06	When did you experience this incident ? - 2010	Discrete	character	1		
v29	hh_i09_1_07	When did you experience this incident ? - 2010	Discrete	character	1		
v30	hh_i09_1_08	When did you experience this incident ? - 2010	Discrete	character	1		
v31	hh_i09_1_09	When did you experience this incident ? - 2010	Discrete	character	1		
v32	hh_i09_1_10	When did you experience this incident ? - 2010	Discrete	character	1		
v33	hh_i09_1_11	When did you experience this incident ? - 2010	Discrete	character	1		
v34	hh_i09_1_12	When did you experience this incident ? - 2010	Discrete	character	1		

Vital Signs Household Survey Protocol 2.0



v35	hh_i09_2_01	When did you experience this incident ? - 2011	Discrete	character	1		
v36	hh_i09_2_02	When did you experience this incident ? - 2011	Discrete	character	1		
v37	hh_i09_2_03	When did you experience this incident ? - 2011	Discrete	character	1		
v38	hh_i09_2_04	When did you experience this incident ? - 2011	Discrete	character	1		
v39	hh_i09_2_05	When did you experience this incident ? - 2011	Discrete	character	1		
v40	hh_i09_2_06	When did you experience this incident ? - 2011	Discrete	character	1		
v41	hh_i09_2_07	When did you experience this incident ? - 2011	Discrete	character	1		
v42	hh_i09_2_08	When did you experience this incident ? - 2011	Discrete	character	1		
v43	hh_i09_2_09	When did you experience this incident ? - 2011	Discrete	character	1		
v44	hh_i09_2_10	When did you experience this incident ? - 2011	Discrete	character	1		
v45	hh_i09_2_11	When did you experience this incident ? - 2011	Discrete	character	1		

Vital Signs Household Survey Protocol 2.0



v46	hh_i09_2_12	When did you experience this incident ? - 2011	Discrete	character	1		
v47	hh_i09_3_01	When did you experience this incident ? - 2012	Discrete	character	1		
v48	hh_i09_3_02	When did you experience this incident ? - 2012	Discrete	character	1		
v49	hh_i09_3_03	When did you experience this incident ? - 2012	Discrete	character	1		
v50	hh_i09_3_04	When did you experience this incident ? - 2012	Discrete	character	1		
v51	hh_i09_3_05	When did you experience this incident ? - 2012	Discrete	character	1		
v52	hh_i09_3_06	When did you experience this incident ? - 2012	Discrete	character	1		
v53	hh_i09_3_07	When did you experience this incident ? - 2012	Discrete	character	1		
v54	hh_i09_3_08	When did you experience this incident ? - 2012	Discrete	character	1		
v55	hh_i09_3_09	When did you experience this incident ? - 2012	Discrete	character	1		
v56	hh_i09_3_10	When did you experience this incident ? - 2012	Discrete	character	1		

Vital Signs Household Survey Protocol 2.0

	v57	hh_i09_3_11	When did you experience this incident ? - 2012	Discrete	character	1		
	v58	hh_i09_3_12	When did you experience this incident ? - 2012	Discrete	character	1		
	v12	hh_j09	How does the household dispose of its garbage?	Discrete	numeric	1	0	1-6
	v14	hh_j16	Major fuel used for cooking?	Discrete	numeric	1	0	1-8
	v16	hh_j18	What is HH main source of electricity?	Discrete	numeric	1	0	1-7
	v17	hh_j19	What is the household's main source of drinking water in the rainy season?	Discrete	numeric	2	0	1-14
	v18	hh_j22	What is the household's main source of drinking water in the dry season?	Discrete	numeric	2	0	1-14
	v19	hh_J25_1	What measures does this household take to ensure the safety of drinking water? 1ST	Discrete	numeric	1	0	1-7

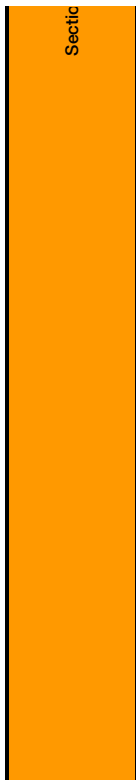
Vital Signs Household Survey Protocol 2.0

Section J: Water, and Sanitation

This file contains data related to section J of the Household questionnaire - water source usage, sanitation facilities, and use of fuel and electricity.

v20	hh_j25_2	What measures does this household take to ensure the safety of drinking water? 2ND	Discrete	numeric	1	0	1-7
v21	hh_j26_1	What is the household's main source of water for cooking? SOURCE 1	Discrete	numeric	2	0	1-14
v22	hh_j26_2	What is the household's main source of water for cooking? SOURCE 2	Discrete	numeric	2	0	1-14
v23	hh_j27_1	What is the household's main source of water for washing? SOURCE 1	Discrete	numeric	2	0	1-14
v24	hh_j27_2	What is the household's main source of water for washing? SOURCE 2	Discrete	numeric	2	0	1-14
v25	hh_j28_1	What is the household's main source of water for gardening/horticulture? SOURCE 1	Discrete	numeric	2	0	1-14

Vital Signs Household Survey Protocol 2.0



v26	hh_j28_2	What is the household's main source of water for gardening/horticulture? SOURCE 2	Discrete	numeric	2	0	1-14
v27	hh_j37	How satisfied are you in terms of the water quality for drinking (taste, smell, color, et.c.)	Discrete	numeric	1	0	1-5
	hh_vs_20b	In the last 12 months, have you been faced with a situation when your household did not have enough water to meet your family needs?	Discrete	numeric	1	0	0-2
	hh_vs_20c	When did you experience this incident?	Discrete	numeric	1	0	1-12
v28	itemcode	SOURCE OF WATER	Discrete	numeric	2	0	1-14
v29	hh_j29	MARK X FOR EACH WATER SOURCE REPORTED IN QUESTIONS 19, 22, 2	Discrete	character	1		
v30	hh_j30	What type of container is used to collect water from [SOURCE]?	Discrete	numeric	1	0	1-5

Vital Signs Household Survey Protocol 2.0

	v31	hh_j31_1	What is the average number of containers fetched from [SOURCE]? (NUMBER)	Continuous	numeric	3	0	0-320
	v32	hh_j31_2	What is the average number of containers fetched from [SOURCE]? (FREQUENCY)	Discrete	numeric	1	0	1-3
	v33	hh_j32	What is the average price for a 20 liter jerry can from [SOURCE]?	Continuous	numeric	4	0	0-6000
	v1	y2_hhid	Unique Year HH ID	Discrete	character	16		
	v2	itemcode	Item codes	Continuous	numeric	4	0	101-1108
	v3	hh_k0b	Item description	Discrete	character	18		
	v4	hh_k01_2	Within the past 7 days, did the members of this household eat/drink any [.] within the household?	Discrete	numeric	1	0	1-2
	v5	hh_k02_1	How much in total did your household consume in the past 7 days?	Discrete	numeric	1	0	1-5
	v6	hh_k02_2	How much in total did your household consume in the past 7 days?	Continuous	numeric	8	2	0.2-58800

Section K: Consumption of Food Over the Past One Week

This file contains data related to section K of the Household questionnaire - quantity and value of food consumed within the household during the last 7 days by source.

v7	hh_k03_1	How much came from purchases during the past 7 days? UNIT	Discrete	numeric	1	0	1-5
v8	hh_k03_2	How much came from purchases during the past 7 days? QUANTITY	Continuous	numeric	8	2	0-31500
v9	hh_k04	How much did you spend?	Continuous	numeric	8	2	0-44000
v10	hh_k05_1	How much came from own-production? UNIT	Discrete	numeric	1	0	0-5
v11	hh_k05_2	How much came from own-production? QUANTITY	Continuous	numeric	8	2	0-58800
	hh_vs_k05a	How much would you have spent at the market?	Continuous	numeric	8	3	0-558000
v12	hh_k06_1	How much came from gifts and other sources? UNIT	Discrete	numeric	1	0	1-5
v13	hh_k06_2	How much came from gifts and other sources? QUANTITY	Continuous	numeric	8	2	0-24500
v14	y2_hhid	Unique Year HH ID	Discrete	character	16		
v15	itemcode	Item code	Discrete	character	1		
v16	hh_k08_2	Item description	Discrete	character	35		

This file contains data related to section K of the Household questionnaire - frequency of consumption

	of food items.	v17	hh_k08_3	Number of days	Discrete	numeric	1	0	0-9	
	This file contains data related to section K of the Household questionnaire - shared meals with non-household members.	v18	y2_hhid	Unique Year HH ID	Discrete	character	16			
		v19	hh_k01_1	SECTION I AGE GROUP	Discrete	character	1			
		v20	hh_k01_2	Item description	Discrete	character	24			
		v21	hh_k01_3	What was the total number of days in which any meal was shared with people [...]?	Discrete	numeric	1	0		0-9
		v22	hh_k11	What was the total number of meals that were shared over past 7 days with [...]?	Continuous	numeric	2	0		0-49



Vital Signs Protocol

Agricultural Management Intensity Survey

Version 2.0

March 2014

ACKNOWLEDGMENTS

This survey incorporates a subset of the questions from the World Bank Living Standards Measurement Survey - Integrated Survey of Agriculture. We would like to acknowledge their contributions towards this survey tool: <http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/EXTLSMS/0,,contentMDK:21610833~pagePK:64168427~piPK:64168435~theSitePK:3358997,00.html>

CONTENTS

1. INTRODUCTION	141
<u>1.1 Definitions of Key Technical Terms</u>	144
<u>1.2 Standard Conventions</u>	146
2. ROLES AND RESPONSIBILITIES	146
3. EQUIPMENT LIST	148
4. COMPLETING THE AGRICULTURAL QUESTIONNAIRE	150
<u>4.1 Section 1: Household Member Roster</u>	151
<u>4.2 Section 2: Farm Sketch and Field Roster</u>	151
4.2.1 Farm and Field Sketch	155
4.2.2 Questions About Farm Fields: Primary Land Use and Crops	155
<u>4.3 Section 3: Farm Details</u>	157
<u>4.4 Section 4: Crops By Field</u>	174
<u>4.5 Section 5: Crop Production and Sales</u>	177
<u>4.6 Section 6: Permanent Crops By Field</u>	180
<u>4.7 Section 7: Permanent Crops By Crop</u>	182
<u>4.8 Section 9: Processed Agricultural Products and Agricultural By-Products</u>	183
<u>4.9 Section 10A: Livestock</u>	187
<u>4.10 Section 10B: Livestock By-Products</u>	190

Vital Signs Agricultural Survey Protocol 2.0

<u>4.11 Section 10C: Livestock By Field</u>	192
<u>4.12 Section 11: Farm Implements and Machinery</u>	193
<u>4.13 Section 12: Extension</u>	194
<u>4.14 Taking Area Measurements of the Fields</u>	196
5. BIBLIOGRAPHY	206
6. APPENDICES	207
<u>6.1 Appendix 1: Photos of Erosion Control/Water</u> <u>Harvesting Facilities</u>	207
<u>6.2 Appendix 2: Agricultural Management Survey Data Entry</u> <u>Form</u>	208
<u>6.3 Appendix 3: Agricultural Management Survey Data</u> <u>Dictionary</u>	241

1. INTRODUCTION

Collecting data on agricultural productivity and management practices used by farmers is critical to understanding current farming practices and yields produced, identifying reasons for yield gaps, and determining possible agricultural intervention strategies that lead to increased production and sustainable intensification.

With the objective of **monitoring linked changes in agricultural productivity, ecosystems services, and human well-being** – particularly food and nutritional security and income levels – having household data on agricultural management practices and the socio-economic and biophysical characteristics of those households is a critical step in making those linkages.

The agricultural survey was developed from the Living Standard Measurement Study (LSMS) tools used in many countries. The data collected through Vital Signs at the landscape and farm level can be used to validate available data from national and sub-national statistics and remotely sensed data.

It is also important to track crop yields and management practices within the Vital Signs Landscapes to see how environmental and socioeconomic outcomes change with different management practices. The information on crop production obtained from household surveys serves as a complement to more rigorous yield measurement and management practices. Therefore, we require estimates of yields from field harvests from representative crop fields

and the associated quantitative data on management practices used in those fields.

The data collected in this protocol are required for determining the indicators for sustainable agricultural intensification, income/poverty, and food security. This protocol has been divided into two linked submodules, and their sequencing is listed below:

Part I: Farm Sketch and Area Mapping of Farm Fields

Part II: Agricultural Management Survey

These activities are to be conducted after the socioeconomic household survey. **The recommended sequencing of the activities is as follows:**

1. Conduct socioeconomic household survey
2. Complete initial sketch and description of farm fields
3. Administer the agricultural management survey
4. Measure farm field areas and geographic position system (GSP) mapping

The sections of the survey are listed below, with brief descriptions of the purpose of each section:

- **Section 1** – Household roster that identifies the age and sex of the household members. This information has already been gathered in the

Household survey and should be prefilled into the Agriculture Management survey.

- **Section 2** – Lists all the fields owned and cultivated by the household. The fields are also measured and located by the interviewer after the interview.
- **Section 3** – Explores detailed information on the use of fields during the current and previous season.
- **Section 4** – Identifies the seeds used, crops planted and harvested during the seasons.
- **Section 5** – Collects information on quantity and value of crops sold, post-harvest losses and crop residue use.
- **Section 6** – Lists permanent crops on the field.
- **Section 7** – Collects information on the quantity and value of the permanent crops sold.
- **Section 9** – Provides information on the farmers' out grower and contract farming agreements for annual crops.
- **Section 10A** – Lists the animals owned and the caretaking practices used during the past twelve months.

- **Section 10B** – Collects information on the quantity and value of livestock by products.
- **Section 10** – Lists fields or areas used for livestock grazing produced by the household during the past 12 months.
- **Section 11** – Lists farm implements owned or used by the household during the past 12 months.
- **Section 12** – Provides information about the household's interaction with government and non-government extension workers.

1.1 Definitions of Key Technical Terms

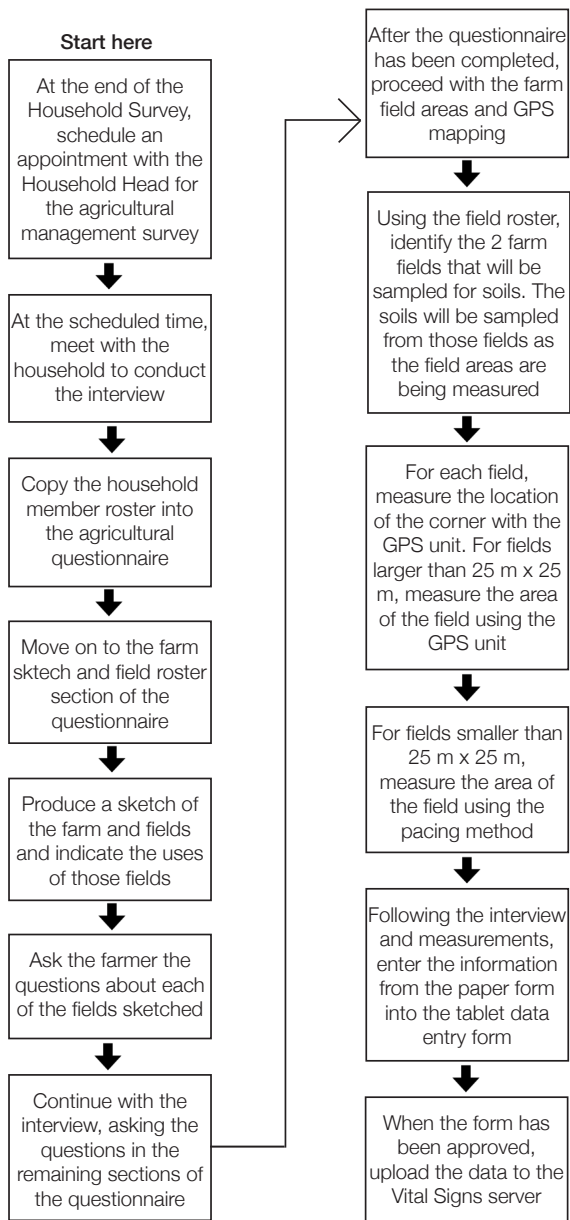
The following terms are used in this questionnaire and Vital Signs research:

LSMS: Living Standards Measurement Survey

Field: an area of any size and shape that is managed in the same way. The areas are defined by the boundaries of a cultivated patch of land (including annual crops, agroforestry and fallows, tree plantations, pastures and areas needed for harvesting wood, food collecting, and hunting).

Permanent Crops: Permanent crops are crops that grow continuously for several (more than 2 years) and can be harvested many times. They do not need to be planted every year like annual crops. Cassava is considered an

**Workflow 1:
Agricultural Management
Intensity Survey Protocol**



annual crop because it can be harvested every 6 to 12 months depending on the variety. Examples of common permanent crops are pineapples, coconut, sugar cane, cashew nuts, and pigeon peas.

1.2 Standard Conventions Used in this Document

The following conventions are used throughout this document:

- The use of bold in the text indicates a critical point. **Please pay special attention to terms, sentences and paragraphs marked in bold** as they are key to the understanding of the protocol.

2. ROLES AND RESPONSIBILITIES

The following section identifies the responsibilities of the Vital Signs team and enumerators conducting this household research.

As in any other kind of work, unforeseen obstacles may develop during implementation of the research. To address these problems, it is important that the supervisor remain in clear and frequent communication with the head office of Vital Signs and the Africa Field Director.

Role	Responsibility
Enumerators	<ul style="list-style-type: none"> ● Conduct interviews and complete household surveys ● Measure farm fields ● See additional responsibilities below on page 11.
Technical Manager	<ul style="list-style-type: none"> ● Supervises teams ● Ensures equipment is well-managed and team is safe ● Ensures data are uploaded to the VS server daily (or weekly if internet access is limited) ● Ensure back-ups and data entry sheets are properly archived
Country Director	<ul style="list-style-type: none"> ● Supports team with a complete understanding of the protocol manual ● Trains technicians ● Leads technicians in fieldwork and assists with measurements as required
Africa Field Director	<ul style="list-style-type: none"> ● Helps train technicians and ensure consistency of protocol implementation across Vital Signs countries ● Reviews data when uploaded ● Approves protocol updates and sends out update notifications to

	field teams
Protocol Manager	<ul style="list-style-type: none"> ● Receives and archives comments about the protocol from the field team ● Updates and re-circulates the protocol

3. EQUIPMENT LIST

The following equipment is required to carry out the activities described in this manual. Before traveling to the field, **use this list to ensure you have all the equipment needed for the day.**

If a tablet is being used to record data, at least one on-site backup laptop and, preferably, at least one off-site backup should be made at the end of each day.

Interviewers and supervisors should ensure that the tools are cared for, as they cannot be obtained easily and there won't be extra tools issued for those that are destroyed.

Supervisors will check to see that the Agriculture Management survey form has been prefilled with the HH ids, GPS locations and other information from the completed HH surveys.

Each interviewer should have the following on their person:

For the Agricultural Questionnaire and Farm Field Sketch:

- Identity card
- Letter of introduction
- Instructional book/manual (for interviewer and for questionnaire)
- Paper Questionnaire, prefilled with information from the Household Questionnaire
- Pencil, rubber eraser, and sharpener
- Writing board and notebook
- Tablet with form downloaded

For Measuring Farm Field and Farm Field Soils

- First aid kit
- Rain boots and raincoat
- GPS unit
- Sketch sheets for farm mapping
- Compass
- Field notebook
- Soil probes or auger

4. COMPLETING THE AGRICULTURAL QUESTIONNAIRE

This module is **administered to farming households following the main household survey**. The following are your responsibilities as an interviewer:

1. You are responsible for identifying and visiting sampled households, administering the survey including the measurement of the area of household's agricultural fields.
2. You must talk to the head of the household or another household member who is above 18 years for every sampled household, explaining the objectives of your work and making an appointment for an interview.
3. Arrange a reasonable time for interviewing residents of the households selected.
4. After completing the interview, thoroughly check the questionnaire to ensure you have not made any mistakes/errors before leaving the interviewed household. For GPS plot measurements, make sure that all the plots are measured and fill in the GPS measurement questions in Section 2. If you think a plot is too far to measure, you must receive permission from your supervisor not to measure it.
5. You must maintain frequent communication with your supervisor for assistance as well as for inspection of your work.

6. Where necessary you will be required to answer some queries raised by your supervisor/staff from Vital Signs Team Leader or Africa Field Director. This is meant to ensure the efficiency of your work.
7. You must submit completed questionnaires to your field supervisor immediately when you have completed them or at the end of the workday.
8. At the end of the workweek, take time to enter the data from the surveys into the forms on the tablet. Ensure that the supervisor checks the data entered on the tablet on the form before it is submitted to the server.

4.1 Section 1: Household Member Roster

Copy all the relevant information on the HH members from the household questionnaire to the Agriculture Management survey Section 1. **It is important to make sure that every member of the household's IDs are identical in both questionnaires.**

In Question 4, you should indicate on the household roster which household member is the respondent for this questionnaire. If there is more than one respondent answering, mark multiple respondents in this section.

4.2 Section 2: Farm Sketch and Field Roster

This section outlines how to identify and map all the farm fields of a household.

Determining the number and types of fields the farmer uses can be challenging. For that reason it is essential for the enumerator to engage the farmer in the sketch by either walking to the different farm fields if they are close by or just discussing the sketch and individual fields in detail with the farmer if the fields are far. The sketch can be verified later during the field mapping and area measurement exercise that follows the survey. This activity helps to reveal the farm agricultural enterprises and how they are distributed within the farm and landscape. It is necessary for focusing the survey questions on agricultural management practices to specific farm fields and crops.

For the purposes of this project, a field is defined and illustrated below:

Field: an area of any size and shape that is managed in the same way. The areas are defined by the boundaries of a cultivated patch of land (including annual crops, agroforestry and fallows, tree plantations, pastures and areas needed for harvesting wood, food collecting, and hunting). A parcel of land is usually considered a contiguous piece of land; it can be divided into several fields.

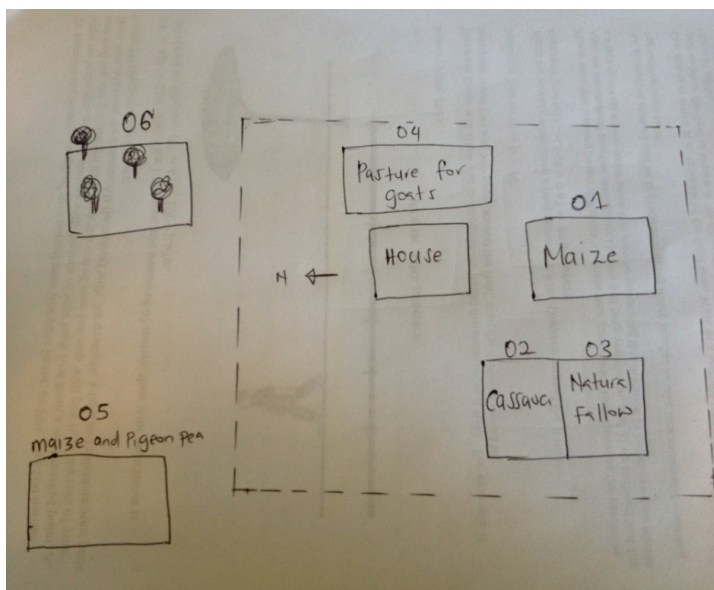
What is a Field?

The illustration below provides examples of different types of fields on a farm.

Field 1: A continuous piece of land where only maize is grown.

Field 2 & 3: Two different crops are grown on one parcel of land. This is considered to be two farm fields. Cassava is grown in a field next to a field that is currently left fallow.

Field 4: Pasture land for goats.



Field 5: The household cultivates a patch of land outside the farm area and intercroops maize and pigeon pea. Intercropped areas are considered to be on the same field.

Field 6: Fruit trees are grown on land that the household owns or operates apart from the main farmland.

What is the minimum size for a field?

In rural areas the idea of a field is usually clear. However, trees and home gardens pose possible confusion. Most households will also grow crops and often trees around the house (homegarden) which in some cases, should also be counted as a field. Use the following rules when deciding whether to count these as a field:

What was planted	Minimum quantity for a field
Fruit trees	4 trees clustered within 10 square meters
Horticultural crops: vegetables such as tomatoes, carrots, cabbage, spinach, etc.	4 square meters

Source: NBOS 2012.

The farm sketch and mapping activity is conducted in three steps. The first two steps are done together during the interview, and the third step is done separately after the interview has been completed:

1. **Produce a sketch of the farm and fields** and indicate the uses of those fields.
2. **Ask the farmer questions about each of the fields** on the main use of the field, primary crops, estimated area, and distance from the home.
3. **After the interview is finished, measure the location and area of each of the fields** using the

GPS unit (for fields smaller than 25 m x 25 m measure area using the Pacing Method).

4.2.1 Farm and Field Sketch

A form is provided for the farmer and enumerator to sketch the farm and identify all farm fields used by the household **Farm Sketch entry form, Question 1**.

A set of questions listed in the next section and provided in the survey under **Section 2 Field Roster** is to be used in sketching the farm and fields and obtaining the information needed regarding the primary land use and the primary crops for each of the fields.

On the sketch, make sure you show the location of each field relative to the home and other fields of the household (including fields within and outside the main farm area).

Also, include the following in the sketch:

- **Orientation of the map** (North, East, South and West) by using the compass and indicating the direction of North (N).
- **Distance from the farmhouse.**

4.2.2 Questions about Farm Fields: Primary Land Use and Crops

The following set of questions provided in **Section 2 Field Roster** is to be used in sketching the farm and fields and

obtaining the information needed regarding the primary land use and the primary crops for each of the fields.

Question 1: *Did you or anyone in this household own or cultivate any fields in the Long Rainy season 2013/Major Cropping Season 2013?*

If yes, continue with table A.

Table A: List all fields being cultivated (including crops and trees) or fields for livestock grazing or fuel wood or other resource gathering (including hunting and gathering fruits and nuts) by the household. This includes all fields owned or not owned by the household (rented or farmed without rent).

Question 2a: *Field Name*

All fields should be given names that are clearly understood and are useful for discussion with the farmer in the agricultural survey and field mapping.

Question 2b1: *What was the use of this field during the Long Rainy season of 2013/Major Cropping Season of 2013?*

Question 2b2: *What was the main crop cultivated on this plot during the Long Rainy Season of 2013/Major Cropping Season of 2013?*

Question 2c: *What is the use of this field during the previous Short Rainy Season/Minor Cropping Season??*

Question 2d1: *What was the main crop cultivated on this plot during the previous Short Rainy Season/Minor Cropping Season??*

Question 3: *Area (Acre) Farmer's Estimate*

Ask the farmer to estimate the size of the fields in acres. Later, you will measure all the fields from the farming area with GPS or pacing method, but this question should be asked first so that the measurement does not influence the farmer's answer.

Question 4: **Please see Section 4.14 on page 35 for the full section on farm field location and area measurements. This is performed at the end of the interview when the questionnaire is complete, and questions should be filled in then.**

Question 5: *Farm Sketch*

Please indicate "north" direction on the map of any fields owned or cultivated during the Long Rainy season 2013/Major Cropping Season 2013 and the previous short rainy season.

Question 8: *How far is this field?*

Ask the farmer or estimate the distance to the field from the house in meters or kilometers. Also estimate the time it takes to walk to the field.

4.3 Section 3: Field Details

Section 3A: Questions in this section are concerned with the Long Rainy Season 2013 / Major Cropping Season 2013 for all fields listed in Table A, Section 2.

Section 3B: Questions in this section are concerned with the season completed previously to that asked in Table A, Section 2. It is asked for all fields listed in Table A, Section 2. Questions in Section 3A and 3B are similar, but are asked in different seasons 3A which is the Long Rainy Season 2013 / Major Cropping Season 2013 and 3B is the previous Short Rainy Season/Minor Cropping Season?

Question 1: *List all fields owned or cultivated by the household in Long Rainy Season 2013 / Major Cropping Season 2013.*

These directions are for the interviewer and should not be asked again to the respondent since they were already asked. Use the list you compiled in Section 2 (Table A) to fill in the fields for this section.

Question 2: *What is the distance from [FIELD]?*

Ask the respondent the distance in kilometers from field to home, road and market. Ask them to estimate if they are unsure. **The enumerator should revisit the responses the farmer gave in Question 8 above as they fill in Question 2.**

Question 3: *How did you use this field during the Long Rainy Season 2013 / Major Cropping Season 2013?*

The purpose of this question is to know how the field was used during the major cropping season. For example, the field could have been cultivated, rented, given out for free, etc.

The response “given out” means the respondent’s household allowed someone outside the household to use this field for free, and received none of the crops from this land and no other payments (in cash or kind) from the person who cultivated it. If payments were received in cash or in kind, you should use the code for “rented out” instead. If 3 = ‘rented’ go to question 4, if 3 ≠ rented out, go to 5.

Question 4: *What was the total income from renting out this field during the Long Rainy Season 2013 / Major Cropping Season 2013?*

Ask the respondent the total income earned from renting that field. This should include cash payments, the estimated cash value of in-kind payments, as well as “future/planned payments,” or the cash value of payments they expect from their tenants even if those tenants have not yet paid.

Question 5: *What was the main crop cultivated on this field in the Long Rainy Season 2013 / Major Cropping Season 2013?*

Ask the respondent the main crop cultivated on the field during the Long Rainy Season 2013 / Major Cropping Season 2013. The main crop is the one that has covered the largest portion of the field, or the crop that the farmer

considers the most important. The codes for the crops are listed on the last page of the agricultural questionnaire. Be careful when using the code “other,” as many times things that are classified as “other” are really local names for crops on the list.

Question 6: *What is the soil quality of this field?*

The soil quality refers to the fertility of the soil. Good soils are fertile and can grow and sustain a large harvest. Bad soils are difficult to grow large harvests. Average soils rank in between good and bad soils. (Drop down menu).

Question 7: *Was there any erosion control/water harvesting facility on this field in the Long Rainy Season 2013 / Major Cropping Season 2013?*

Ask the respondent if they used any erosion control/water harvesting facility on this field in the major cropping season 2013. The list of specific methods is given in the next question. If the respondent does not understand what you mean by “erosion control / water harvesting facility,” you can read them the list from the next question to see if they use any of the individual methods.

Question 8: *What type of erosion control or water harvesting facility was used on this field?*

You may list up to two methods in order of importance. The definitions for the methods are listed below, and there are photos in the annex.

Question 9: *Was this field irrigated in the Long Rainy Season 2013 / Major Cropping Season 2013?*

This question includes both mechanized and manual irrigation.

Definition of Soil Conservation Options for Question 8

Terraces: Terraces are similar to steps cut into the side of a sloped field to provide flat growing areas and prevent water run-off.

Erosion Control Bunds: Bunds are built up by farmers and are usually made out of stone or soil, to prevent run-off on steep slopes.

Gabions or Sandbags: Gabions are structures, usually made of metal mesh, that are filled with earth and/or stone to build walls on slopes. Sandbags can similarly be used to prevent water or soil from running off the land.

Vetiver Grass: Vetiver grass may be established as permanent vegetative barriers in the bed of the gully to slow runoff. They also trap sediment and organic matter, which enhances regeneration of vegetation and terrace formation within the gully.

Tree Belts: Tree belts are line of trees planted to either break the wind or to stabilize erosion prone areas.

Water Harvest Bunds: Water harvest bunds are built out of earth or stone to channel water into collection areas.

Drainage Ditches: Drainage ditches are ditches built to collect runoff water. They are very commonly found on roadsides.

Dam: A dam stops or slows the course of a river or stream to allow water to collect into a lake or pond.

Question 10: *What was the type of irrigation?*

Ask the respondent what type of irrigation was used on the field, see drop down menu.

- Sprinkler irrigation is a way of applying irrigation that is similar to natural rainfall.
- Micro (drip) irrigation includes a number of technologies, where water is applied only to part of the field surface.

Vital Signs Agricultural Survey Protocol 2.0

- Watering can or bucket irrigation is the simplest form of overhead irrigation, and is widely used by smallholder farmers.
- Flooding
- Water hose

Question 11: *What was the source of water?*

Ask about the source of water for irrigation, and use the appropriate from the drop down menu.

Question 12: *What was the total value of irrigation services purchased or rented?*

If the respondent had to purchase or barter in-kind for any irrigation services in the long rainy season, please indicate how much they spent. If they had to barter or trade, please indicate how much the respondent would value their traded goods and/or services.

Question 13: *What would the value of this field be if it were sold today in local currency?*

Ask the respondent on the worth value of the field if it was to be sold today. In this question the value should not include the temporary crops recently grown in that field. However the value of fruit trees and permanent crops should be included. Explain this distinction to the respondent carefully before recording their answer. Be careful to also explain that this information will be used for

research purposes only, and that there is no government plan to buy/sell the respondent's field.

NOTE: The question of land ownership is very important. Here we would like to know how much land is owned by the household and how it was obtained. This question is crucial but also sensitive, so ask it carefully. It is sensitive because the head of the household may think that the government has strategies to confiscate his land or, alternatively, to compensate the household if they have only a small field.

Question 14: *What was the ownership status of this plot in the Long Rainy Season 2013 / Major Cropping Season 20133?*

“Owned” implies that the land cannot be taken without the household's permission. Land that is “used free of charge” might be taken back by the owner or the village leaders at some time in the future.

Question 15: *What type of title deed does your household have for this field?*

For the purpose of this research, the following title deeds are acceptable:

Options for Question 15:

Granted right of occupancy
Certificate of customary right of occupancy
Residential license
Village-government-witnessed/Purchase agreement
Local-court-certified/Purchase agreement
Inheritance letter
Letter of allocation from village government
Other government documents
Official correspondence
Utility or other bill

Question 16: *What share of output from this field did you give as rent, if any, in the Long Rainy Season 2013 / Major Cropping Season 2013?*

If the respondent farms a field that is owned by someone else, he or she may pay the owner a portion of the crops from the land. This question asks how much of the crop was given to the owner. So if the total value of the crop was 125,000 local currency, of which 35,000 local currency was paid to the owner, then the percentage is $90,000/125,000$ or 72%.

Question 17: *Did the household cultivate this plot in the Long Rainy Season 2013 / Major Cropping Season 2013?*

These are directives to the interviewer. Follow the skip codes as indicated in the questionnaire.

Organic Fertilizer

Questions 18-22 are about the use of organic fertilizer. Organic fertilizers are fertilizers from animal waste products and crop residue or compost. These questions are only asked once for each field. In some cases, there may be more than one crop on a single field. In this case, give the total amount for all crops on the field in each season. (The same rule applies to inorganic fertilizers, pesticides, herbicides, etc.)

Question 18: *Did you use any organic fertilizer from animal waste products and crop residue or compost on [FIELD] in the Long Rainy Season 2013 / Major Cropping Season 2013?*

Ask the respondent if they applied organic fertilizer in [FIELD] during the Long Rainy Season 2013 / Major Cropping Season 2013 or previous completed season. If fertilizer was applied to ANY crop on this field, answer yes, even if it was not applied to all crops on this field. Also ask the questions to determine if the crop residue was from the same field, a different field from the same farm, or from outside the farm boundaries.

Question 18b: *What type of organic fertilizer did you apply?*

Indicate which type of organic fertilizer was applied. If there were more than one type, indicate which type was the primary organic fertilizer applied from drop down menu.

Question 18c: *What was the source of the crop residue/compost used on this field?*

See drop down menu for option.

Question 19: *What was the quantity of organic fertilizer used?*

Ask the respondent the amount of organic fertilizer applied. Write weight in kilograms – converting from traditional or non-standard units as necessary.

Question 20: *Was any of this organic fertilizer purchased?*

In many cases, the farmer will use organic fertilizer produced by his animals on his farm, or receive manure from neighboring farms free of charge. This question asks if he or she purchased any from a person or commercial provider.

Question 21: *How much was purchased?*

Ask the respondent the amount of organic fertilizer purchased. Write weight in kilograms – converting from traditional or non-standard units as necessary.

Question 22: *What was the total value of organic fertilizer purchased?*

Ask the respondent the worth value of the organic fertilizer purchased and record the value in local currency.

Inorganic Fertilizer

Question 23-28 are concerned with the use of inorganic fertilizers such as DAP (Diammonium phosphate, urea, etc.)

Question 23: *Did you use any inorganic fertilizer on [FIELD] in the Long Rainy Season 2013 / Major Cropping Season 2013?*

Ask the respondent if they used inorganic fertilizer on the (FIELD) during the Long Rainy Season 2013 / Major Cropping Season 2013. For topdressing, ask if they used any other type of inorganic fertilizer beyond that which they listed in question 23.

Question 24: *What type of inorganic fertilizer did you use?*

Ask the respondent the type of inorganic fertilizer that they used, using the codes listed in the questionnaire on the tablet.

Question 25: *What quantity of this inorganic fertilizer did you use?*

Ask the respondent the amount of inorganic fertilizer purchased. Write weight in kilograms – converting from traditional or non-standard units as necessary.

Question 26: *Did you receive a voucher or certificate for any of this (fertilizer)?*

This question is aimed at measuring the percentage of the population that is participating in programs where they are provided vouchers or certificates to help pay for fertilizers.

Question 27: *What was the total value of inorganic fertilizer purchased?*

Ask for the total value of the inorganic fertilizer purchased. If the respondent used a voucher, record only the amount that the respondent actually spent, not the total value of fertilizer received.

Questions 28-32 are the second type of inorganic fertilizer therefore follow the same instruction as those from 23-28.

Pesticides or Herbicides

Questions 33-36 concern the use of pesticides or herbicides.

Question 33: *Did you use any pesticide or herbicide on [FIELD] in the Long Rainy Season 2013 / Major Cropping Season 2013?*

Ask the respondent if used pesticides/herbicides on (FIELD) during the Long Rainy Season 2013 / Major Cropping Season 2013. Pesticides are chemicals that are used to kill insects or other small animals that damage the crop or the harvest.

- Herbicides are chemicals that are used to kill weeds and other unwanted plants that grow on the field.

- Fungicides are also included in this question and are used to kill fungus that might grow on plants.

Question 34: *What type of pesticide/herbicide did you apply?*

Ask the respondent the type of pesticide/herbicides that he or she used, and use the codes in the questionnaire. If the respondent used more than one type, chose the “main” or most important type.

Question 35: *What quantity of this pesticide/herbicide did you use?*

Ask the respondent the amount of pesticide/herbicide used. If the respondent applied the herbicide/pesticide more than once, you should record the total amount of the applications taken together. Indicate the correct amount.

Question 36: *What was the total value of pesticide/herbicide purchased?*

Ask the respondent to give the total worth value of the pesticide/herbicide purchased. If the respondent purchased more pesticides/herbicide than was used, list the price of the full amount purchased. (For example, a farmer may purchase 50kg for 100,000, but only use 10kg this season. List 10kg used for question 35, but list the full price of 100,000 for question 36.)

Household Labor

This section records each individual household member’s labor on the household’s fields. You should use the codes from the household roster in the ID line to indicate about which household member you are speaking.

Question 37: *During the Long Rainy Season 2013/Major Cropping Season 2013, how many days did [NAME] spend on the following activities on this field?*

Ask the respondent if during the Long Rainy Season 2013 / Major Cropping Season 2013, how many days did (NAME) work on the four different types of activities that are listed: “land preparation and planting,” “weeding,” “ridging, fertilizing and other non-harvest activities,” and “harvesting.” For each individual in the household that participated in these activities, write his/her code from the household roster in the appropriate column, and indicate how much time was spent on the given activity for each listed household field.

37. During the most recently completed season, how many days did [NAME] spend on the following activities on this field?																			
Land preparation and planting					Weeding					Ridging, Fertilizing, Other Non-Harvest Activities					Harvesting				
ID:	ID:	ID:	ID:	ID:	ID:	ID:	ID:	ID:	ID:	ID:	ID:	ID:	ID:	ID:	ID:	ID:	ID:	ID:	ID:
01	02				01	02													
14	12				13														
	7					3													

Example: Consider a household consisting of Mr. Juma, roster ID 01, and his wife, roster ID 02. On their main field (M1), Mr. Juma worked for 10 days on land preparation and 4 days on planting, and 13 days on weeding on their main field. His wife worked for 7 days on land preparation, and 5 days on planting. In addition, his grandchild Ali (who lives in a different household) assisted them on land preparation for 14 days, 4 days for planting and 10 days for weeding. On their secondary field (M2), the wife spent 5 days preparing the land, 2 days planting and 3 days weeding. Ali assisted his grandmother with the weeding, working for 3 days with her.

NOTE: For the non-household member who worked on fields without payments (eg Ali who lives in other household but has helped his grandparents), the information should be filled in Question 38, as hired labor, even though Ali does not get paid.

Question 38: *During the Long Rainy Season 2013 / Major Cropping Season 2013, how many days did your household have hired labor for this field for [...]?*

Ask the respondent during the Long Rainy Season 2013 / Major Cropping Season 2013, how many days did the household hire a person to work in the field for the four listed activities, “land preparation and planting,” “weeding,” “ridging, fertilizing and other non-harvest activities,” and “harvesting.” This information is divided into categories, man days, woman days, child days, and total wages paid.

Vital Signs Agricultural Survey Protocol 2.0

“Man days” equals the total number of men working times the number of days they worked.

For example, on my first field (M1) suppose I hired 5 people to work on my first field only to do land preparation and planting and that I paid each of them 2,000 per day per adult. If I hired 2 men and 2 women and 1 child, and Man A worked for 3 days, Man B worked for 2 days, Woman C and her child each worked for 7 days, and Woman D worked for 1 day, then the following information should be entered. The child was not paid.

On my second field, the children of my cousins did all the land preparation and weeding. There are 6 of these children, and they each worked 4 days each on land preparation, 4 days each on planting, and 5 days each on weeding. They are the children of my cousin so I do not have to pay them, as my children will also assist his household in the fields.

HIRED LABOR								
38. During the most recently completed season, how many days did your household have hired labor for this plot for [.]?								
INCLUDE IN-KIND PAYMENTS								
	Land preparation and planting				Weeding			
	Woman Days	Man Days	Child Days	Total Wages paid	Woman Days	Man Days	Child Days	Total Wages paid
M1	8	5	7	26000	0	0	0	0
M2	8	5	7	26000	0	0	30	0

Please note that for the HIRED LABOR you must indicate the total wages that were paid to the workers.

NOTE: if a household hired equipment in addition to the people, such as a man with a plow for three days at a cost of local currency 30,000, this should not be recorded here. This information will be entered in section 11, 'Agricultural Equipment'.

4.4 Section 4: Crops by Field

In Section 3, one line is referred to one field. In Section 4, one line refers to a specific crop on a specific field. If the household grows multiple crops on the same field, they should be listed separately (for example, maize and beans in the same field will be on different lines). If the household grows the same crop in different fields (for example, cassava on two fields) these should be on different lines.

NOTE: Section 4 is about annual crops. Do NOT include fruits, trees, cassava or any other perennial crops.

In section 4A, list all crops cultivated in the Long Rainy Season 2013 / Major Cropping Season 2013. This includes all crops listed in section 2 and/or 3A. For each field, list all crops grown in Long Rainy Season 2013 / Major Cropping Season 2013.

In section 4B, list all crops cultivated in the relevant previous completed season. This includes all crops listed in section 2. For each field, list all crops grown in previous completed season on a separate line.

Column one: List all fields and their respective ID codes (see section of table).

Column two: List of all crops cultivated during the Long Rainy Season 2013 / Major Cropping Season 2013 or the previously completed season.

Question 1: *Was [crop] planted in the entire area of field?*

Question 2: *Approximately, how much of the field was planted with [CROP]?*

Ask what percentage of the field was planted with (crop).

Question 3: *Was cultivation intercropped?*

Intercropped means that two or more types of crops were grown intermixed together in a single field.

Question 4: *What was the reason for this intercropping?*

Households have different reasons for intercropping. Use the codes listed in the drop down menu of the questionnaire.

Question 5: *What was the planting date of [CROP]?*

Indicate the date of the planting: month and year.

Harvest

Question 6: *Did you harvest any [CROP] on this field in the Long Rainy Season / Major Cropping Season of 2013?*

This question asks if any crop was harvested during the Long Rainy Season 2013 / Major Cropping Season 2013. Record yes even if the entire crop was destroyed after the harvest.

Question 7: *What was the area harvested in the Long Rainy Season 2013/Major Cropping Season 2013?*

Ask the area (acres) of the field harvested during Long Rainy Season 2013 / Major Cropping Season 2013. Verify that this area is not greater than the total area of the field listed in section 2. If the household suffers losses, the area harvested may be smaller than the area planted.

Question 8: *What was the quantity [CROP] harvested?*

This question asks the respondent for the quantity harvested from the individual crop on the individual field. Make sure to include both 1) the amount that has been harvested already and 2) the estimated amount that is left to harvest.

It is very important that this measure be expressed in kilograms. This means you must convert all local crop measurement units into kilograms before leaving the landscape.

Question 9: *What is the estimated value of the harvested crop in local currency?*

Ask the respondent to estimate the value of the harvest recorded in question 15 at the time of that harvest. They

should answer this question even if they did NOT sell any of this crop.

Seeds

Question 10: *Did you purchase any seed for [CROP] in the Long Rainy Season 2013 / Major Cropping Season 2013?*

Question 11: *What was the total value of seeds purchased in local currency?*

Ask for the total value of the seeds purchased. If the respondent used a voucher, record only the amount that the respondent actually spent, not the total value of seeds received.

Question 12: *What type of seed did you purchase?*

4.5 Section 5: Crop Production and Sales

Section 5A refers to crops cultivated during the Long Rainy Season 2013 / Major Cropping Season 2013, and section 5B refers to crop cultivated during the previous completed season. All the crops listed in previous sections should also appear in this section.

No new crops should appear here. This will be verified by the data entry program and a callback must be done in the event that this is done incorrectly.

Sales

Question 1: *Did you sell any of the [CROP] produced in the Long Rainy Season 2013 / Major Cropping Season 2013?*

Indicate if the respondent sold any of the [CROP] produced during the Long Rainy Season 2013 / Major Cropping Season 2013. [If yes, code 1 and continue to the next question. If no, code 2 and skip to Question 5.]

Question 2: *What was the quantity sold?*

Indicate the amount sold in kilograms. If the respondent gives a measure in local units, this measure must be converted into kilograms before you leave the enumeration area. You should verify that the amount sold of each crop is not greater than the amount harvested on all fields.

Question 3: *What was the total value of sales?*

Write the amount of money received from sales in local currency.

Question 4: *During which month did you sell most of the [CROP]?*

Ask the respondent in what month most of the sales occurred. This may be easy (such as with a crop that is sold all at once), or very difficult (such as with tomatoes which can be sold many times throughout the year). You

should probe to capture the best information from the respondent.

Losses

Question 5: *Was any portion of the production of [crop] lost post-harvest to rotting, insects, rodents, theft, etc?*

Some part of the crop may be lost after the harvest but before the crops can be sold, possibly due to rotting, or to being eaten by insects or rats, or by theft. This question does not include losses before the harvest, such as from insects or birds while still in the field.

Question 6: *What was the reason for the loss?*

If more than one reason exists, probe to find out which reason was the most important. Use the codes/drop down menu listed in the questionnaire. If the respondent gives a reason that was not listed on the questionnaire, code 5 "OTHER" and write the reason in the notes column.

Question 7: *Out of ten units of [CROP], how many were lost?*

This response should be an integer between 1 and 10. For example, if a maize farmer lost 5 out of every 10 ears of maize (or 50%) to birds before they could be sold, then 5 should be the response. If the farmer lost 3 out of 10 (or 30%), 3 should be the response. This response will be automatically rounded off to the nearest integer if a person's response is 25% - to 3.

Crop Residue

Question 8: *What was done with the residue from this crop?*

This question asks what was done with the residue after the crop was harvested (the stalk, inedible leaves, etc.). This is in the drop down menu of the questionnaire.

Question 9: *What was the quantity sold?*

Record the quantity sold in kilograms – converting from local units if necessary.

Question 10: *What was the total value of the sales?*

Record this value in local currency. If there were multiple sales, record the total amount.

4.6 Section 6: Permanent Crops by Field

Section 6 is very similar to section 4. One line refers to a specific crop on a specific field. If the household grows multiple permanent crops on the same field, they should be listed separately. If the household grows the same permanent crop on different fields (for example, cassava on two fields) these should be on different lines.

6A: Fruit Trees

This section refers to fruit trees cultivated (i.e. managed or harvested) within last 12 months in the respective field. List all fruit trees on the household's land. Common examples of fruit trees are passion fruit, banana, mango,

papaya, and oranges. The complete list of codes for fruit trees are listed on the last page of the questionnaire (in drop down menu of tablet). Be sure to probe carefully if the respondent gives you the name of a fruit not on this list. In many cases this is the local name for a fruit that is in fact on the list. If possible, ask to see the fruit when visiting the respondent's field to take GPS measurements, or to find this type of fruit in the local market, to try to identify its name.

Column 1: Write the ID code of the field as indicated in the sketch, example M1, M2, M3 etc.

Column 2: Write the ID code of the crop grown in the field listed in the first column or using the drop down menu on the tablet.

Question 1: *Please list all fields cultivated during the last 12 months. For each field, list all fruits cultivated.*

Ask the respondent to list all the types of fruit trees they have on their fields. Remember, the field definition for fruit trees at 4 trees clustered in 10 square meters.

Question 2: *How many of these plants/trees are on this field?*

Write the number of trees present in the field listed.

Question 3: *Was cultivation intercropped during the Long Rainy Season 2013 / Major Cropping Season 2013?*

Ask if there is a field in which intercropped were done in the last period of 12 months. Verify that the answers are consistent with what you have previously recorded in the questionnaire. For any field with more than one crop listed, the answer should be yes.

Question 4: *What was the total amount of [FRUIT] harvested in the past 12 months?*

Record the fruit harvest in kilograms – converting from local units if necessary.

Question 4a: *What is the estimated value of the total amount of [FRUIT] harvested in the past 12 months?*

Ask the respondent to estimate the value of the harvest recorded in Question 4. They should answer this question even if they did NOT sell any of this fruit.

6B: Permanent Crops

All of the questions in 6B are identical to 6A.

4.7 Section 7: Permanent Crops by Crop

NOTE: All permanent and fruit crops that are listed in section 6 should appear in section 7. No permanent or fruit crops should be listed in section 7 that did not appear in section 6. This will be verified by the data entry program and a callback must be done in the event that this is done incorrectly.

Question 1: *List all fruit trees/permanent crops as reported in Section 6A.*

This question should not be asked to the respondent. Copy the list from section 6. No crops that do not appear in section 6 should appear in section 7.

Question 2: *Did you sell any of the [FRUIT] collected?*

Indicate if the respondent sold any of the fruit harvest. Code 1 for yes and continue with the next question. Code 2, no, skip to next section.

Question 3: *What was the total quantity of [FRUIT/CROP] sold?*

Ask respondent the amount of [FRUIT] harvested and sold. Record the amount in kilograms, not in local units.

Question 4: *What was the total value of [FRUIT] sold in local currency?*

Write the total value in local currency of [FRUIT] sold. In some cases the respondent may have sold the crop in small amounts over a long period of time. In this case he or she should estimate the total amount sold over the last 12 months and record this amount in local currency.

7B: Permanent Crops

All of the questions in 7B are identical to 7A.

4.8 Section 9: Processed Agricultural Products and Agricultural By-Products

This section asks about processed agricultural products and agricultural by-products. Note that some of the

products appear twice, once under “Agricultural Products” and once under “Agricultural By-Products.” **If the good was produced purposely for sale this is an agricultural product.** For example, if the household pounds maize grain grown on the farm into flour and sells the flour, this would be an agriculture product. **If the good is produced as a consequence of processing another good, but is sold anyway, this is an agricultural by-product.** An example of an agricultural by-product would be if the husks from the maize production are sold as animal fodder.

It is important to distinguish between the two products. If the household produced dried apple slices for sale, but before the apple slices can be dried all the juice must be squeezed out, and this juice is then sold in the market, it is an agricultural by-product. The important thing in making the distinction is the primary goal of the production.

Question 1: *Did the household process any of the products harvested on the farm in the last 12 months?*

Probe to make sure that the respondent understands all the possible agricultural products and by-products. If the answer is yes, write code 1 and ask next question, and if the answer is no write code 2 skip to next section.

Question 2: *Crop name.*

Write the name of the original crop from which the product or by-product comes. Indicate the appropriate

crop code, and then mark if a product or by-products is produced.

Question 3: *What is the by-product produced from this crop?*

Indicate what product or by-product is produced, using the codes listed on the questionnaire – being careful to distinguish between agricultural products and by-products for items that appear on both lists. If the respondent lists a product that does not appear on the list on the questionnaire, decide if the item is a product or by-product and chose the appropriate “OTHER” code. Write the name of the item in words.

Question 4: *What is the quantity produced in the last 12 months?*

Ask the respondent the amount of product or by-product produced within 12 months, write weight in kilogram/liter. Be careful to convert the amount into either kilograms or liters. For example, if the respondent produced a ton of fodder, indicate 1000 kilograms.

Question 7: *How much [CROP] did you use as input for the sold [BY-PRODUCT]?*

Ask the respondent the amount of [CROP] that was used as inputs for the [BY-PRODUCT]. For example, if 60 kilograms of maize grain was used to produce 20 kilograms of flour, indicate the amount of the input, 60 in this case, on the questionnaire.

Question 5: *Was any [BY-PRODUCT] sold?*

Ask the respondent if any amount of the by-products produced in the past 12 months were sold. If the answer is yes, continue to Question 6, if the answer is no skip to Question 10.

Question 6: *How much was sold?*

Ask the amount of by products sold by the respondent. Write the amount and the code of the unit in kilogram or liter within 12 past months. Be careful to convert the amount into either kilograms or liters.

For example, if the respondent sold a ton of fodder, indicate 1000 kilograms.

Question 8: *What was the total sale in local currency?*

Ask the respondent for the amount of the sales of each by-product, and write the amount in local currency.

Question 8a: *Did you give out [BY-PRODUCT] for in-kind/barter?*

Question 8b: *How much was given away?*

Question 9: *Did you incur any other expenses such as labor costs, additional inputs etc. in the production of [BY-PRODUCT]?*

This question relates to other costs used in production of those products/by products. For example, wages for

workers, fuel for machines, etc. If the answer is yes continue to Question 10, if the answer is no go to the next crop.

Question 10: *What were the total costs of these additional expenses?*

Ask the respondent for the amount spent on the additional expenses listed in Question 9, and record this amount in local currency.

4.9 Section 10A: Livestock

Question 1: *Did this household own any animals in the last 12 months (cow, goat, chicken etc)?*

Ask the respondent if anyone in the household has kept any livestock in the past 12 months. If the answer is yes write code 1 then go to Question 2. If the answer is no, write code 2 then go to next section.

Question 2: *How many [ANIMAL] does this household currently own?*

Sales

Question 3: *Have you sold any [ANIMAL] alive in the last 12 months?*

This question refers to the sale of any live [ANIMAL] in the past 12 months. Do not include animals that had been slaughtered prior to sale in this question. If the answer is

yes, code 1 and continue to question 5. If the answer is no, code 2 and skip to Question 4.

Question 4: *How many [ANIMAL] have you sold alive in the past 12 months?*

Record the number of live [ANIMAL] that have been sold in the last 12 months.

Question 5: *What was the total value of sales?*

Record the total value of live animal sales in the last 12 months for each type of animal sold.

Slaughter

Question 6: *Did you slaughter any [ANIMAL] in the past 12 months?*

This question refers to the slaughter of each type of animal on the list – even those that may appear unusual, like dogs.

Question 7: *How many [ANIMAL] did you slaughter in the past 12 months?*

Indicate the number of slaughtered animals by the household within the last 12 months.

Question 8: *How many of the [ANIMAL] slaughtered did you sell?*

For each type of animal that was slaughtered, indicate the number of animals that were sold. This question refers only to animals that were slaughtered for sale only. Do not include those that were slaughtered for other purposes (such as funerals, vocations, etc.) If none of the animals slaughtered were sold, indicate 0, and skip to Question 10.

Question 9: *What was the total value of the sold slaughtered [ANIMAL]?*

Record the total value of sales for each type of animal sold in local currency.

Labor

Question 10: *In principle, who is responsible for keeping [ANIMAL]?*

Ask the respondent the roster number of household members primarily responsible for the keeping of each type of animal.

Question 11: *Did you hire any labor to help you with the [ANIMAL] in the last 12 months?*

This question asks the respondent if they hired any labor from outside the household to help with the [ANIMAL] in the last 12 months. Include both those laborers that were paid in cash and those paid with in-kind payments. If any labor was hired, code 1 and continue to the next question. If no labor was hired, code 2 and skip to the next section.

Question 12: *What was the total cost of this labor for [ANIMAL] in the past 12 months?*

Record the amount paid to labor from outside the household that assisted with each type of animal. This amount should be recorded in local currency. Therefore the value of in-kind payments will have to be estimated in local currency.

4.10 Section 10B: Livestock By-Products

This section asks about products that are produced by the raising of different types of animals. Be sure to make the distinction between traditional and improved cow milk, and traditional and improved chicken eggs. As there are many different produces that can be produced, and these things may vary by region, many items might not be on the list. Rows 10 to 12 are available to record products that do not appear on the list. Write the name in words and continue with the section. There is also a section on the bottom of the page that asks about services that can be provided by certain types of animal goods

Question 1: *Did your household produce any [PRODUCT] in the last 12 months?*

Ask respondent if the household produced each of the items on the list, making sure to distinguish between improved and traditional varieties. Additional products not appearing on the list should be added in the 'other category.

Question 1a: *How much of the [PRODUCT] did you produce in the past 12 months?*

This question estimates the production of [PRODUCT]. These measurement should be in standard international units (such as liters or kilograms), not in local units. Note also that there is a unit labeled “pieces.” This should be used only where appropriate. For example, a household can produce 6 skins (or “pieces”), but it cannot produce 6 pieces of honey or milk. Liquid measures should always be recorded in liters.

Question 1b: *What was the total value of total [PRODUCT] produced in the last 12 months?*

Ask the respondent to estimate the value of the products recorded in question 1a. They should answer this question even if they did NOT sell any of these products.

Question 1c: *How much of the [PRODUCT] produced did you sell in the last 12 months?*

This question estimates the total sales of [PRODUCT] in the last 12 months. These measurements should be in standard international units (such as liters or kilograms), not in local units. Note also that there is a unit labeled “pieces.” This should be used only where appropriate. For example, a household can sell 6 skins (or “pieces”), but it cannot sell 6 pieces of honey or milk. Liquid measures should always be recorded in liters.

Question 2: *What was the total value of sales of [PRODUCT] in the last 12 months?*

Ask the respondent the total value of sales of each [PRODUCT] in the last 12 months. This value should be recorded in shillings.

Question 3: *Who in your household decided what to do with these earnings?*

This question asks the respondent who in the household makes the decisions related to the sales of this animal. You should use the codes listed in the household roster. Some household spending decisions are made as a joint decision from the head and spouse (therefore you should use code 01 and 02), some decisions are made by the head only (01) or the spouse only (02), or by another household member. Use the roster codes as appropriate.

4.11 Section 10C: Livestock By Field

Question 1a: *Did livestock graze on this field during the long rainy season/major cropping season 2013?*

If the answer is yes, please proceed to the next question if 'no' proceed to the next section. Please make sure the respondent lists the field that livestock grazed on from the list in section 2,3,4 and any additional fields. Some field may have been grazed after the harvest, please indicate this.

Question 2: *Indicate the animals that were grazed on each field grazing in the long rainy season/major cropping season 2013?*

This question is to distinguish between fields that are mainly for grazing and those that livestock graze on occasionally (either during fallow or when crops are out of season).

Question 3: *When do they graze on the field?*

Please use the coding given.

4.12 Section 11: Farm Implements and Machinery

Question 1: *How many [ITEM] does the household own?*

Indicate how many of each [ITEM] the household owns. If the household does not own any of the item, code 0 and skip to Question 3.

Question 6: *How many [ITEM] did the household rent or borrow in the last agricultural season?*

Record the number of items that the household rented or borrowed in the last agricultural season.

Question 7: *How much did your household pay to rent or borrow [ITEM] last agricultural season?*

Ask for the amount of money that was spent for hiring the (equipment) in the last agricultural season. If the respondent made in-kind payments for the use of this equipment, estimate value of these payments and record the total in local currency.

4.13 Section 12: Extension

Question 1: *Did you receive advice for your agricultural/livestock activities from any of the following sources in the past 12 months?*

The question relates only to advice on agricultural and livestock activities. Do not include other types of training or information, such as women's health or child nutrition. If answer is yes, write code 1 and then proceed to the next question. If answer is no, write in code 2 then go to the next [SOURCE].

Question 2: *Did you receive any advice from [SOURCE] about...?*

This question asks the different types of advice that the household may receive from the [SOURCE]. If yes, code 1, and if no, code 2. For example, perhaps a household received advice about increasing maize production and marketing from the government, about raising livestock and vaccinations advice from an NGO, and no other advice. Row 1 "Government extension" should have 1's in columns A and C, and row 2 "NGO" should have 1's in columns E and F. All the other boxes in this question should have 2's. If the respondent indicates a source that is not on the list, code 5 "OTHER" and record the source in words.

Question 3: *How would you rate the advice received?*

Ask the respondent on his opinion about the quality of the advice he/she received. Use the codes indicated in the questionnaire.

Question 4: *Did you pay anything in order to receive the advice?*

Ask the respondent if they were required to pay anything for the advice they received. If yes, code 1 and continue to the next question. If no, code 2 and skip to Question 6.

Question 5: *How much did you pay?*

Ask for the amount, in local currency, that the respondent was required to pay for the extension advice that they received.

Question 6: *In the past 12 months, did anyone in your household receive any information about agricultural prices from [SOURCE]?*

This question is the same as question 2 but refers specifically to price information. If the respondent indicates a source that is not on the list, enter code 8 "OTHER" and record the source in words.

Question 7: *Did you pay anything in order to receive the advice?*

This question is the same as Question 4 but asks specifically about price information.

Question 8: *How much did you pay?*

This question is the same as Question 5 but asks specifically about price information.

Question 9: *Are you or a member of your household a member of a microfinance or savings group?*

Question 10: *Please indicate the micro finance or credit group that you received assistance from listed options.*

4.14 Taking Area Measurements of the Fields

Question 4: *GPS¹ location of a corner of the field*

This is needed for the mapping activity and to relocate fields in subsequent years. Please circle the cardinal direction if it is North circle the “N” if South circle the “S.”

To mark these locations follow these steps:

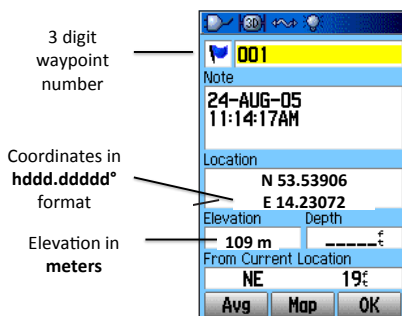
1. When you have arrived at the sampling point, turn the GPS on and let the GPS unit average the position for at least 5 minutes. Make sure that you have an open view of the sky (no obstacle above such as a tree).
2. Press and hold the MARK key until the Mark Waypoint page appears.

¹ The protocol for the Garmin GPSmap 60CSx is written for this use (Garmin 2007).

GPS Unit with the MARK Key



Mark Waypoint Page



3. Assigning a Location Name to the Waypoint

- After marking the waypoint a default three-digit code is automatically assigned to the WAYPOINT (3 spaces provided).
 - To enter a VS name/code to the waypoint, maneuver the rocker to the waypoint ID field and press enter. Type in the name/code of the VS location.
 - The Note field can be used to indicate specific remarks about the location such as water quality, farm field etc.
 - Record the information of the code, longitude, latitude of the waypoint into the appropriate Vital Sign data entry sheet.
4. To accept the waypoint with the information, highlight OK, and press ENTER.

5. Indicate on the farmer sketch which corner of the field was geo-referenced.

Question 9: *Area (GPS Measurement)*

This is the area that you record from the GPS measurement for field with dimensions greater than 25m x 25m. You should record the area in m² to two decimal places.

Taking Area Estimates of Fields

The area of all fields (with dimensions greater than 25 m x 25 m) will be measured using the Tracks Page of the GPS device. Areas of fields that are less than 25 m on a side should not be measured with a GPS but instead measured using the pacing method.

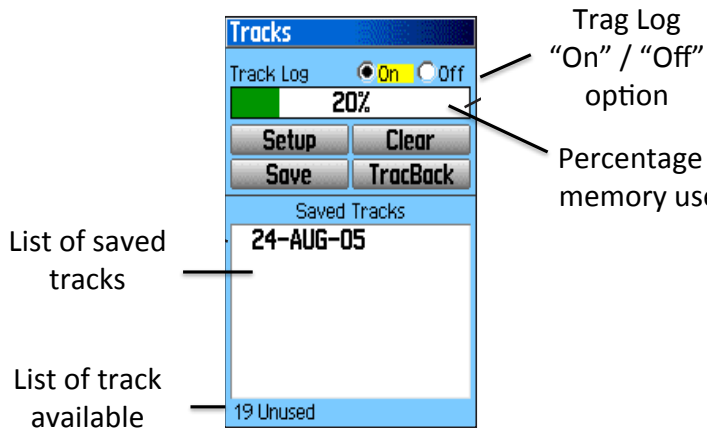
Area Estimates with a GPS – for fields larger than 25 m x 25 m²

1. Go to a corner of the field you want to measure.
2. Open the device and let the GPS unit average the position for at least 5 minutes. Make sure that you have an open view of the sky (no

² We acknowledge the use of instruction for the Garmin device GPSMAP 60CSx are from the owners manual at http://www8.garmin.com/manuals/GPSMAP60CSx_OwnersManual.pdf

obstacle above such as tree). Then press MENU twice to open the Main Menu.

Track Page.



3. Select the Tracks icon, and press ENTER to open the Tracks Page.
4. Highlight the Clear button. A confirmation message appears "Do you really want to clear the track log?" Press ENTER to clear the track log.
5. Move Track Log from "Off" to "On" and press ENTER.

Vital Signs Agricultural Survey Protocol 2.0

6. Press the MENU button once, highlight the Area calculation option and press ENTER. A Start button should appear on the bottom of the screen.
7. Press ENTER. The Start button should change to Stop button.
8. Begin walking around the edge of the field.
9. While walking the perimeter, you will see your path drawn on the screen as you walk as well as the origin of your path. You can zoom in or out with the IN or OUT button of the GPS. If either the path or the origin is missing, go back to the starting point and start over from step 1. If this fails multiple times, move on to the PACING METHOD.
10. When you reach a corner, pause and slowly count to 30. This will allow the GPS unit to take many points at the corners.
11. Continue walking around the field, stopping at each of the corners for 30 seconds.
12. Once you return to the origin corner point and are done defining the area, press ENTER to open the Calculated Area Page.
13. The area will appear on the bottom of the screen. Record this area on the appropriate survey tool in square meters. If the result is

given in another unit, scroll down and select square meters: m² .

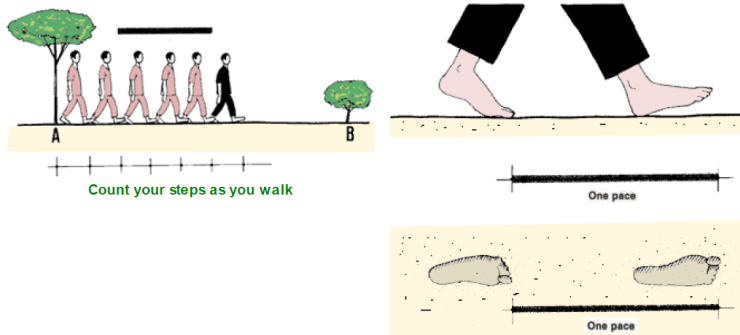
14. Press ENTER to save the new track to the Saved Tracks list on the Tracks Page.
15. At the end of each day, these files should be uploaded to a computer and saved as gpx files using an appropriate GIS software program (Mapsource, Basecamp, Google Earth)

WARNING: Because the capacity of GPS to store tracks is very limited – no more than 20 tracks can be saved simultaneously on the GPSMAP 60CSx, it is required to transfer tracks to computer every day and then clear the tracks from GPS.

If this is not done, the GPS will not be able to save and an error message will appear: “Track memory full.”

Area Estimate without a GPS: pacing method for fields less than 25 m x 25 m

You may measure distances roughly by pacing. This means you count the number of normal steps which will cover the distance between two points along a straight line. To be accurate, you should know the average length of your step when you walk normally. This length is called your normal pace. Always measure your pace from the toes of the foot behind to the toes of the foot in front.

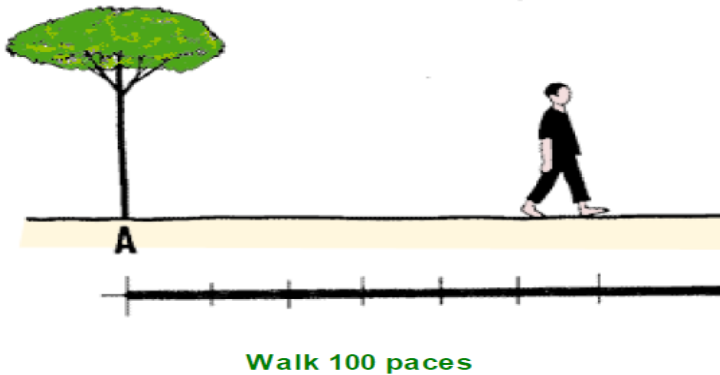


Source: FAO 2013.

To measure the average length of your normal pace (the pace factor, or PF): take 100 normal steps on horizontal ground, starting with the toes of your back foot from a well-marked point, A, and walking along a straight line. Mark the end of your last step with peg B, at the toes of your front foot. Measure the distance AB (in meters) with, for example, a tape and calculate your pace factor PF (in meters) as follows:

$$PF = AB \div 100$$

For if for 100 paces, you measured 67 meters, then your pace factor is calculated as follows: $PF = 67 \div 100 = 0.67\text{m}$.



Source: FAO. 2013.

This pace factor will allow you to calculate the paced distances around field. For example if your pace count (N) was 560 paces around the field, then the distance would be:

Distance meters= $N \times PF$.

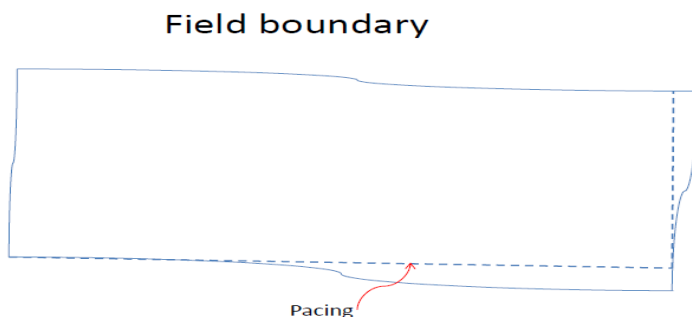
Since we already established a pace count of 0.67m.

Distance around the field is: Distance meters= $560 \times 0.67 = 375$ meters

Please note that walking longer distances to obtain your pace factor may increase the precision. Also we recommend practice walking in; 1) short and long vegetation, and 2) on inclined and flat surface to obtain a pace count since you may be measuring this distance in heterogeneous terrain.

An alternative method will be to practice walking a step needed to take one meter and counting the number steps taken.

Our aim is to arrive at an estimate of the field area. Walk in a straight line and obtain the length and width of the field as shown in the diagram. Indicate the number of steps on the data entry form or tablet.



Question 9a: *Name of area file*

Please indicate the name of the area file that you assigned the field in the GPS memory.

Question 9b: *Number of steps*

Record the number of steps from the pacing method above for fields with dimensions less than 25m x 25m. Take the length and width of the field as indicated in the pacing method above. Please ensure that the enumerators have a visual idea of fields larger than 25 x 25m.

Question 9c: *Length of one step*

Question 6: *Was the field measured?*

Question 7: *Why was the field not measured?*

Please use the coding provided in the data entry sheet to fill in this question.

5. BIBLIOGRAPHY

NBOS (National Bureau of Statistics). 2012. *Enumerator Manual*. National Panel Survey 2010-2011. Available at: http://siteresources.worldbank.org/INTLSMS/Resources/3358986-1233781970982/5800988-1286190918867/Interviewer_Manual_NPS_Y2_English_.pdf

FAO, 2013. *Measuring Horizontal Distances*. Available at: ftp://ftp.fao.org/fi/cdrom/fao_training/FAO_Training/General/x6707e/x6707e02.htm.

Garmin, 2007. *GPSMAP 60CSx with Sensors and Maps Owners Manual*. Available at: http://www8.garmin.com/manuals/GPSMAP60CSx_OwnersManual.pdf

6. APPENDICES

Appendix 1: Photos of Erosion Control/Water Harvesting Facilities

Photos of Erosion Control / Water Harvesting Facilities



Terraces



Erosion Control Bunds



Gabions



Vertiver Grass



Water Harvest Bunds



Drainage Ditches

Vital Signs Agricultural Questionnaire

Version 2 - 13 December 2013

THIS INFORMATION IS STRICTLY CONFIDENTIAL AND IS TO BE USED FOR STATISTICAL PURPOSES ONLY.

AGRICULTURAL QUESTIONNAIRE

SECTION A-1: HOUSEHOLD IDENTIFICATION

1. REGION ID:

--	--

2. DISTRICT

--	--

3. WARD (IF APPLICABLE, IF NOT '99')

--	--	--

4. LANDSCAPE

--	--	--

4a. E-PLOT ID

--	--	--

5. TOWN/VILLAGE/COMMUNITY

--	--	--	--

6. HOUSEHOLD ID :

7. NAME OF HOUSEHOLD HEAD:

.....

.....

.....

.....

.....

.....

.....

.....

MARK BOX WITH AN 'X' AND
NUMBER FORMS BELOW IF YOU
USE MORE THAN THIS SINGLE
FORM TO COLLECT
INFORMATION FROM THIS
HOUSEHOLD. IF SO, BE SURE
TO MARK IN THE SAME WAY
THE OTHER FORMS USED FOR
THIS HOUSEHOLD

--

FORM ____ OF ____ TOTAL

9. NAME OF ENUMERATOR

.....

10. ENUMERATOR CODE

--	--	--

11. Time of interview start

--

12. DATE OF INTERVIEW

/	/
---	---

(ENUMERATOR:
▶ ***NEXT PAGE***)

13. NAME OF FIELD SUPERVISOR

.....

14. FIELD SUPERVISOR ID

--	--	--

15. DATE OF QUESTIONNAIRE INSPECTION

/	/
---	---

16. NAME OF DATA ENTRY CLERK

.....

17. DATA ENTRY CLERK ID

--	--	--

18. DATE OF DATA ENTRY

/	/
---	---

1. HOUSEHOLD MEMBER ROSTER

PLEASE COPY THE FOLLOWING INFORMATION FROM THE HOUSEHOLD QUESTIONNAIRE

ID	1. NAME	2. AGE YEARS	3. SEX MALE . . . 1	4. MARK WITH 'X' THE RESPONDENT OR RESPONDENTS TO THIS QUESTIONNAIRE
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

2. FIELD ROSTER

		1. Did you or anyone in this household own or cultivate any FIELDS in the Long Rainy Season/Major Cropping Season? YES . . 1					
A. PLEASE LIST ALL FIELDS ANYONE IN YOUR HOUSEHOLD OWNED OR CULTIVATED DURING THE PREVIOUS TWO SEASONS.							
Field ID	2a Field Name	2b1 What was the use of this field during the Long Rainy Season/Major Cropping Season of 2013? CULTIVATED . 1 ▶ 2b2 RENTED OUT . 2 ▶ 2c GIVEN OUT . . 3 ▶ 2c FALLOW 4 ▶ 2c FOREST 5 ▶ 2c OTHER, SPECIFY . . 7 ▶ 2c	2b2 What was the main crop cultivated on this FIELD during the Long Rainy Season/Major Cropping Season of 2013? USE CODES	2c What is the use of this field during the previous Short Rainy Season/Minor Cropping Season? CULTIVATED . 1 ▶ 2d1 RENTED OUT . 2 ▶ 3 GIVEN OUT . . 3 ▶ 3 FALLOW 4 ▶ 3 FOREST 5 ▶ 3 OTHER, SPECIFY . . 7 ▶ 3	2d1 What was the main crop cultivated on this FIELD during the Short Rainy Season/Minor Cropping Season? USE CODES	3. AREA (ACRES) FARMER'S ESTIMATE	4. GPS LOCATION (RECORD GPS LOCATION OF A CORNER OF THE FIELD --- THIS WILL BE FILLED IN DURING THE MAPPING ACTIVITY)
M1							° ° ° °
M2							° ° ° °
M3							° ° ° °
M4							° ° ° °
M5							° ° ° °
M6							° ° ° °
M7							° ° ° °
M8							° ° ° °

CROP CODES

CEREAL/TUBERS/ROOTS:

MAIZE.....	11
PADDY.....	12
SORGHUM.....	13
BULRUSH MILLET...	14
FINGER MILLET...	15
WHEAT.....	16
BARLEY.....	17
CASSAVA.....	21
SWEET POTATOES...	22
IRISH POTATOES...	23
YAMS.....	24
COCOYAMS.....	25
ONIONS.....	26
GINGER.....	27

LEGUMES, OIL, & FRUIT:

BEANS.....	31
COWPEA.....	32
GREEN GRAM.....	33
CHICK PEAS.....	35
BAMBARA NUTS.....	36
FIELD PEAS.....	37
SUNFLOWER.....	41
SESAME.....	42
GROUNDNUTS.....	43
Soyabeans.....	47
CASTER SEED.....	48

PERMANENT CASH CROPS:

SISAL.....	53
COFFEE.....	54
TEA.....	55
COCOA.....	56
RUBBER.....	57
WATTLE.....	58
KAPOK.....	59
SUGAR CANE.....	60
CARDAMOM.....	61
TAMARIND.....	63
CINNAMON.....	64
NUTMEG.....	65
CLOVE.....	66
BLACK PEPPER.....	18
PIGEON PEA.....	34
CASSAVA.....	21
PINEAPPLE.....	75
PALM OIL.....	44
COCONUT.....	45
CASHEW NUT.....	46
GREEN TOMATO.....	300
MONKEYBREAD/BAOBAB.....	301
BAMBOO.....	302
FIREWOOD/FODDER.....	303
TIMBER.....	304
MEDICINAL PLANT.....	305
"FENCE TREE".....	306
OTHER.....	998

VEGETABLES:

CABBAGE.....	86
TOMATOES.....	87
SPINACH.....	88
CARROT.....	89
CHILIES.....	90
AMARANTHS.....	91
PUMPKINS.....	92
CUCUMBER.....	93
EGGPLANT.....	94
WATERMELON.....	95
CAULIFLOWER.....	96
OKRA.....	100
KIWI.....	101

CASH CROPS:

COTTON.....	50
TOBACCO.....	51
PYRETHRUM.....	52
JUTE.....	62
SEAWEED.....	19

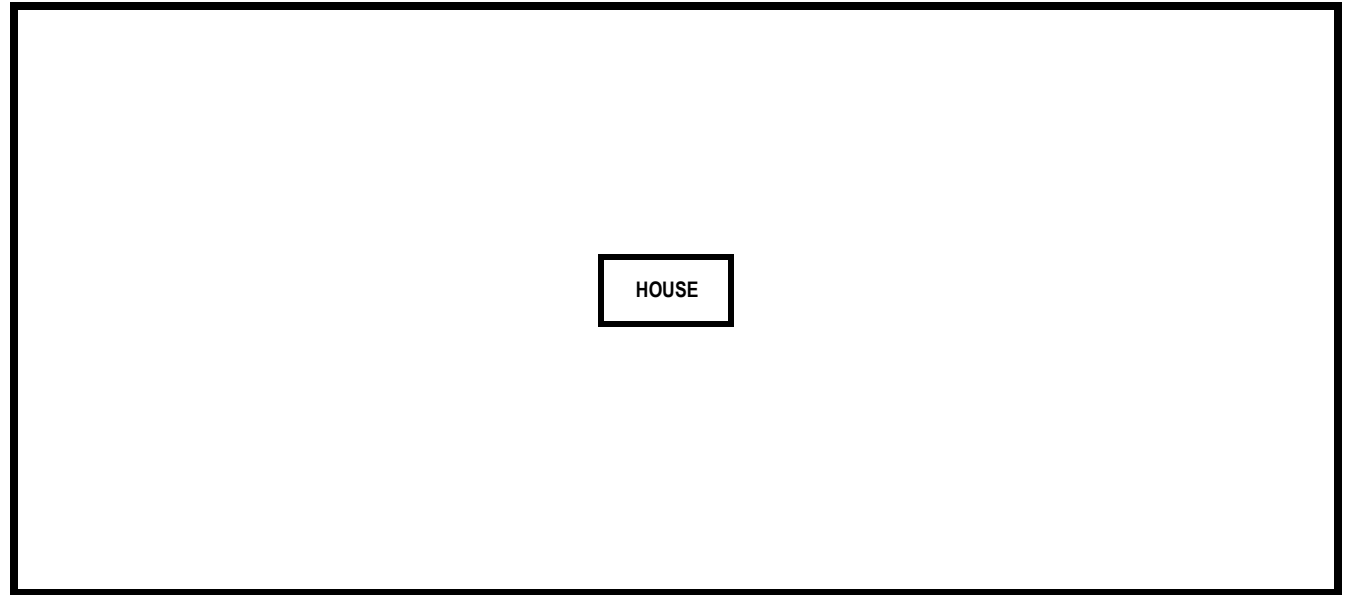
CROP CODES

FRUITS:

PASSION FRUIT....	70
BANANA.....	71
AVOCADO.....	72
MANGO.....	73
PAPAW.....	74
ORANGE.....	76
GRAPEFRUIT.....	77
GRAPES.....	78
MANDARIN.....	79
GUAVA.....	80
BLOOD FRUIT.....	81
APPLES.....	82
PEARS.....	83
PEACHES.....	84
LIME.....	851
LEMON.....	852
POMELO.....	68
JACK FRUIT.....	69
DURIAN.....	97
BILIMBI.....	98
RAMBUTAN.....	99
BREAD FRUIT.....	67
MALAY APPLE.....	38
STAR FRUIT.....	39
CUSTARD APPLE.....	200
GOD FRUIT.....	201

5. FARM SKETCH

1. PLEASE INDICATE "NORTH" DIRECTION ON THE MAP OF ANY FIELDS OWNED OR CULTIVATED DURING THE Long Rainy Season/Major Cropping Season 2013 AND THE PREVIOUS Short Rainy Season/Minor CroppingSeason



Please sketch approximate location of each FIELD w.r.t. house and mark approximate walking distance (in meters) and:
 1) the crop or use for this Long Rainy Season/Major Cropping Season 2013
 2) the crop or use of the previous Short Rainy Season/Minor CroppingSeason

CODES FOR Q9

CLEAR/SUNNY.....	1
MOSTLY CLEAR.....	2
PARTLY CLOUDY.....	3
MOSTLY CLOUDY.....	4
COMPLETELY CLOUDY.....	5
RAINY.....	6

2. FIELD ROSTER

							YES.....1	<input type="checkbox"/>
							NO.....2 ▶	
A.								
Field ID	8 How far is this field from your household? ESTIMATE THE DISTANCE IN METERS OR KILOMETERS TO THE FIELD FROM THE HOUSE/FARM OR TIME TO TRAVEL WALKING IN MINUTES DISTANCE...A TIME (WALKING OR BICYCLING)...B	9 AREA (ACRES) GPS MEASUREMENT (What is the area of the field taken by GPS tracking (Acres)?)	9a Name of the area file	9b AREA (STEPS) Step Measurement	9c NUMBER OF STEPS	LENGTH OF ONE STEP (M)	6 Was the field measured? YES...1 ▶NEXT NO...2	7 WHY WAS THE FIELD NOT MEASURED? ▶ NEXT FIELD TOO FAR...1 REFUSED...2 OTHER, SPECIFY...3
M1								
M2								
M3								
M4								
M5								
M6								
M7								
M8								

10. What year was the last completed Short Rainy Season/Minor Cropping Season?
--

MINOR CROPPING SEASON
2012..1
MINOR CROPPING SEASON
2013..2

3. FIELD DETAILS

3A. Long Rainy Season/Major Cropping Season 2013

FIELD ID	1. LIST ALL FIELDS OWNED OR CULTIVATED BY THE HOUSEHOLD. REFER TO SECTION 2.	2. What is the distance from [FIELD] to:	3. How did you use this field during the Long Rainy Season/Major Cropping Season 2013?	4. What was the total income from renting out this field during the Long Rainy Season/Major Cropping Season 2013?	5. What was the main crop cultivated on this field in the Long Rainy Season/Major Cropping Season 2013?	6. What was the soil quality of this field?	
		HOME | ROAD | MARKET KM | KM | KM	CULTIVATED . 1 ▶ 5 RENTED OUT . 2 ▶ NextQ GIVEN OUT . 3 ▶ 6 FALLOW 4 ▶ 13 FOREST 5 ▶ 13 OTHER, (SPECIFY) . . 6 ▶ 13	INCLUDE: IN-KIND INCOME INCOME BY CROP OUTPUT FUTURE/ PLANNED INCOMES LOCAL CURRENCY	CROP NAME | Code	GOOD 1 AVERAGE . 2 BAD 3	

Please indicate the previous Short Rainy Season/Minor Cropping Season:

3B. Previous Short Rainy Season/Minor Cropping Season

1a. LIST ALL FIELDS OWNED OR CULTIVATED BY THE HOUSEHOLD IN THE PREVIOUS Short Rainy Season/Minor Cropping Season. REFER TO SECTIONS 2 AND 2B	1b. ENUMERATOR: DID YOU ALREADY LIST THIS FIELD ABOVE IN 3A? YES . . . 1 ▶ 18 NO 2	2. What is the distance from [FIELD] to:	3. How did you use this field during the previous Short Rainy Season/Minor Cropping Season?	4. What was the total income from renting out this field during the previous Short Rainy Season/Minor Cropping Season?	5. What was the main crop cultivated on this field in the previous Short Rainy Season/Minor Cropping Season?	6. What was the soil quality of this field in the previous Short Rainy Season/Minor Cropping Season?
		HOME | ROAD | MARKET KM | KM | KM	▶ !		CROP NAME | Code	

FIELD ID	7. Was there any erosion control/water harvesting facility on this field in the Long Rainy Season/Major Cropping Season 2013? YES...1 NO...2 ▶ 9	8. What type of erosion control/water harvesting facility was on this field? TERRACES.....1 EROSION CONTROL BUNDS..2 GABIONS / SANDBAGS....3 VETIVER GRASS.....4 TREE BELTS.....5 WATER HARVEST BUNDS..6 DRAINAGE DITCHES.....7 LIST MAIN TWO 1st | 2nd	9. Was this field irrigated in the Long Rainy Season/Major Cropping Season 2013? YES...1 NO...2 ▶13	10. What was the type of irrigation? FLOODING.....1 SPRINKLER.....2 DRIP IRRIGATION...3 BUCKET / WATERING CAN.4 WATER HOSE....5 OTHER, (SPECIFY).....6	11. What was the source of water? WELL.....1 BOREHOLE....2 POND/DAM.....3 TANK .....3a DUGOUTS.....3c RIVER/STREAM..4 OTHER, (SPECIFY)...5	12. What was the total value of irrigation services purchased or rented? LOCAL CURRENCY	13. What would the value of this field be if it were sold today? LOCAL CURRENCY

	7. Was there any erosion control/water harvesting facility on this field in the previous Short Rainy Season/Minor Cropping Season? ▶!	8. What type of erosion control/water harvesting facility was on this field?	9. Was this field irrigated in the previous Short Rainy Season/Minor Cropping Season? ▶!	10. What was the type of irrigation?	11. What was the source of water?	12. What was the total value of irrigation services purchased? LOCAL CURRENCY	13. What would the value of this field be if it were sold today? LOCAL CURRENCY

FIELD ID	14. What was the ownership status of this field in the Long Rainy Season/Major Cropping Season 2013?	15. What type of title deed (land tenure system) did your household have for this field?	16. What share of output from this field did you give as rent, if any, in the Long Rainy Season/Major Cropping Season 2013?	17. Did the household cultivate this field in the Long Rainy Season/Major Cropping Season 2013?
	OWNED (FAMILY/CLANS/STOOL LAND) ... 1 ▶	GRANTED RIGHT OF OCCUPANCY ... 1 CERTIFICATE OF CUSTOMARY RIGHT OF OCCUPANCY ... 2 RESIDENTIAL LICENSE ... 3 TRADITIONAL AUTHORITIES- WITNESSED PURCHASE AGREEMENT ... 4 LOCAL-COURT-CERTIFIED PURCHASE AGREEMENT ... 5 INHERITANCE LETTER ... 6 LETTER OF ALLOCATION FROM VILLAGE GOV'T ... 7 OTHER GOVERNMENT DOCUMENT ... 8 OFFICIAL CORRESPONDENCE ... 9 UTILITY OR OTHER BILL ... 10 NONE ----- 11	NONE ... 1 ALMOST NONE . 2 ABUSA (ONE THIRD) ... 3 ABUSA (TWO THIRD) ... 4 ABUNU (HALF) ... 5	YES ... 1 NO ... 2 ▶ NEXT
	15 USED FREE OF CHARGE . 2 ▶ 16 RENTED IN ... 3 ▶ 16 SHARED - RENT ... 4 ▶ 16 SHARED - OWN ... 5 > 15			

14. What was the ownership status of this field in the Long Rainy Season/Major Cropping Season 2013?	15. What type of title deed (land tenure system) did your household have for this field?	16. What share of output from this field did you give as rent, if any, in the previous Short Rainy Season/Minor Cropping Season?	17. Did the household cultivate this field in the Long Rainy Season/Major Cropping Season 2013?
▶!			YES ... 1 ▶ 18

ORGANIC FERTILIZER

F I E L D I D	18. Did you use any ORGANIC FERTILIZER on [FIELD] in the Long Rainy Season/Major Cropping Season 2013? YES...1 NO...2 ▶ 23	18b What type of organic fertilizer did you apply? CROP RESIDUE.....1 ANIMAL MANURE.....2 NATURAL FALLOW.....4 LEGUMINOUS TREE FALLOW.....5 LEGUMINOUS COVER CROP.....6 BIOMASS TRANSFER.....7 COMPOST.....8 OTHER (SPECIFY) _____	18c What was the source of the crop residue/compost used on this field? SAME FIELD.....1 ANOTHER FIELD FROM THE SAME FARM.....2 EXTERNAL TO THE FIELD.....3 OTHER (SPECIFY) _____	19. What was the quantity of organic fertilizer used? KGs	20. Was any of this purchased? YES...1 NO...2	21. How much was purchased? KGs	22. What was the total value of organic fertilizer purchased? LOCAL CURRENCY

18. Did you use any ORGANIC FERTILIZER on [FIELD] in the last completed Short Rainy Season/Minor Cropping Season? ▶!	18b What type of organic fertilizer did you apply?	18c What was the source of the crop residue/compost used on this field?	19. What was the quantity of organic fertilizer used?	20. Was any of this purchased? ▶!	21. How much was purchased?	22. What was the total value of organic fertilizer purchased?

INORGANIC/MINERAL FERTILIZER

F I E L D I D	23. Did you use any inorganic/mineral fertilizer on [FIELD] in the Long Rainy Season/Major Cropping Season 2013?	24. What type of inorganic/mineral fertilizer did you use on this field?	25. What quantity of [FERTILIZER] did you use?	26. Did you receive a voucher/ certificate for any of this [FERTILIZER]?	27. What was the total value of [FERTILIZER] purchased?
	YES . 1 NO . . 2 ▶ 33	DI-AMMONIUM PHOSPHATE (DAP) .....1 UREA .....2 TRIPLE SUPER PHOSPHATE (TSP) .....3 CALCIUM AMMONIUM NITRATE (CAN) .....4 SULPHATE OF AMMONIUM (SA) .....5 NITROGEN PHOSPHATE POTASSIUM (NPK) .....6 ROCK PHOSPHATE (MRP) [MINJINGU] .....7	KGS	YES . . . 1 NO 2	LOCAL CURRENCY

23. Did you use any inorganic fertilizer on [FIELD] in the previous Short Rainy Season/Minor Cropping Season?	24. What type of inorganic fertilizer did you use on this field?	25. What quantity of [FERTILIZER] did you use?	26. Did you receive a voucher/ certificate for any of this [FERTILIZER]?	27. What was the total value of [FERTILIZER] purchased?
▶!		KGS		LOCAL CURRENCY

INORGANIC/MINERAL FERTILIZER

FIELD ID	28. Did you use any other inorganic/mineral fertilizer on [FIELD] in the Long Rainy Season/Major Cropping Season 2013? YES . 1 NO . . 2 ▶ 33	29. What is the other type of inorganic/mineral fertilizer you used on this field? DI-AMMONIUM PHOSPHATE (DAP) 1 UREA 2 TRIPLE SUPER PHOSPHATE (TSP) 3 CALCIUM AMMONIUM NITRATE (CAN) 4 SULPHATE OF AMMONIUM (SA) 5 NITROGEN PHOSPHATE POTASSIUM (NPK) 6 ROCK PHOSPHATE (MRP) [MINJINGU] 7	30. What quantity of [FERTILIZER] did you use? KGS	31. Did you receive a voucher/certificate for any of this [FERTILIZER]? YES . . . 1 NO 2	32. What was the total value of [FERTILIZER] purchased? LOCAL CURRENCY

28. Did you use any inorganic fertilizer on [FIELD] in the previous Short Rainy Season/Minor CroppingSeason? ▶!	29. What is the other type of INORGANIC FERTILIZER you used on this field?	30. What quantity of [FERTILIZER] did you use ?	31. Did you receive a voucher/certificate for any of this [FERTILIZER]?	32. What was the total value of [FERTILIZER] purchased?

PESTICIDES/HERBICIDES

F I E L D I D	33. Did you use any pesticide/ herbicide on [FIELD] in the Long Rainy Season/Major Cropping Season 2013? YES . . . 1 NO . . . 2 ▶ 37	34. What was the main type of pesticide/herbicide that you applied? PESTICIDE 1 HERBICIDE 2 FUNGICIDE 3 OTHER (SPECIFY) . 4	35. What quantity of this pesticide/ herbicide did you use? KG 1 LITRE 2 MILLILITRE . . 3	36. What was the total value of this pesticides/ herbicides purchased?
		AMOUNT	UNIT	LOCAL CURRENCY

33. Did you use any pesticide/ herbicide on [FIELD] in the previous Short Rainy Season/Minor Cropping Season? ▶ !	34. What was the main type of pesticide/herbicide that you applied?	35. What quantity of this pesticide/ herbicide did you use?	36. What was the total value of this pesticides/ herbicides purchased?
---	---	---	--

3. FIELD DETAILS

3A. Long Rainy Season/Major Cropping Season 2013

F I E L D I D	1. LIST ALL FIELDS OWNED OR CULTIVATED BY THE HOUSEHOLD IN Long Rainy Season/Major Cropping Season 2013.
	REFER TO SECTION 2A.

3B. PREVIOUS Short Rainy Season/Minor CroppingSeason

F I E L D I D	1. LIST ALL FIELDS OWNED OR CULTIVATED BY THE HOUSEHOLD IN Long Rainy Season/Major Cropping Season of 2013 OR THE Short Rainy Season/Minor CroppingSeason 2013. REFER TO SECTIONS 2A AND 2B

4. CROPS BY FIELD

4A. Long Rainy Season/Major Cropping Season 2013

HARVEST

FIELD	CROP	1.	2.	3.	4.	5.	6.	7.	8.		9.
		Was crop planted in the entire area of FIELD?	Approximately, how much of the field was planted with [CROP]?	Was cultivation intercropped?	What is the reason for this intercropping? SUBSTITUTE IF EITHER CROP FAILS.....1 MORE FERTILE FOR THE SOIL.....2 OTHER,	What was the planting date of [CROP]?	Did you harvest any [CROP] on this field in the Long Rainy Season/Major Cropping Season 2013?	What was the area harvested in the Long Rainy Season/Major Cropping Season 2013?	What was the quantity harvested?	AMOUNT	UNIT	What is the estimated value of the harvested crop?
		YES...1 ▶3 NO...2	1/4.....1 1/2.....2 3/4.....3 ALMOST ALL...4	YES...1 NO...2 ▶ 5		(MM/YY)	YES...1 ▶ NO...2 ▶10	ACRES			LOCAL CURRENCY

4B. PREVIOUS Short Rainy Season/Minor Cropping Season

FIELDS	CROP	1.	2.	3.	4.	5.	6.	7.	8.		9.
		Was crop planted in the entire area of field?	Approximately, how much of the field was planted with [CROP]?	Was cultivation intercropped?	What is the reason for this intercropping?	What was the planting date of [CROP]?	Did you harvest any [CROP] on this field in the previous completed season?	What was the area harvested in previous Short Rainy Season/Minor Cropping Season?	What was the quantity harvested?	AMOUNT	UNIT	What is the estimated value of the harvested crop?
		▶ !		▶ !		(MM/YY)	▶ !				

4. CROPS BY FIELD

4A. Long Rainy Season/Major Cropping Season 2013

P L O T	C R O P	PLEASE LIST ALL FIELDS CULTIVATED DURING THE Long Rainy Season/Major Cropping Season 2013. FOR EACH FIELD LIST ALL ANNUAL CROPS CULTIVATED.	
		FIELD NAME	CROP NAME

4B. LAST COMPLETED Short Rainy Season/Minor Cropping Season

P L O T	C R O P	PLEASE LIST ALL FIELDS CULTIVATED DURING THE LAST COMPLETED Short Rainy Season/Minor Cropping Season. FOR EACH FIELD LIST ALL CROPS CULTIVATED.	
		FIELD NAME	CROP NAME

5. CROPS - HOUSEHOLD TOTALS

5A. Long Rainy Season/Major Cropping Season 2013

C R O P C O D E	SALES		POST HARVEST LOSSES				CROP RESIDUE		9. What was the quantity sold? KGs	10. What was the total value of the sales? LOCAL CURRENCY
	1. Did you sell any of the [CROP] produced in the Long Rainy Season/Major Cropping Season 2013? YES...1 NO...2 ▶ 5	2. What was the quantity sold? USE UNIT CODES AMOUNT | UNIT	3. What was the total value of the sales? LOCAL CURRENCY	4. During which month did you sell most of [CROP] ? MONTH | YEAR	5. Was any portion of the production lost during post harvest? (rotting, insects, rodents, theft, fire etc) YES...1 NO...2 ▶ 8	6. What was the reason for the loss? ROTTEN...1 INSECTS...2 MAMMALS...3 BIRDS...4 THEFT...5 FIRE...5a FLOOD...5b OTHER, SPECIFY.6	7. Out of 10 units of [CROP], how many were lost? NUMBER (0-10)	8. What was done with the residue from this crop? CROP PRODUCES NO RESIDUE...1 ▶NEXT SECTION RESIDUE WAS LEFT IN FIELD...2 ▶NEXT SECTION MULCHED...3 ▶NEXT SECTION FOR GRAZING OWN ANIMALS...4 ▶NEXT SECTION FOR GRAZING OTHERS' ANIMALS...5 ▶NEXT SECTION FEEDING OWN ANIMALS.6 ▶NEXT SECTION FOR SALE...7 OTHER, (SPECIFY)...8		

UNIT CODES	
AMERICAN TIN	1
BARREL	2
BASKET	3
BEER BOTTLE	4
BOWL	5
BOX	6
BUNCH	7
BUNDLE	8
FANTA BOTTLE	9
FINGERS	10
FRUIT	11
GALLON	13
KILOGRAM	14
LITRE	16
MARGARINE TIN	17
MAXI BAG	18
MINI BAG	19
NUT	20
POUNDS	21
SHEET	22
STICK	23
TONNE	24

5B. PREVIOUS Short Rainy Season/Minor Cropping Season

C R O P C O D E	SALES		POST HARVEST LOSSES				CROP RESIDUE		9. What was the quantity sold? KGs	10. What was the total value of the sales? LOCAL CURRENCY
	1. Did you sell any of the [CROP] produced in the previous Short Rainy Season/Minor Cropping Season? YES...1 NO...2 ▶ !	2. What was the quantity sold? USE UNIT CODES AMOUNT | UNIT	3. What was the total value of the sales? LOCAL CURRENCY	4. During which month did you sell most of [CROP] ? MONTH | YEAR	5. Was any portion of the production lost during post harvest? (rotting, insects, rodents, theft, fire etc) YES...1 NO...2 ▶	6. What was the reason for the loss? ROTTEN...1 INSECTS...2 MAMMALS...3 BIRDS...4 THEFT...5 FIRE...5a FLOOD...5b OTHER, SPECIFY.6	7. Out of 10 units of [CROP], how many were lost? NUMBER (0-10)	8. What was done with the residue from this crop? CROP PRODUCES NO RESIDUE...1 ▶NEXT SECTION RESIDUE WAS LEFT IN FIELD...2 ▶NEXT SECTION MULCHED...3 ▶NEXT SECTION FOR GRAZING OWN ANIMALS...4 ▶NEXT SECTION FOR GRAZING OTHERS' ANIMALS...5 ▶NEXT SECTION FEEDING OWN ANIMALS.6 ▶NEXT SECTION FOR SALE...7 OTHER, (SPECIFY)...8		

7. PERMANENT CROPS BY CROP

7A. FRUIT CROPS

F R U I T	1. LIST ALL FRUIT TREES REPORTED IN SECTION 6A	2. Did you sell any of the [FRUIT] collected?	3. What was the total quantity sold?		4. What was the total value of [FRUIT] sold?
	FRUIT NAME	YES . . . 1 NO . . . 2 ► (NEXT FRUIT)	AMOUNT	UNIT	LOCAL CURRENCY
1					
2					
3					
4					
5					

UNIT CODES	
AMERICAN TIN	..... 1
BARREL	..... 2
BASKET	..... 3
BEER BOTTLE	..... 4
BOWL	..... 5
BOX	..... 6
BUNCH	..... 7
BUNDLE	..... 8
FANTA BOTTLE	..... 9
FINGERS	..... 10
FRUIT	..... 11
GALLON	..... 13
KILOGRAM	..... 14
LITRE	..... 16
MARGARINE TIN	..... 17
MAXI BAG	..... 18
MINI BAG	..... 19
NUT	..... 20
POUNDS	..... 21
SHEET	..... 22
STICK	..... 23
TONNE	..... 24
TUBERS	..... 25

7B. PERMANENT CROPS

C R O P	1. LIST ALL PERMANENT CROPS REPORTED IN SECTION 6B	2. Did you sell any of the [CROP] collected?	3. What was the total quantity sold?		4. What was the total value of this [CROP] sold?
	CROP NAME	YES . . . 1 NO . . . 2 ► !	AMOUNT	UNIT	LOCAL CURRENCY
1					
2					
3					
4					
5					

9. PROCESSED AGRICULTURAL PRODUCTS AND AGRICULTURAL BY-PRODUCTS

1. Did the household process any of the products harvested on the farm in the last 12 months?

YES 1
 NO 2 ► **SECTION 10**

PLEASE LIST THE MAIN CROPS PROCESSED AND PROVIDE DETAILS:

2.	3.	4.	7.	5.	6.	8.	8a	8b	9.	10.
Crop name	What is the by-product produced from this crop?	What is the quantity produced in the last 12 months?	How much [CROP] did you use as input for the sold [BY-PRODUCT]?	Was any [BY-PRODUCT] sold?	How much was sold?	What was total sales in LOCAL CURRENCY?	Did you give out [BY PRODUCT] for in-kind/barter?	How much was given away?	Did you incur any other expenses such as labor costs, additional inputs etc. in the production of [BY-PRODUCT]?	What were the total costs of these additional expenses?
NAME	SEE CODES BELOW	AMOUNT | UNIT	AMOUNT | UNIT	YES...1 NO...2 ►9	AMOUNT | UNIT	LOCAL CURRENCY	YES...1 NO...2 ►11	AMOUNT | UNIT	YES...1 NO...2 ►NEXT PRODUCT	LOCAL CURRENCY
PROCESSED...1 BY-PRODUCT...2			USE UNIT CODES		USE UNIT CODES					
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										

CODES FOR Q3 PROCESSED:
 FLOUR.....1
 SEED.....2
 PALM OIL.....3
 JUICE.....4
 THREAD.....5
 PULP.....6
 RUBBER.....7
 OTHER, SPECIFY..8

BY-PRODUCTS:
 MAIZE BRAN.....9
 WET HUSK (WHEAT, BARLEY).....10
 RICE COVER.....11
 JUICE.....12
 THREAD.....13
 PULP.....14
 PALM OIL.....15
 OUTER COVER....16
 NO WASTE.....17
 OTHER, SPECIFY..18

UNIT CODES

AMERICAN TIN	1	GALLON.....	13
BARREL.....	2	KILOGRAM.....	14
BASKET.....	3	LITRE.....	16
BEER BOTTLE.....	4	MARGARINE TIN...	17
BOWL.....	5	MAXI BAG.....	18
BOX.....	6	MINI BAG.....	19
BUNCH.....	7	NUT.....	20
BUNDLE.....	8	POUNDS.....	21
FANTA BOTTLE.....	9	SHEET.....	22
FINGERS.....	10	STICK.....	23
FRUIT.....	11	TONNE.....	24
		TUBERS.....	25

10A. LIVESTOCK

YES 1

NO 2 ► **NEXT SECTION**

1. Did this household own any animals in the last 12 months (cows, goats, chicken, ducks)?

		OWNERSHIP			SALES			SLAUGHTER			LABOR													
2. How many [ANIMAL] does this household currently own?		3. Have you sold any [ANIMAL] alive in the last 12 months?			4. How many [ANIMAL] have you sold alive in the past 12 months?			5. What was the total value of sales?			6. Did you slaughter any [ANIMAL] in the past 12 months?		7. How many [ANIMAL] did you slaughter in the past 12 months?			8. How many of the [ANIMAL] slaughtered did you sell?			9. What was the total value of the sold slaughtered [ANIMAL]?		10. Did you hire any labor to help you with the [ANIMAL] in the past 12 months?		11. What was the total cost of this labor for [ANIMAL] in the past 12 months?	
CODE		Indigenous	Improved Beef	Improved Dairy	YES...1 NO...2 ► 6	NUMBER	LOCAL CURRENCY	YES...1 NO...2 ► 10	NUMBER	NUMBER	IF '0' ► 10	LOCAL CURRENCY	YES...1 NO...2 ► Section 10B	LOCAL CURRENCY	LOCAL CURRENCY									
1	BULLS																							
2	COWS																							
3	STEERS																							
4	HEIFERS																							
5	MALE CALVES																							
6	FEMALE CALVES																							
7	GOATS																							
8	SHEEP																							
9	PIGS																							
10	CHICKENS																							
10a	GUINEA FOWL																							
11	DUCKS																							
12	RABBITS																							
12a	HARE																							
12b	GRASS CUTTER																							
14	DONKEYS																							
15	DOGS																							
16	OTHER _____																							

10B. LIVESTOCK BY-PRODUCTS

CODE	PRODUCT	1. Did your household produce any [PRODUCT] in the last 12 months? Any other by-products from keeping livestock? YES . . . 1 NO . . . 2 ▶ NEXT	1.a How much of the [PRODUCT] did you produce in the past 12 months? LITRES . . . 1 KGS 2 PIECES . . . 3		1.b What was the total value of total [PRODUCT] produced in the last 12 months?	1.c How much of the [PRODUCT] produced did you sell in the last 12 months? LITRES . . . 1 KGS 2 PIECES . . . 3		2. What was the total value of sales of [PRODUCT] in the last 12 months?
		QUANTITY	UNIT	LOCAL CURRENCY	QUANTITY	UNIT	LOCAL CURRENCY	
1	COW MILK (TRADITIONAL)							
2	COW MILK (IMPROVED)							
3	CHICKEN EGGS (TRADITIONAL)							
4	CHICKEN EGGS (IMPROVED)							
5	GHEE/BUTTER							
6	CHEESE/YOGURT							
7	HONEY							
8	SKINS AND HIDES							
9	MANURE							
10	OTHER _____							
11	OTHER _____							
12	OTHER _____							

10.LIVESTOCK BY FIELD

10. Long Rainy Season/Major Cropping Season 2013

FIELD	LIVESTOCK	1. Did livestock graze on this field during the Long Rainy Season/Major Cropping Season 2013? YES... 1 NO.... 2 ► NEXT SECTION	2. Indicate the animals that were grazed on each field grazing in the Long Rainy Season/Major Cropping Season 2013? USE CODES	3. When did they graze on the field? AFTER THE HARVEST..... 1 DURING THE FALLOW..... 2 OTHER, SPECIFY..... 3

ANIMAL CODES
 BULLS.....1
 COWS..... 2
 STEERS..... 3
 HEIFERS..... 4
 MALE CALVES..... 5
 FEMALE CALVES..... 6
 GOATS..... 7
 SHEEP..... 8
 DONKEY..... 9
 DOGS..... 50
 OTHER (SPECIFY) .51

11. FARM IMPLEMENTS AND MACHINERY

PLEASE GIVE DETAILS OF FARM IMPLEMENTS USED OR OWNED BY THE HOUSEHOLD IN THE PAST 12 MONTHS

		1. How many [ITEM] does the household own? IF '0' ▶ 3 NUMBER	6. How many [ITEM] did the household rent or borrow in the last 12 months? NUMBER
	ITEM		
1	HAND HOE		
2	HAND-POWERED SPRAYER		
3	OX PLOUGH		
4	OX SEED PLANTER		
5	OX CART		
6	TRACTOR		
7	TRACTOR PLOUGH		
8	TRACTOR HARROW		
9	SHELLER/THRESHER		
10	HAND MILL/GRINDER		
11	WATERING CAN		
12	FARM BUILDINGS		
13	GERI CANS/DRUMS		
13a	COOL STORAGE		
13b	SILOS		
13c	SHEDS		
13d	STOREROOM		
13e	CUTLASS		
13f	AXE		
13g	"SOSO" (USED TO DIG HOLES/PLUCK PLANTAINS/HARVEST YAMS)		
13h	SICKLE (FOR COCOA HARVESTING)		
13i	SICKLE (GRASS CUTTING/THRESHING)		
14	OTHER, (SPECIFY)		

12. EXTENSION

SOURCE	1. Did you receive advice for your agricultural/livestock activities from any of the following sources in the past 12 months? YES . . . 1 NO . . . 2 ▶ NEXT ROW	2. Did you receive any advice from [SOURCE] about...? YES . . . 1 NO . . . 2						3. How would you rate the advice received? GOOD 1 AVERAGE . . . 2 BAD 3	4. Did you pay anything in order to receive the advice? YES . . . 1 NO . . . 2 ▶ 6	5. How much did you pay? LOCAL CURRENCY
		A.	B.	C.	D.	E.	F.			
		Agricultural production	Agro-processing	Marketing	Fishing Production	Livestock Production	Prevention of Livestock diseases			

1	MINISTRY OF FOOD & AGRICULTURE (MOFA)								
2	NGO								
3	COOPERATIVE								
3a	COMMUNITY BASED FARMER'S ORGANISATIONS (CBOs)/FARMER BASED ORGANISATIONS (FBOs)								
4	LARGE SCALE FARMER/OUTGROWERS								
5	OTHER (SPECIFY)								

SOURCE	6. In the past 12 months did anyone in your household receive any information about agricultural prices from [SOURCE]? YES . . . 1 NO . . . 2 ▶ NEXT ROW	7. Did you pay anything in order to receive the advice? YES . . . 1 NO . . . 2 ▶ NEXT ROW	8. How much did you pay? LOCAL CURRENCY
--------	--	---	---

1	MINISTRY OF FOOD & AGRICULTURE (MOFA)		
2	NGO		
3	COOPERATIVE		
3a	COMMUNITY BASED FARMER'S ORGANISATIONS (CBOs)/FARMER BASED ORGANISATIONS (FBOs)		
4	LARGE SCALE FARMER/OUTGROWERS		
5	RADIO		
6	PUBLICATION		
6a	MARKET WOMEN / MIDDLEMEN		
7	NEIGHBOUR		
	CHIEF FARMER		
8	OTHER, (SPECIFY)		

9 Are you or any member of your household a member of a microfinance or savings group? YES . . . 1 NO . . . 2 NEXT

10 Please indicate the micro finance or credit group that you received assistance from	
	MICROFINANCE INSTITUTIONS
	SUSU
	MARKET WOMEN/MIDDLE MEN
	MASLOC
	OTHER, (SPECIFY)

OBSERVATIONS ON THE INTERVIEW

RECORD GENERAL NOTES ABOUT THE INTERVIEW AND RECORD ANY SPECIAL INFORMATION THAT WILL BE HELPFUL FOR SUPERVISORS AND THE ANALYSIS OF THIS QUESTIONNAIRE.

Large empty rectangular box for recording observations and notes.

END DATE

--	--	--

END TIME

	:	
--	---	--

CROP CODES**CEREAL/TUBERS/ROOTS:**

MAIZE.....	11
PADDY.....	12
SORGHUM.....	13
BULRUSH MILLET...	14
FINGER MILLET...	15
WHEAT.....	16
BARLEY.....	17
CASSAVA.....	21
SWEET POTATOES...	22
IRISH POTATOES...	23
YAMS.....	24
COCOYAMS.....	25
ONIONS.....	26
GINGER.....	27

LEGUMES, OIL, & FRUIT:

BEANS.....	31
COWPEA.....	32
GREEN GRAM.....	33
CHICK PEAS.....	35
BAMBARA NUTS.....	36
FIELD PEAS.....	37
SUNFLOWER.....	41
SESAME.....	42
GROUNDNUTS.....	43
Soyabeans.....	47
CASTER SEED.....	48

VEGETABLES:

CABBAGE.....	86
TOMATOES.....	87
SPINACH.....	88
CARROT.....	89
CHILIES.....	90
AMARANTHS.....	91
PUMPKINS.....	92
CUCUMBER.....	93
EGGPLANT.....	94
WATERMELON.....	95
CAULIFLOWER.....	96
OKRA.....	100
KIWI.....	101

CASH CROPS:

COTTON.....	50
TOBACCO.....	51
PYRETHRUM.....	52
JUTE.....	62
SEAWEED.....	19

CROP CODES**FRUITS:**

PASSION FRUIT....	70
BANANA.....	71
AVOCADO.....	72
MANGO.....	73
PAPAW.....	74
ORANGE.....	76
GRAPEFRUIT.....	77
GRAPES.....	78
MANDARIN.....	79
GUAVA.....	80
BLOOD FRUIT....	81
APPLES.....	82
PEARS.....	83
PEACHES.....	84
LIME.....	851
LEMON.....	852
POMELO.....	68
JACK FRUIT.....	69
DURIAN.....	97
BILIMBI.....	98
RAMBUTAN.....	99
BREAD FRUIT.....	67
MALAY APPLE.....	38
STAR FRUIT.....	39
CUSTARD APPLE...	200
GOD FRUIT.....	201
MITOBO.....	202
PLUM.....	203
PEACHES.....	204
POMEGRANATE.....	205
DATE.....	210

PERMANENT CASH CROPS:

SISAL.....	53
COFFEE.....	54
TEA.....	55
COCOA.....	56
RUBBER.....	57
WATTLE.....	58
KAPOK.....	59
SUGAR CANE.....	60
CARDAMOM	61
TAMARIND.....	63
CINNAMON.....	64
NUTMEG.....	65
CLOVE.....	66
BLACK PEPPER....	18
PIGEON PEA.....	34
CASSAVA.....	21
PINEAPPLE.....	75
PALM OIL.....	44
COCONUT.....	45
CASHEW NUT.....	46
GREEN TOMATO....	300
MONKEYBREAD/BAOBAB.	301
BAMBOO.....	302
FIREWOOD/FODDER..	303
TIMBER.....	304
MEDICINAL PLANT..	305
"FENCE TREE".....	306

UNIT CODES

AMERICAN TIN	1
BARREL.....	2
BASKET.....	3
BEER BOTTLE.....	4
BOWL.....	5
BOX.....	6
BUNCH.....	7
BUNDLE.....	8
FANTA BOTTLE.....	9
FINGERS.....	10
FRUIT.....	11
GALLON.....	13
KILOGRAM.....	14
LITRE.....	16
MARGARINE TIN....	17
MAXI BAG.....	18
MINI BAG.....	19
NUT.....	20
POUNDS.....	21
SHEET.....	22
STICK.....	23
TONNE.....	24

ANIMAL CODES

BULLS.....	1
COWS.....	2
STEERS.....	3
HEIFERS.....	4
MALE CALVES.....	5
FEMALE CALVES....	6
GOATS.....	7
SHEEP.....	8
DONKEY.....	9
DOGS.....	50
OTHER (SPECIFY) ..	51

WESTERN REGION CODE**01****CENTRAL REGION CODE****02**

No	District name	District code	No.	District name	District code
	Jomoro	01		Komenda / Edina / Eguafo / Abirem	01
	Ellembelle	02		Cape Coast	02
	Nzema East	03		Abura / Asebu / Kwamankese	03
	Ahanta West	04		Mfantsiman	04
	Sekondi-Takoradi	05		Ajumako / Enyan / Essiam	05
	Shama	06		Gomoa West	06
	Mpohor-Wassa East	07		Effutu	07
	Tarkwa Nsuaem	08		Gomoa East	08
	Prestea / Huni Valley	09		Ewutu Senya	09
	Wassa Amenfi East	10		Agona East	10
	Wassa Amenfi West	11		Agona West	11
	Aowin / Suaman	12		Asikuma / Odoben / Brakwa	12
	Sefwi-Akontombra	13		Assin South	13
	Sefwi-Wiawso	14		Assin North	14
	Sefwi-Bibiani-Ahwiaso-Bekwai	15		Twifo / Heman / Lower Denkyira	15
	Juabeso	16		Upper Denkyira East	16
	Bia	17		Upper Denkyira West	17

GREATER ACCRA REGION**03****VOLTA REGION****04**

District name	District code	District name	District code
Weija (Ga South)	01	South Tongu	01
Ga West	02	Keta Municipal	02
Ga East	03	Ketu South	03
A M A	04	Ketu North	04
Adenta	05	Akatsi	05
Ledzokuku / Krowor	06	North Tongu	06
Ashaiman	07	Adaklu Anyigbe	07
Tema	08	Ho	08
Dangbe West	09	South Dayi	09
Dangbe East	10	North Dayi	10
		Hohoe	11
		Biakoye	12
		Jasikan	13
		Kadjebi	14
		Krachi East	15
		Krachi West	16
		Nkwanta South	17
		Nkwanta North	18

EASTERN REGION		05	ASHANTI REGION		06
District name	District code		District name	District code	
Birim South	01		Atwima Mponua	01	
Birim Municipal	02		Amansie West	02	
West Akim	03		Amansie Central	03	
Suhum / Kraboa Coaltar	04		Adansi South	04	
Akwapem South	05		Obuasi Municipal	05	
Akwapem North	06		Adansi North	06	
New Juaben Municipal	07		Bekwai Municipal	07	
Yilo Krobo	08		Bosome Freho	08	
Lower Manya	09		Asante Akim South	09	
Asuogyaman	10		Asante Akim North	10	
Upper Manya	11		Ejisu Juaben	11	
Fanteakwa	12		Bosumtwi	12	
East Akim	13		Atwima Kwanwoma	13	
Kwaebibirem	14		K M A	14	
Akyem Mansa	15		Atwima Nwabiagya	15	
Birim North	16		Ahafo Ano South	16	
Atiwa	17		Ahafo Ano North	17	
Kwahu West	18		Offinso Municipal	18	
Kwahu South	19		Afigya Kwabre	19	
Kwahu East	20		Kwabre East	20	
Kwahu North (Afram Plains)	21		Sekyere South	21	
			Mampong Municipal	22	
			Sekyere East	23	
			Sekyere Afram Plains	24	
			Sekyere Central	25	
			Ejura Sekye Dumasi	26	
			Offinso North	27	

BRONG AHAFO REGION		07	NORTHERN REGION		08
District name	District code		District name	District code	
Asunafo South	01		Bole	01	
Asunafo North	02		Sawla / Tuna / Kalba	02	
Asutifi	03		West Gonja	03	
Dormaa Municipal	04		Gonja Central	04	
Dormaa East	05		East Gonja	05	
Tano South	06		Kpandai	06	
Tano North	07		Nanumba South	07	
Sunyani Municipal	08		Nanumba North	08	
Sunyani West	09		Zabzugu Tatali	09	
Berekum	10		Yendi	10	
Jaman South	11		Tamale Metro	11	
Jaman North	12		Tolon Kumbugu	12	
Tain	13		Savelugu Nanton	13	
Wenchi	14		Karaga	14	
Techiman	15		Gushiegu	15	
Nkoranza South	16		Saboba	16	
Nkoranza North	17		Chereponi	17	
Atebubu	18		Bunkpurugu Yonyo	18	
Sene	19		Mamprusi East	19	
Pru	20		Mamprusi West	20	
Kintampo South	21				
Kintampo North	22				

UPPER EAST REGION

District name	District code
Builsa	01
Kasena Nankana West	02
Kasena Nankana East	03
Bolgatanga Municipal	04
Talensi Nabdam	05
Bongo	06
Bawku West	07
Garu Tempane	08
Bawku Municipal	09

09**UPPER WEST REGION**

District name	District code
Wa West	01
Wa Municipal	02
Wa East	03
Sissala East	04
Nadowli	05
Jirapa	06
Sissala West	07
Lambussie	08
Lawra	09

10

Region Code	Region Name	District Code	District Name	Region Code	Region Name	District Code	District Name
05	Morogoro	01	Kilosa	11	Iringa	01	Iringa Rural
05	Morogoro	02	Morogoro	11	Iringa	02	Mufindi
05	Morogoro	03	Kilombero	11	Iringa	03	Iringa Urban
05	Morogoro	04	Ulanga	11	Iringa	04	Kilolo
05	Morogoro	05	Morogoro Urban	11	Iringa	05	Mafinga Township
05	Morogoro	06	Mvomero				
05	Morogoro	07	Gairo				
				12	Mbeya	01	Chunya
06	Pwani	01	Bagamoyo	12	Mbeya	02	Mbeya Rural
06	Pwani	02	Kibaha	12	Mbeya	03	Kyela
06	Pwani	03	Kisarawe	12	Mbeya	04	Rungwe
06	Pwani	04	Mkuranga	12	Mbeya	05	Ileje
06	Pwani	05	Rufiji	12	Mbeya	06	Mbozi
07	Pwani	06	Mafia	12	Mbeya	07	Mbarali
06	Pwani	07	Kibaha Urban	12	Mbeya	08	Mbeya Urban
				12	Mbeya	09	Momba
10	Ruvuma	01	Tunduru	12	Mbeya	10	Tunduma
10	Ruvuma	02	Songea Rural				
10	Ruvuma	03	Mbinga	15	Rukwa	01	Kalambo
10	Ruvuma	04	Songea Urban	15	Rukwa	02	Sumbawanga Rural
10	Ruvuma	05	Namtumbo	15	Rukwa	03	Nkasi
10	Ruvuma	06	Nyasa	15	Rukwa	04	Sumbawanga Urban

Household Survey Metadata

Version: 1.0

	Form Value	Definition	Data Type	Values List	Example	Empty Value
Household Identification	Country	The VS country three-letter abbreviation	String	None	TZA or GHA	Required
	Region ID	Two figure assigned to each region	numeric	none	01	Required
	District	A unique number assigned to each district	numeric	{1-54}	1	Required
	Ward	The Ward name	numeric	None	IHM	Required
	Landscape	Three figures assigned to each landscape	numeric	none	001	Required
	E-Plot ID	A unique number assigned to each E-Plot	numeric	None	none	Required
	Town/Village/Community	Provide full name	String	None	none	Required
	Household ID	5 Digits combination of landscape, E-Plot, and house number	numeric	None	none	Required
	Household Head	List first and last name of the household head	String	None	none	Required
details	Name of Enumerator	First and Last Name of person interviewing household head	string	None	none	Required
	Time Interview	Time taken to complete interview will be recorded in hours	numeric	None	2	Required
	Date Interview	State the month (mm) and year (yy)	string	None	12/2013	Required
	Field Supervisor	First and Last Name of Socio-economic manager	string	none	none	Required

Vital Signs Agricultural Survey Protocol 2.0

Enumerator D	Questionnaire inspection	Date the questionnaire was inspected; (Month/Year)	string	None	none	Required
	Data Entry Clerk	First and Last Name of data entry clerk	string	None	none	Required
	Entry Clerk Code	Write the code assigned to the clerk	numeric	None	none	Required
	Date Data Entry	State the month (mm) and year (yy)	numeric	None	none	Required
	2nd Entry Clerk Code	Write the code assigned to the clerk	numeric	None	none	Required
	Date 2nd Data Entry	State the month (mm) and year (yy)	numeric	None	none	Required

Vital Signs Agricultural Survey Protocol 2.0

Agriculture Management Survey
Version: 1.0

	Description	ID	Form Value	Definition	Type	Format	Width	Decimals	Range
Section A: Household Identification & Survey Staff Details	This file contains data related to section A of the Household questionnaire - household identifier variables, cluster identification, region identification, 2013-2014 household id, enumerator, supervisor, data entry clerk identifiers and data and time of interview.	v1	region	region	Continuous	numeric	2	0	1-55
		v2	district	district	Discrete	numeric	1	0	1-8
		v3	ward	Ward	Continuous	numeric	3	0	001-010
		v4	vs_landscape	Landscape/EA	Continuous	numeric	3	0	1-999
		v4a	E-Plot_ID	E-Plot ID	Continuous	numeric	2	0	1-20
		v5	hh_a05	Town/village/community	Discrete	character	24		
		v6	y2_hhid	Household ID					
		v8		Name of household head					
		v9		Name of enumerator					
		v10	hh_a16	Enumerator code	Continuous	numeric	2	0	5-94
		v11	intwlnth_hr	Length of interview -- hour	Discrete	numeric	2	0	0-11
		v12	intwlnth_min	Length of interview -- minutes	Continuous	numeric	2	0	0-59
		v14	hh_a18_month	Date of interview - Month	Discrete	numeric	2	0	1-12
		v15	hh_a18_year	Date of interview - Year	Discrete	numeric	4	0	2013-2014
		v17	hh_a20	Field supervisor code	Continuous	numeric	3	0	1-100
		v18	hh_a21	Date of questionnaire inspection	Continuous	numeric	8	0	1012011-31102011
		v20	hh_a23	Data entry clerk code	Continuous	numeric	2	0	1-96
v21	hh_a24	Date of data entry	Continuous	numeric	8	0	1022011-31122010		
v22	hh_a25	2ND Data entry clerk code	Continuous	numeric	2	0	1-85		
v23	hh_a26	Date of 2ND data entry	Continuous	numeric	8	0	1022011-31052011		
Section 1: Household Member Roster	This file contains data from Module 1 of the Agriculture questionnaire - name, age and sex of household members.	V14	y2_hhid	Unique Household Identifier	Discrete	character	16		
		V15	indidy2	Personal ID	Continuous	numeric	2	0	1-55
		V16	ag1a_02	Age	Continuous	numeric	3	0	0-105
		V17	ag1a_03	Sex	Discrete	numeric	1	0	1-2
		V18	ag1a_04	Respondent to Questionnaire	Discrete	character	1		
	V19	y2_hhid	Unique Household Identifier	Discrete	character	16			
	V20	plotnum	FIELD Code	Discrete	character	3			

Vital Signs Agricultural Survey Protocol 2.0

Section 2: Plot Roster	This file contains data related to section 2 of the Agriculture questionnaire - list of all plots cultivated or owned by the household during the most recent completed season.				What was the use of this field during the Long Rainy Season/Major Cropping Season of 2013?	Continuous	numeric	3	0	11-998				
				ag2a_vs_2b1										
					ag2a_vs_2b2_1		What was the main crop cultivated on this FIELD during the Long Rainy Season/Major Cropping Season of 2013?	Discrete	numeric	2	0	1-12		
						ag2a_vs_2c		What is the use of this field during the previous Short Rainy Season/Minor CroppingSeason?	Discrete	numeric	2	0	1-7	
							ag2a_vs_2d1		What was the main crop cultivated on this FIELD during the Short Rainy Season/Minor CroppingSeason?	Continuous	numeric	3	0	11-998
							ag2a_vs_08		Distance field from household	Continuous	numeric	3	2	0-100
			V21	ag2a_04			Area (Acres) Farmers Estimate	Continuous	numeric	6	2	0-300		
			V23	ag2a_07			FIELD Measured	Discrete	numeric	1	0	1-2		
			V24	ag2a_08			Why was the FIELD not measured	Discrete	numeric	1	0	1-3		
			V25	ag2a_09			Area (Acres) GPS measurement	Continuous	numeric	5	2	0-99.3499984741211		
							ag2a_vs_08a		Name of the area file					
							ag2a_vs_8b		Number of steps	Continuous	numeric	6	2	0-300
							ag2a_vs_8c		Length of one step	Continuous	numeric	2	2	0-3
			V35	y2_hhid			Unique Household Identifier	Discrete	character	16				
			V36	plotnum			FIELD Code	Discrete	character	3				
			V37	ag3a_02_1			Distance from [FIELD] to: HOME KM	Continuous	numeric	6	2	0-800		
			V38	ag3a_02_2			Distance from [FIELD] to: ROAD KM	Continuous	numeric	5	2	0-80		

Vital Signs Agricultural Survey Protocol 2.0

V39	ag3a_02_3	Distance from [FIELD] to: MARKET KM	Continuous	numeric	6	2	0-518
V40	ag3a_03	How did you use [FIELD] during the Long Rainy Season/Major Cropping Season of 2013?	Discrete	numeric	1	0	1-6
V41	ag3a_04	Total income from renting out [FIELD] during the Long Rainy Season/Major Cropping Season of 2013?	Continuous	numeric	6	0	0-360000
	ag5a_vs_5a	What is the crop variety?					
V44	ag3a_07_1	Main crop on [FIELD] in the Long Rainy Season/Major Cropping Season of 2013?	Discrete	character	18		
V45	zaocode	Crop code for main crop	Continuous	numeric	3	0	11-998
V51	ag3a_10	What was the soil quality of [FIELD]?	Discrete	numeric	1	0	1-3
V55	ag3a_14	Was there any erosion control/water harvesting facility on [FIELD] in the Long Rainy Season/Major Cropping Season of 2013?	Discrete	numeric	1	0	1-3
V56	ag3a_15_1	What type of erosion control/water harvesting facility was on [FIELD]?	Discrete	numeric	1	0	1-8
	ag3a_15_2	What type of erosion control/water harvesting facility was on [FIELD]?	Discrete	numeric	1	0	1-8
V59	ag3a_17	Was [FIELD] irrigated in the Long Rainy Season/Major Cropping Season of 2013?	Discrete	numeric	1	0	1-2
V60	ag3a_18	What was the type of irrigation?	Discrete	numeric	1	0	1-6
V62	ag3a_20	What was the source of water?	Discrete	numeric	1	0	1-5

Vital Signs Agricultural Survey Protocol 2.0

	ag31_vs_13	What was the total value of irrigation services purchased?	Continuous	numeric	10	0	0-1000000000
V65	ag3a_23	What would the value of [FIELD] be if it were sold today? local currency	Continuous	numeric	10	0	0-1000000000
	ag3a_24	What was the ownership status of [FIELD] in the long rainy season 2010?	Discrete	numeric	1	0	1-5
V70	ag3a_28	What type of title did your household have for [FIELD]?	Discrete	numeric	2	0	1-10
	ag3a_34	What share of output from this field did you give as rent if any, in the Long Rainy Season/Major Cropping Season of 2013?	Discrete	numeric	1	0	0-6
V84	ag3a_39	Did you use any ORGANIC FERTILIZER on [FIELD] in the Long Rainy Season/Major Cropping Season of 2013?	Discrete	numeric	1	0	1-2
	ag3a_vs_18a	What type of organic fertilizer did you apply?	Discrete	numeric	1	0	1-8
	ag3a_vs_18b	What was the source of the crop residue/compost used on this field?	Discrete	numeric	1	0	1-4
V85	ag3a_40	What was the quantity of organic fertilizer used?	Continuous	numeric	5	0	4-14000
V86	ag3a_41	Was any of this purchased?	Discrete	numeric	1	0	1-2
V87	ag3a_42	How much was purchased? KG	Continuous	numeric	4	0	20-3200
V88	ag3a_43	What was the total value of organic fertilizer purchased? local currency	Continuous	numeric	6	0	400-200000
V91	ag3a_45	Did you use any INORGANIC FERTILIZER on [FIELD] in the Long Rainy	Discrete	numeric	1	0	1-2

Vital Signs Agricultural Survey Protocol 2.0

Plot Details

This file contains data related to section 3 of the Agriculture questionnaire - detailed plot information (agricultural practices, fertilizer use, etc.)

V92	ag3a_46	What is the main type of INORGANIC FERTILIZER you used on [FIELD]?	Discrete	numeric	1	0	1-7
V93	ag3a_47	What quantity of [FERTILIZER] did you use?	Continuous	numeric	5	0	1-50000
V94	ag3a_48	Did you receive a voucher/certificate for any of this [FERTILIZER]?	Discrete	numeric	1	0	1-2
V95	ag3a_49	What was the total value of [FERTILIZER] purchased? local currency	Continuous	numeric	7	0	0-5500000
V99	ag3a_52	Did you use any other INORGANIC FERTILIZER on [FIELD] in the recently completed season?	Discrete	numeric	1	0	1-2
V100	ag3a_53	What is the other type of INORGANIC FERTILIZER you used on [FIELD]?	Discrete	numeric	1	0	1-7
V101	ag3a_54	What quantity of [FERTILIZER] did you use?	Continuous	numeric	5	0	1-25000
V102	ag3a_55	Did you receive a voucher/certificate for any of this [fertilizer]?	Discrete	numeric	1	0	1-2
V103	ag3a_56	What was the total value of [FERTILIZER] purchased?	Continuous	numeric	7	0	0-1400000
V106	ag3a_58	Did you use any pesticide/herbicide on [FIELD] in the Long Rainy Season/Major Cropping Season of 2013?	Discrete	numeric	1	0	1-2
V107	ag3a_59	What was the main type of pesticide/herbicide that you applied?	Discrete	numeric	1	0	1-4
V108	ag3a_60_1	What quantity of this pesticide/herbicide did you use?	Continuous	numeric	7	2	0.1-3500

Vital Signs Agricultural Survey Protocol 2.0

Section 3. F

ownership status of the land, use of fertilizers or pesticides, inputs received on credit, and labor inputs) for most recent completed season.

V109	ag3a_60_2	What quantity of this pesticide/herbicide did you use?	Discrete	numeric	1	0	1-3
V110	ag3a_61	What was the total value of this pesticides/ herbicides purchased? local currency	Continuous	numeric	6	0	0-555000
V125	ag3a_70_id1	Land preparation and planting: HH ID #1 CODE	Discrete	numeric	2	0	1-99
V126	ag3a_70_1	Land preparation and planting: HH ID #1 DAYS	Continuous	numeric	2	0	0-90
V127	ag3a_70_id2	Land preparation and planting: HH ID #2 CODE	Discrete	numeric	2	0	1-99
V128	ag3a_70_2	Land preparation and planting: HH ID #2 DAYS	Continuous	numeric	2	0	0-90
V129	ag3a_70_id3	Land preparation and planting: HH ID #3 CODE	Discrete	numeric	2	0	1-99
V130	ag3a_70_3	Land preparation and planting: HH ID #3 DAYS	Continuous	numeric	2	0	0-90
V131	ag3a_70_id4	Land preparation and planting: HH ID #4 CODE	Discrete	numeric	2	0	2-99
V132	ag3a_70_4	Land preparation and planting: HH ID #4 DAYS	Continuous	numeric	2	0	0-60
V133	ag3a_70_id5	Land preparation and planting: HH ID #5 CODE	Discrete	numeric	2	0	2-99
V134	ag3a_70_5	Land preparation and planting: HH ID #5 DAYS	Continuous	numeric	2	0	0-60
V135	ag3a_70_id6	Land preparation and planting: HH ID #6 CODE	Discrete	numeric	2	0	3-99
V136	ag3a_70_6	Land preparation and planting: HH ID #6 DAYS	Continuous	numeric	2	0	1-60
V137	ag3a_70_id13	Weeding: HH ID #1 CODE	Discrete	numeric	2	0	1-99
V138	ag3a_70_13	Weeding: HH ID #1 DAYS	Continuous	numeric	2	0	0-90
V139	ag3a_70_id14	Weeding: HH ID #2 CODE	Discrete	numeric	2	0	1-99
V140	ag3a_70_14	Weeding: HH ID #2 DAYS	Continuous	numeric	2	0	0-90
V141	ag3a_70_id15	Weeding: HH ID #3 CODE	Discrete	numeric	2	0	1-99
V142	ag3a_70_15	Weeding: HH ID #3 DAYS	Continuous	numeric	2	0	0-90
V143	ag3a_70_id16	Weeding: HH ID #4 CODE	Discrete	numeric	2	0	1-99

Vital Signs Agricultural Survey Protocol 2.0

V144	ag3a_70_16	Weeding: HH ID #4 DAYS	Continuous	numeric	2	0	0-60
V145	ag3a_70_id17	Weeding: HH ID #5 CODE	Discrete	numeric	2	0	2-99
V146	ag3a_70_17	Weeding: HH ID #5 DAYS	Continuous	numeric	2	0	0-60
V147	ag3a_70_id18	Weeding: HH ID #6 CODE	Discrete	numeric	2	0	5-99
V148	ag3a_70_18	Weeding: HH ID #6 DAYS	Continuous	numeric	2	0	1-56
V149	ag3a_70_id37	Ridging, Fertilizing: HH ID #1 CODE	Discrete	numeric	1	0	1-9
V150	ag3a_70_37	Ridging, Fertilizing: HH ID #1 DAYS	Continuous	numeric	2	0	0-60
V151	ag3a_70_id38	Ridging, Fertilizing: HH ID #2 CODE	Discrete	numeric	2	0	2-10
V152	ag3a_70_38	Ridging, Fertilizing: HH ID #2 DAYS	Discrete	numeric	2	0	0-60
V153	ag3a_70_id39	Ridging, Fertilizing: HH ID #3 CODE	Discrete	numeric	2	0	1-12
V154	ag3a_70_39	Ridging, Fertilizing: HH ID #3 DAYS	Discrete	numeric	2	0	0-60
V155	ag3a_70_id40	Ridging, Fertilizing: HH ID #4 CODE	Discrete	numeric	2	0	3-11
V156	ag3a_70_40	Ridging, Fertilizing: HH ID #4 DAYS	Discrete	numeric	2	0	0-60
V157	ag3a_70_id41	Ridging, Fertilizing: HH ID #5 CODE	Discrete	numeric	2	0	3-15
V158	ag3a_70_41	Ridging, Fertilizing: HH ID #5 DAYS	Discrete	numeric	2	0	0-60
V159	ag3a_70_id42	Ridging, Fertilizing: HH ID #6 CODE	Discrete	numeric	2	0	6-18
V160	ag3a_70_42	Ridging, Fertilizing: HH ID #6 DAYS	Discrete	numeric	2	0	1-20
V161	ag3a_70_id25	Harvesting: HH ID #1 CODE	Discrete	numeric	2	0	1-99
V162	ag3a_70_25	Harvesting: HH ID #1 DAYS	Continuous	numeric	2	0	0-90
V163	ag3a_70_id26	Harvesting: HH ID #2 CODE	Discrete	numeric	2	0	1-99
V164	ag3a_70_26	Harvesting: HH ID #2 DAYS	Continuous	numeric	2	0	0-90
V165	ag3a_70_id27	Harvesting: HH ID #3 CODE	Discrete	numeric	2	0	1-99

Vital Signs Agricultural Survey Protocol 2.0

V166	ag3a_70_27	Harvesting: HH ID #3 DAYS	Continuous	numeric	2	0	0-90
V167	ag3a_70_id28	Harvesting: HH ID #4 CODE	Discrete	numeric	2	0	1-99
V168	ag3a_70_28	Harvesting: HH ID #4 DAYS	Continuous	numeric	2	0	0-90
V169	ag3a_70_id29	Harvesting: HH ID #5 CODE	Discrete	numeric	2	0	2-99
V170	ag3a_70_29	Harvesting: HH ID #5 DAYS	Continuous	numeric	2	0	0-90
V171	ag3a_70_id30	Harvesting: HH ID #6 CODE	Discrete	numeric	2	0	5-99
V172	ag3a_70_30	Harvesting: HH ID #6 DAYS	Continuous	numeric	2	0	1-90
V174	ag3a_72_1	Land preparation and planting: WOMEN DAYS	Continuous	numeric	2	0	0-97
V175	ag3a_72_2	Land preparation and planting: MEN DAYS	Continuous	numeric	2	0	0-96
V176	ag3a_72_21	Land preparation and planting: CHILDREN DAYS	Discrete	numeric	2	0	0-20
V177	ag3a_72_3	Land preparation and planting: TOTAL PAID WAGES (local currency)	Continuous	numeric	6	0	0-420000
V178	ag3a_72_4	Weeding: WOMEN DAYS	Continuous	numeric	2	0	0-99
V179	ag3a_72_5	Weeding: MEN DAYS	Continuous	numeric	2	0	0-99
V180	ag3a_72_51	Weeding: CHILDREN DAYS	Discrete	numeric	2	0	0-42
V181	ag3a_72_6	Weeding: TOTAL PAID WAGES (local currency)	Continuous	numeric	6	0	0-800000
V182	ag3a_72_61	Ridging, fertilizing: MEN DAYS	Discrete	numeric	2	0	0-21
V183	ag3a_72_62	Ridging, fertilizing: WOMEN DAYS	Discrete	numeric	2	0	0-16
V184	ag3a_72_63	Ridging, fertilizing: CHILDREN DAYS	Discrete	numeric	2	0	0-20
V185	ag3a_72_64	Ridging, fertilizing: TOTAL PAID WAGES (local currency)	Continuous	numeric	6	0	0-150000
V186	ag3a_72_7	Harvesting: WOMEN DAYS	Continuous	numeric	2	0	0-90
V187	ag3a_72_8	Harvesting: MEN DAYS	Continuous	numeric	2	0	0-99
V188	ag3a_72_81	Harvesting: CHILDREN DAYS	Discrete	numeric	2	0	0-70

Vital Signs Agricultural Survey Protocol 2.0

Section 4. Crops by Plot		V189	ag3a_72_9	Harvesting: TOTAL PAID WAGE (local currency)	Continuous	numeric	6	0	0-420000	
	This file contains data related to section 4 of the Agriculture questionnaire - crops planted and harvested, seeds used, and any unexpected losses experienced for most recent completed season.		V361	y2_hhid	Unique household Identifier	Discrete	character	16		
			V362	plotnum	FIELD Code	Discrete	character	3		
			V363	zaocode	Crop Code	Continuous	numeric	3	0	11-998
			V364	ag4a_01	Was crop planted in entire area of [FIELD]?	Discrete	numeric	1	0	1-2
			V365	ag4a_02	Approximately, how much of the FIELD was planted with [CROP]?	Discrete	numeric	1	0	1-3
			V367	ag4a_04	Was cultivation intercropped?	Discrete	numeric	1	0	1-2
			V368	ag4a_05	What is the reason for this intercropping?	Discrete	numeric	1	0	1-3
				ag4a_vs_5a_1	What was the planting Date of [CROP]? (Day)	Discrete	numeric	2	0	1-31
				ag4a_vs_5a_2	What was the planting Date of [CROP]? (Month)	Discrete	numeric	2	0	1-12
				ag4a_vs_5a_3	What was the planting Date of [CROP]? (Year)	Discrete	numeric	4	0	2013-2014
			V369	ag4a_06	Did you harvest any [CROP] on this FIELD in the Long Rainy Season/Major Cropping Season of 2013?	Discrete	numeric	1	0	1-2
			V371	ag4a_08	What was the area harvested in the Long Rainy Season/Major Cropping Season of 2013?	Continuous	numeric	5	2	0-50
			V379	ag4a_15	What was the quantity harvested?	Continuous	numeric	7	0	0-6000000
			V380	ag4a_16	What is the estimated value of the harvested crop? local currency	Continuous	numeric	8	0	0-24000000
			V383	ag4a_19	Did you purchase any SEED for [CROP] in the Long Rainy Season/Major Cropping Season of 2013?	Discrete	numeric	1	0	1-2

Vital Signs Agricultural Survey Protocol 2.0

	V385	ag4a_21	What was the total value of seeds purchased? local currency	Continuous	numeric	7	0	0-1400000	
	V388	ag4a_23	What type of seed did you purchase?	Discrete	numeric	1	0	1-2	
Section 5. Crop Production and Sales	V419	y2_hhid	Unique Year HH ID	Discrete	character	16			
	V420	zaocode	CROP CODE	Discrete	numeric	3	0	11-998	
	V421	ag5a_01	Did you sell any of the [CROP] produced in the most recent completed season?	Discrete	numeric	1	0	1-2	
	V422	ag5a_02	What was the quantity sold?	Continuous	numeric	8	0	100-10500000	
	V423	ag5a_03	What was the total value of the sales?	Continuous	numeric	7	0	252-9100000	
		ag5a_12_1	During which month did you sell most of [CROP] ?	Discrete	numeric	2	0	0-12	
		ag5a_12_2	During which month did you sell most of [CROP] ?	Continuous	numeric	4	0	0-2011	
	V445	ag5a_20	Was any portion of this production lost post-harvest to rotting, insects, rodents, theft, etc?	Discrete	numeric	1	0	1-2	
	V446	ag5a_21	What was the reason for the loss?	Discrete	numeric	1	0	1-5	
	V448	ag5a_22	Out of 10 units of [CROP], how many were lost?	Discrete	numeric	2	0	0-20	
	V449	ag5a_24	What was done with the residue from this crop?	Discrete	numeric	1	0	0-8	
	V450	ag5a_25	What was the quantity sold?	Continuous	numeric	4	0	0-5000	
	V451	ag5a_26	What was the total value of the sales?	Continuous	numeric	6	0	0-200000	
	ield	V501	y2_hhid	Unique Household Identifier	Discrete	character	16		
		V502	plotnum	FIELD ID	Discrete	character	2		
V503		zaocode	Crop Code	Continuous	numeric	3	0	18-998	
V504		ag6a_01	Crop Name	Discrete	character	17			

Vital Signs Agricultural Survey Protocol 2.0

Section 6. Permanent Crops By Field	This file contains data related to section 6 of the Agriculture questionnaire - age of plants, agricultural practices, quantity harvested and unexpected losses for fruit crops.	V505	ag6a_02	How many of these plants/trees are on this FIELD?	Continuous	numeric	5	0	1-30000
		V508	ag6a_05	Was cultivation intercropped during the most recent completed season?	Discrete	numeric	1	0	1-2
		V514	ag6a_08_1	What was the total amount of [FRUIT] harvested in the past 12 months?	Continuous	numeric	6	0	0-280000
			ag6a_08_2	What was the total amount of [FRUIT] harvested in the past 12 months?	Discrete	numeric	1	0	1-7
		V515	ag6a_vs_09	What was the estimated value of the total amount of [Fruit] harvested in the past 12 months?	Continuous	numeric	6	0	0-200000
Section 7. Permanent Crops	This file contains data related to section 7 of the Agriculture questionnaire - quantity and value of crop sale, post-procudeion losses and storage for fruit crops.	V533	y2_hhid	Unique Household Identifier	Discrete	character	16		
		V534	zaocode	Fruit Tree Code	Discrete	numeric	3	0	18-998
		V535	ag7a_01	Fruit Tree Name	Discrete	character	16		
		V536	ag7a_02	Did you sell any of the [FRUIT] collected?	Discrete	numeric	1	0	1-2
		V537	ag7a_03_1	What was the total quantity sold?	Continuous	numeric	6	0	3-162000
			ag7a_03_2	What was the total quantity sold?	Discrete	numeric	2	0	1-25
		V538	ag7a_04	What was the total value of [FRUIT] sold? local currency	Continuous	numeric	7	0	30-2000000
		V613	y2_hhid	Unique Household Identifier	Discrete	character	16		
		V614	ag09_02_1	Crop Name	Discrete	character	12		
		V615	zaocode	Crop Code	Discrete	numeric	2	0	2-998
		V616	ag09_02_3	Processed / By-Product	Discrete	numeric	1	0	1-2
		V617	ag09_03	What is the by-product produced from this crop?	Discrete	numeric	2	0	1-18

Vital Signs Agricultural Survey Protocol 2.0

Section 9. By- Products	This file contains data related to section 9 of the Agriculture questionnaire - agricultural products that were processed during the last 12 months, including the cost and value at sale.	V618	ag09_04_1	What is the quantity produced in the last 12 months? AMOUNT	Continuous	numeric	5	0	0-18000
		V619	ag09_04_2	What is the quantity produced in the last 12 months? UNIT	Discrete	numeric	1	0	1-2
		V620	ag09_05	Was any [BY-PRODUCT] sold?	Discrete	numeric	1	0	1-2
		V621	ag09_06_1	AMOUNT	Continuous	numeric	4	0	6-4800
		V622	ag09_06_2	How much was sold? UNIT	Discrete	numeric	1	0	1-2
		V623	ag09_07	How much [CROP] did you use as input for the sold [BY-PRODUCT]?	Continuous	numeric	4	0	0-4200
		V624	ag09_08	What was total sales? local currency	Continuous	numeric	7	0	1000-1080000
		V625	ag09_vs_8a	Did you give out [BY-PRODUCT] for inkind/barter?	Discrete	character	2		
		V626	ag09_vs_8b_1	How much was given away?	Discrete	character	1	0	1-2
			ag09_vs_8b_2	How much was given away?	Continuous	numeric	4	0	0-4200
		V627	ag09_10	Did you incur any other expenses such as labor costs...?	Discrete	numeric	1	0	1-2
		V628	ag09_11	these additional expenses? local currency	Continuous	numeric	6	0	2-400000
		V629	y2_hhid	Unique Year HH ID	Discrete	character	16		
		V630	lvstrcode	LIVESTOCK CODE	Discrete	numeric	2	0	1-16
V631	ag10a_02	Did this household own any [ANIMAL] in the last 12 months (cows, goats, chicken, ducks)?	Discrete	numeric	1	0	1-2		
V634	ag10a_05_1	How many [ANIMAL] does this household currently own? Indig	Continuous	numeric	3	0	0-210		

Vital Signs Agricultural Survey Protocol 2.0

Section 10A. Livestock	This file contains data related to section 10A of the Agriculture questionnaire - livestock owned by the household during the last 12 months, caretaking practices, and unexpected losses.								
	V635	ag10a_05_2	How many [ANIMAL] does this household currently own? Beef	Continuous	numeric	3	0	0-528	
	V636	ag10a_05_3	How many [ANIMAL] does this household currently own? Dairy	Continuous	numeric	7	0	0-8750000	
	V650	ag10a_19	Have you sold any [ANIMAL] alive in the past 12 months?	Discrete	numeric	1	0	1-2	
	V651	ag10a_20	How many [ANIMAL] have you sold alive in the past 12 months	Continuous	numeric	4	0	0-2220	
	V652	ag10a_21	What was the total value of sales?	Continuous	numeric	7	0	0-8436000	
	V657	ag10a_24	Did you slaughter any [ANIMAL] in the past 12 months?	Discrete	numeric	1	0	1-2	
	V658	ag10a_25	How many [ANIMAL] did you slaughter in the past 12 month	Continuous	numeric	2	0	1-96	
	V659	ag10a_26	How many of the [ANIMAL] slaughtered did you sell?	Continuous	numeric	2	0	0-70	
	V660	ag10a_27	What was the total value of the sold slaughtered [ANIMAL]	Continuous	numeric	6	0	1-770000	
	V671	ag10a_33	Did you hire any labor to help you with the [ANIMAL] in	Discrete	numeric	1	0	1-2	
	V672	ag10a_34	What was the total cost of this labor for [ANIMAL] in the past 12 months?	Continuous	numeric	6	0	0-800000	
	Products	V685	y2_hhid	Unique Household Identifier	Discrete	character	16		
		V686	itemcode	Product Code	Discrete	numeric	2	0	1-12
V687		ag10b_01	Did your household produce any [PRODUCT] in the last 12 months?	Discrete	numeric	1	0	1-2	

Vital Signs Agricultural Survey Protocol 2.0

Section 10B, Livestock By-Products	This file contains data related to section 10B of the Agriculture questionnaire - quantity and value of livestock byproducts produced by the household during the last 12 months.	V692	ag10b_05_1	[PRODUCT] produced did you sell in the last 12 months? QUANTITY	Continuous	numeric	5	0	1-18000
		V693	ag10b_05_2	How much of the [PRODUCT] produced did	Discrete	numeric	1	0	1-3
		V694	ag10b_06	What was the total value of	Continuous	numeric	7	0	100-5400000
			ag10b_vs_05_1	How much of the [Product] did you consume in the last	Continuous	numeric	5	0	1-18000
			ag10b_vs_05_2	did you consume in the last 12 months? Unit	Discrete	numeric	1	0	1-3
			ag10b_vs_06	sales of [PRODUCT] in the last 12 months?	Continuous	numeric	7	0	100-5400000
Section 10, Livestock By Field	Fields or areas used for livestock		y2_hhid	Unique Year HH ID	Discrete	character	16		
			ag10_vs_1	Did livestock graze on this field during the Long Rainy Season/Major Cropping Season of 2013?	Discrete	numeric	1	0	1-2
			ag10_vs_2	Indicate the animals that were grazed on each field in the Long rainy season/Major Cropping Season in 2013?	Discrete	numeric	2	0	1-52
			ag10_vs_3	When do they graze on the field	Discrete	numeric	1	0	1-3
Section 11, Farm Implements	This file contains data related to section 11 of the Agriculture questionnaire - farm equipment owned or used by the household during the last 12 months.	V708	y2_hhid	Unique 16digit HH ID	Discrete	character	16		
		V709	itemcode	Item Code	Discrete	numeric	2	0	1-14
		V710	ag11_01	How many [ITEM] does the household own?	Continuous	numeric	2	0	0-86
		V715	ag11_07	household rent or borrow in the last 12 months?	Continuous	numeric	2	0	1-32
		V719	y2_hhid	Unique Year 2 HH ID	Discrete	character	16		
		V720	sourceid	Source Id	Discrete	numeric	1	0	1-5
		V721	ag12a_0b	Source of extension	Discrete	character	25		

Vital Signs Agricultural Survey Protocol 2.0

Section 12. Extension	This file contains data related to section 12 of the Agriculture questionnaire - interaction with governmental and non-governmental extension agents.							
	V722	ag12a_01	Did you receive advice for your agricultural/livestock activities from any of the following sources in the past	Discrete	numeric	1	0	1-2
	V723	ag12a_02_1	advice from [SOURCE]	Discrete	numeric	1	0	1-2
	V724	ag12a_02_2	advice from [SOURCE]	Discrete	numeric	1	0	1-2
	V725	ag12a_02_3	advice from [SOURCE]	Discrete	numeric	1	0	1-2
	V726	ag12a_02_4	advice from [SOURCE]	Discrete	numeric	1	0	1-2
	V727	ag12a_02_5	2E. Did you receive any advice from [SOURCE] about...?	Discrete	numeric	1	0	1-2
	V728	ag12a_02_6	2F. Did you receive any advice from [SOURCE] about...?	Discrete	numeric	1	0	1-2
	V729	ag12a_03	How would you rate the advice received?	Discrete	numeric	1	0	1-3
	V730	ag12a_04	Did you pay anything in order to receive the advice?	Discrete	numeric	1	0	1-2
	V731	ag12a_05	How much did you pay?	Continuous	numeric	6	0	300-200000
	V733	y2_hhid	Unique Year 2 HH ID	Discrete	character	16		
	V734	ag12b_0a	Source ID	Discrete	numeric	1	0	1-8
	V735	ag12b_0b	Source Name	Discrete	character	20		
	V736	ag12b_07	In the past 12 months did anyone in your household receive any information about agricultural prices from [SOURCE]?	Discrete	numeric	1	0	1-2
V737	ag12b_08	Did you pay anything in order to receive the advice?	Discrete	numeric	1	0	1-2	
V738	ag12b_09	How much did you pay?	Continuous	numeric	6	0	300-182500	
	ag12b_vs_09a	your household a member of a microfinance or saving group?	Discrete	numeric	1	0	1-2	
	ag12a_vs_10	finance or credit group that you received assistance from	Discrete	character	16			



Vital Signs Protocol

Farm Field Soil Sampling and Processing

Version 1.0

March 2014

ACKNOWLEDGMENTS

The Vital Signs team would like to thank Keith Shepherd for his discussions and sharing farm sampling protocols.

CONTENTS

1. INTRODUCTION	261
<u>1.1 Definitions of Key Technical Terms</u>	262
<u>1.2 Standard Conventions</u>	262
2. ROLES AND RESPONSIBILITIES	263
3. EQUIPMENT LIST	264
4. FIELD SELECTION	265
<u>4.1 Selection of Major Staple Crop Field for Soil</u> <u>Sampling</u>	266
<u>4.2 Selection of Second Crop Field for Soil</u> <u>Sampling</u>	270
<u>4.3 Example Selection of a Field for Soil Sampling</u> ...	271
5. QUESTIONS FOR SELECTED FIELDS	274
6. IN-FIELD MEASUREMENTS	276
7. BIBLIOGRAPHY	280
8. APPENDICES	281
<u>8.1 Appendix 1: Random Number Table</u>	281
<u>8.2 Appendix 2: Farm Field Soils Data Entry Form</u> ...	282
<u>8.3 Appendix 3: Farm Field Soils Data Dictionary</u>	283

1. INTRODUCTION

Soils will be sampled and analyzed from farm fields where the most common staple and cash crops of the region are grown. Topsoil (0 to 20 cm) will be sampled in a maximum of three agricultural fields per farm that have been identified through the Agricultural Management Survey. The location of the fields that will be sampled for soils will be determined based on the timing of the administration of the agricultural management survey and crop harvest measurements.

- **If the survey is administered during crop harvest season**, the soil sample should be taken from the quadrat where the crop harvest measurement was taken (as described in the crop harvest protocol).
- If, however, this is not the case, then the fields from which soil will be sampled will be determined according to the following protocol.

1.1 Definitions of Key Technical Terms

Soil texture: the amount of sand, silt and clay in the soil. Texture is important for determining many soil properties, including soil aggregation and structure, which influence water and air movement through the soil.

Soil health: an assessment of the soil chemical and physical conditions that determine the suitability for plant growth.

Soil nutrients: Plants require 16 nutrients for growth. The major ones (macronutrients) are nitrogen (N), phosphorus (P), sulfur (S), potassium (K), calcium (Ca), magnesium (Mg). In addition, there are many micronutrients that are required in small quantities. If any of these nutrients are at levels insufficient for the plant, then plant growth will be inhibited and yields will be reduced.

Soil pH: the reaction of a soil is measured by pH. Optimal pH for crop growth is between 5.5 and 7.5. Soils with a pH less than 5.5 are considered acidic due to the presence of exchangeable aluminium that affects root growth and the uptake of nutrients.

Soil organic matter content: a critical component of the soil that determines the nutrient supplying and storage capacity. Soil organic matter influences the aggregation of smaller particles and the structure of soil, which in turn determines the movement and storage of water in the soil. The structure of the soil is also important for protecting the soil from erosion.

1.2 Standard Conventions Used in this Document

The following conventions are used throughout this document:

- The use of bold in the text indicates a critical point. **Please pay special attention to terms, sentences and paragraphs marked in bold** as they are key to the understanding of the protocol.

2. ROLES AND RESPONSIBILITIES

The following table introduces the roles and responsibilities of the members of a Vital Signs field team:

Role	Responsibility
Country Director	<ul style="list-style-type: none"> • Supports team with a complete understanding of the protocol manual • Trains technicians • Leads technicians in fieldwork and sampling, and assists with measurements as required
Technical Manager	<ul style="list-style-type: none"> • Supervises teams • Ensures equipment is well-managed and team is safe • Ensures consistency and quality of measurements • Ensures data are uploaded to the VS server daily (or weekly if internet access is limited) • Ensures back-ups and data entry sheets are properly archived
Enumerators	<ul style="list-style-type: none"> • Conduct interviews • Perform soil sampling in fields • Enter and uploads data

	<ul style="list-style-type: none"> • Clean and store equipment
Africa Field Director	<ul style="list-style-type: none"> • Helps train technicians and ensures consistency of protocol implementation across Vital Signs countries • Reviews data when uploaded • Approves protocol updates and sends out update notifications to field teams
Protocol Manager	<ul style="list-style-type: none"> • Receives and archives comments about the protocol from the field team • Updates and re-circulates the protocol

3. EQUIPMENT LIST

The following equipment is required to carry out the activities described in this manual. Before traveling to the field to carry out sampling, use this list to ensure you have all the equipment needed for the day.

If a tablet is been used to record data, at least one on-site backup to a laptop and, preferably, at least one off-site backup should be made at the end of each day.

Each interviewer should have the following on their person:

- Identity card
- Letter of introduction
- Instructional book/manual (for interviewer and for questionnaire)
- Paper Questionnaire
- Tablet with form downloaded
- Pencil, rubber eraser, and sharpener
- Writing board and notebook
- Compass
- Sampling plate (optional, as long as there is other means for estimating the 120° angle between subplots)
- Soil probe (sufficient to sample to 20 cm depth)

4. FIELD SELECTION

Two fields per household will be selected randomly.

- The **first field will be selected from one of the top three staple crops grown in the location**, and only if that field is a pure monoculture of that

crop as identified in the Agricultural Management Survey (see Table 1).

- The **second field will be selected from all remaining agricultural fields**. If the household does not have any pure, monoculture major staple crop fields, then the two fields will be selected randomly from the full list of agricultural fields identified in the Agricultural Management Survey.
- Note that **only fields larger than 10 m x 10 m should be eligible for sampling soils**.

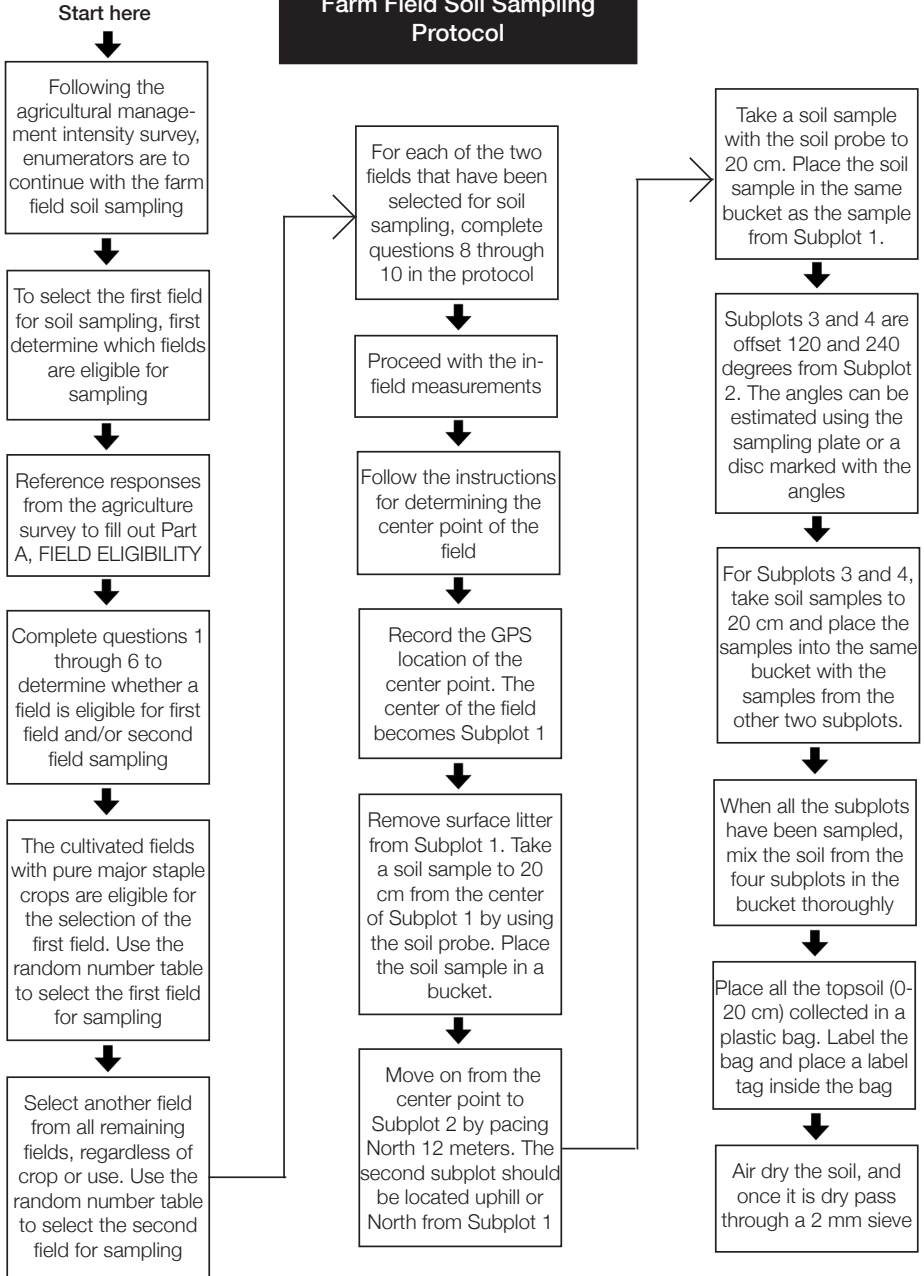
4.1 Selection of Major Staple Crop Field for Soil Sampling

To select the first field for soil sampling, the enumerator must first determine which fields are eligible for sampling. This is accomplished by completing Section 13: SOIL DATA ENTRY, Part A, FIELD ELIGIBILITY. This should occur after the agricultural survey, and does not require the participation of any household respondent.

The enumerator should reference responses from the agriculture survey to fill out Part A, FIELD ELIGIBILITY. Match each field ID in Section 13 to each field ID from Section 2, FIELD ROSTER (from the agriculture survey).

Vital Signs Farm Field Soils Protocol 1.0

Workflow 1: Farm Field Soil Sampling Protocol



Question 1: *Is this field size larger than 100 m²? (or 0.025 acres)*

The enumerator determines if the field is larger than 100 m² (0.025 acres). The enumerator should reference the agriculture survey, Section 2, FIELD ROSTER, Question 3, AREA (ACRES) FARMER'S ESTIMATE. If the field is larger than 0.025 acres, this question should be marked '1.' If not, it should be marked '2,' and the enumerator should move on to the NEXT FIELD.

Question 2: *Was the field cultivated during the current or most recently completed season?*

The definition for cultivated fields are the same definitions from the agriculture survey, Section 2, FIELD ROSTER, Question 2b1, "What was the use of this field during the Long Rainy Season/Major Cropping Season of 2013", and 2c, "What is the use of this field during the previous Short Rainy Season/Minor Cropping Season?" **However, we are now asking about current activity on the field.** If, at the time of survey, the farm is in between cultivation seasons (planting through harvesting), please reference the most recently completed season. If the field was CULTIVATED, this question should be marked '1.' If not, it should be marked '2,' and the enumerator should skip to Question 6.

Question 3: *Was one of the 3 major crops [insert 3 major crops] grown on this field during the current or most recently completed season?*

The definitions for major crops are the same definitions from the agriculture survey, Section 2, FIELD ROSTER, question 2b2, “What was the main crop cultivated on this field during the Long Rainy Season/Major Cropping Season of 2013” and question 2d1, “What was the main crop cultivated on this field during the Short Rainy Season/Minor Cropping Season?” **However, we are now asking about current activity on the field.** If, at the time of survey, the farm is in between cultivation seasons (planting through harvesting), please reference the most recently completed season. If the reported crop is one of the major crops, this question should be marked ‘1.’ If not, it should be marked ‘2,’ and the enumerator should skip to Question 6.

Question 4: *Is this field a pure stand/monoculture?*

The enumerator may reference the agriculture survey, Section 4, CROPS BY FIELD, Question 3, “Was cultivation intercropped?” as an initial guide for the question. If the reported crop is pure stand/ monoculture, this question should be marked ‘1.’ If not, it should be marked ‘2,’ and the enumerator should skip to Question 6.

Question 5: *Is this field eligible for testing for first field?*

The enumerator should refer back to the responses for questions 1-4. Mark ‘1’ in question 5 if both:

- Question 1, 2, 3 and 4 are marked ‘1’

Question 6: *Is this field eligible for testing for second field?*

Mark '1' in Question 6 if question 1 and question 2 have been marked '1.'

Question 7: Is this field selected for testing?

Recall that only two fields will be selected for testing. We will randomly select one field that is eligible from Question 5, and one field that is eligible from Question 6.

Random selection of first crop field for soil sampling:

The cultivated fields with pure major staple crop are marked with "1" (Question 5) and are eligible for the selection of the first field (major staple crop).

- In order to select the field you will need to have a **random number table** with you (provided by the supervisor, example in Appendix 1).

Reading left to right in the row of the random number table, keep moving to the right until you find a number that matches the field ID number of one of the eligible major staple crop fields (see the example of how to do this below). Cross out this number on the random number table and mark a '1' in Question 7 for the selected field.

Note: if there is only one major staple crop field in the household, select that field by default.

4.2 Selection of Second Crop Field for Soil Sampling

Second, select another field from all remaining fields, regardless of crop or use. All these fields are marked with

“1” (Question 6) and are eligible for selection as the second field.

On the same random number table, start again at the left hand side of the random number row, looking for the first number that matches the field ID number of any of the fields. Cross out the entire line on the random number table, and mark a ‘1’ in Question 7 for the selected field. You must not select the same field as the first selection.

If there is **no pure major staple crop field in the household, select two random fields** using the same method as described above.

Note: do not use the same number line for multiple households. After randomly selecting the second field, make sure to use the next line in the random number table for new households.

4.3 Example Selection of a Field for Soil Sampling

The fields eligible for the first field selection are chosen from those that are larger than 100m² (Question 1), cultivated (Question 2), and have one or more of the three primary staple crops (Question 3).

In this case, let’s say that the crops for this location are maize, sorghum, and beans. In this example major staple crop fields have maize, sorghum or tomatoes. Next you must determine if that crop is planted in monoculture (Question 4). In this case only fields M1 and M3 are eligible to be selected as the first field for soil sampling. Finally, we mark all the eligible first fields for selection

Vital Signs Farm Field Soils Protocol 1.0

(Question 5). Now to randomly select which field, follow the step below (see Section 13.A, FIELD ELIGIBILITY).

Use the random number table provided by the supervisor, starting with the first row. To select the major staple crop field, look for the first number in the random number table that matches the field ID number of the eligible fields. In this example, the only eligible fields are M1 and M3. The first number that matches is number 1 – this field will be selected for soil sampling.

9	7	1	4	3	2
---	---	---	---	---	---

Next, we select the second field for testing from all remaining fields, regardless of crop. We mark with “1” all the fields that are eligible for selection of the second field (Question 6). Field 1 is excluded, since it was already selected as a major crop for testing. This leaves field 3 and field 4 for selection. Looking at the random number table and starting again from left to right, number 4 is the first number that matches the field ID number of one of the fields.

9	7	1	4	3	2
---	---	--------------	---	---	---

Once the first and second fields have been randomly selected, we indicate them in Question 7.

FIELD ID	<p>1 Is this field size larger than 100m²? (or 0.025 acres) YES . 1 NO . . 2 ▶ NEXT FIELD USE q3 FROM SECTION 2.FIELD ROSTER</p>	<p>2 Was the field cultivated during the Current or most recently completed Season? YES . . 1 NO . . . 2 ▶ 6 USE q2b1 or q2c FROM SECTION 2.FIELD ROSTER</p>	<p>3 Was one of the 3 major crops - insert 3 major crops - grown on this field during the Current or most recently completed Season? YES . 1 NO . . 2 ▶ 6 USE q2b2 or q2d1 FROM SECTION 2.FIELD ROSTER</p>	<p>4 Is this field purestand/ monoculture? YES . 1 NO . . 2 ▶ 6 USE q3 FROM SECTION 4.CROPS BY FIELD</p>	<p>5 Is this field eligible for testing for first field? MARK WITH "1" IF ELIGIBLE</p>	<p>6 Is this field eligible for testing for second field? MARK WITH "1" IF ELIGIBLE ▶ NEXT FIELD</p>	<p>7 Is this field selected for testing? YES . . . 1 NO 2</p>
M1	1	1	1 (maize)	1	1	1	1
M2	2						
M3	1	1	1 (sorghum)	1	1	1	
M4	1	1	2 (tomatoes)			1	1
M5	1	2					

5. QUESTIONS FOR SELECTED FIELDS

For each of the two fields that have been selected for soil sampling, ask the following questions in Section B, Soil Measurements.

Field ID

Write down the Field ID of the selected field in Section B, Soil Measurements. For example, if in the previous section, field 'm1' is marked a '1' in Question 7, then write 'm1' in Field ID in Section B.

Question 8: *Slope*

Ask the respondent about the slope of the field. Is it flat, with moderate slope, or with steep slope?

- Flat (<8%)
- Moderate slope (8-22%)
- Steep slope (>22%)

Question 9: *Erosion*

Erosion refers to the loss of topsoil from rain, wind, animals or people. Indicate yes if all or some of the field is suffering from erosion.

Are there visible signs of soil erosion (sheet, rill or gully)?

Soil erosion:

- 1 None

Vital Signs Farm Field Soils Protocol 1.0

- 2 Slight
- 3 Moderate
- 4 Severe

Ask the respondent if he is using any methods to prevent erosion on the field. Also ask about the main method used to protect the field from erosion and record the code.

Question 10: *Surface condition score (0-10)*

This question is derived from the soil condition questions for the E-plot sampling, but instead of applying it to a one-meter quadrat apply it to the circular plot (Figure 2) from which the four soil samples are taken.

Please indicate the cover of each in the circular plot, where 1=10%, 2=20%, ..., 10=100%. If no cover is present, it should be left blank.

- Rooted plants
- Litter cover
- Downed wood
- Stone or gravel
- Dung
- Disturbed soil (generally means tilled)
- Undisturbed, bare & porous soil
- Undisturbed, bare but sealed soil
- Sodic soil
- Microfloral crust
- Termite mound

6. IN-FIELD MEASUREMENTS

For ease of sampling, the soil sample will be taken near the center of the plot.

1. Measure the length and width of the field.
2. Pace off half the distance along the length of the field and walk into the field perpendicular to the border and pace off half the width. **This will be the center point of the field.**
3. **Record the GPS location of the center point.** The center of the field becomes the center plot, and is referred to as Subplot 1
4. Offset the center point to avoid the following conditions:
 - a. **There are obstacles in that location** such as trees, soil conservation structures, a rocky surface
 - b. **The point is not representative of the main part of the field.** For example, if a small section of the field (less than 10%) appears to be prone to flooding; has slope significantly different from the other part of the field; has shallow or superficial rocky layer such as laterite that is not found in the rest of the field, etc. **Make sure the sampling point is at least 2 meters from**

the edge of the field. If it is not then move the point directly into the field, perpendicular to the field border to the 2 meter limit.

5. Remove surface litter from Subplot 1. **Take a soil sample to 20 cm from the center of Subplot 1** by using the soil probe.
6. Place the soil sample in a bucket.
7. Record auger depth restrictions (in cm), if present.
8. **Move on from the center point to Subplot 2 by pacing 12 meters** (or using a measuring tape or a pre-marked chain). This second subplot should be located directly uphill from the center point (if there is no slope, then move North from the center to Subplot 2).
9. Take a soil sample with the soil probe to 20 cm.
10. Place the soil sample in the same bucket as the sample from Subplot 1.
11. **Subplots 3 and 4 are offset 120 and 240 degrees from Subplot 2**, respectively. The angles can be estimated using the sampling plate or a disc marked with the angles as indicated in Figure 1.

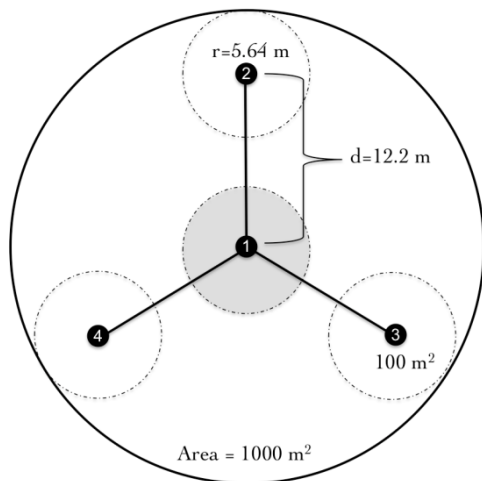


Figure 1. Sample plot layout in agricultural fields, with four subplots (dotted circles). Subplots have a radius of 5.64 m (area = 100 m²), and the distance along the radial arms between the subplot centers is 12.2 m. The whole plot has a radius of 17.84 m (area = 1000 m²). The angles can be measured using a compass or the sampling plate (Figure 1) can be placed over the center sampling point and marked and used to locate subplots 2, 3 and 4.

12. For Subplots 3 and 4, take soil samples to 20 cm and place the samples into the same bucket with the samples from the other two subplots.

Note: If one of the sub-plots falls outside of the agricultural field, place the sub-plot 2 m within the farm field boundary.

Vital Signs Farm Field Soils Protocol 1.0

13. When all the subplots have been sampled, mix the soil from the four subplots in the bucket thoroughly.
14. Place all the topsoil (0-20 cm) collected in a plastic bag. Label the bag and place a label tag inside the bag. Label the bags with: Site name/code, HHID, field number, depth of sample, and date of sampling.
15. Air dry the soil as described for the E-plot soil health samples, and once it is dry pass through a 2 mm sieve. Place the soil in a plastic bag with a label on the inside and outside with the label code. Include site name/code; HHID, field number, depth of sample, date of sampling.

7. BIBLIOGRAPHY

Brady, N. C. and R. R, Weil. 2008. *The Nature and Properties of Soils*. Pearson Publishing.

8. APPENDICES

Appendix 1: Random Number Table

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1	8	0	9	4	2	5	2	5	8	2	4	7	1	3	4	7	7	4	3	3	3	6	2	0	1	8	9	7	2	1	3	4
2	3	5	6	3	2	1	9	8	8	2	1	1	9	0	4	5	2	6	1	8	2	7	5	1	2	6	2	7	1	0	9	5
3	1	3	3	0	6	3	3	1	3	7	5	3	9	6	9	3	8	7	3	8	6	8	1	5	1	5	3	8	8	5	4	3
4	3	5	6	5	0	0	1	6	2	2	4	3	6	4	3	2	4	7	9	6	6	0	9	5	5	2	8	3	1	6	2	0
5	7	8	5	0	5	9	2	5	5	5	8	8	7	3	1	1	2	1	9	2	4	5	4	5	3	5	3	0	5	5	8	9
6	4	4	9	0	5	4	1	7	9	7	2	7	6	1	5	3	5	9	0	1	4	8	7	8	9	9	8	0	9	8	7	7
7	6	5	4	6	9	1	0	4	9	3	1	8	8	8	1	9	7	5	3	7	2	7	8	5	9	3	7	3	2	4	4	5
8	3	8	2	6	5	9	9	5	1	2	1	5	9	7	5	3	9	2	2	3	5	6	6	8	2	9	4	4	2	8	8	9
9	4	8	6	5	4	8	2	0	7	5	5	4	0	6	1	2	9	6	8	3	4	2	5	1	9	1	3	8	1	7	0	9
10	6	4	9	8	7	5	1	9	0	4	7	4	7	8	1	8	6	8	3	2	9	6	8	3	9	8	7	2	4	0	9	0
11	6	7	2	2	9	8	6	9	9	3	6	1	7	8	7	5	4	8	8	3	1	3	1	5	9	6	7	9	8	8	3	4
12	9	7	4	8	5	9	3	2	5	1	1	5	2	7	2	1	0	0	3	3	9	3	0	3	9	7	1	3	4	0	1	2
13	5	6	4	1	1	4	1	7	1	4	1	9	7	4	3	4	8	1	6	5	7	3	6	8	1	2	1	8	5	0	3	9
14	7	4	4	4	9	2	0	0	8	8	4	0	5	8	8	2	4	3	9	8	3	9	0	4	9	1	9	9	9	3	3	6
15	8	2	7	9	3	0	1	9	4	6	7	2	3	7	4	3	3	9	7	9	4	6	8	9	9	0	2	1	6	9	9	0
16	0	1	6	1	7	6	1	7	1	0	2	4	2	3	8	7	2	8	9	1	6	6	7	7	1	5	8	5	2	4	8	2
17	7	3	8	8	9	7	5	9	7	5	5	5	6	6	2	4	9	9	7	7	2	0	0	8	5	5	9	6	9	7	4	0
18	7	8	3	0	4	7	1	4	3	6	9	5	2	9	1	9	1	8	0	4	4	0	4	4	1	0	3	4	2	5	9	7
19	9	8	8	7	4	2	1	6	6	5	2	6	4	5	3	5	8	4	3	0	5	2	7	0	9	6	0	5	0	7	6	8
20	1	2	6	1	2	5	1	6	8	5	6	9	2	3	1	0	3	9	3	9	8	7	0	3	9	8	4	1	0	3	5	3
21	3	9	4	7	4	9	3	7	7	6	3	4	2	5	4	3	6	2	3	9	7	4	5	5	2	0	5	5	7	7	9	5
22	4	5	5	0	8	1	0	3	1	2	5	0	2	3	0	4	1	1	3	8	9	7	8	8	9	1	4	4	4	5	2	6
23	1	3	4	4	9	6	9	7	2	3	8	3	6	9	7	6	6	2	5	1	4	2	0	1	2	0	3	8	6	5	5	2
24	8	9	7	6	5	8	2	3	8	4	8	7	0	4	5	0	3	1	0	6	9	1	6	6	2	7	1	7	7	6	0	1
25	7	7	1	0	9	9	4	3	6	9	7	8	8	2	7	3	9	7	1	4	9	7	0	0	1	5	6	6	2	8	8	9
26	8	9	5	9	6	0	0	8	8	4	4	2	2	2	8	2	1	5	2	4	2	5	1	7	5	8	1	8	0	0	8	1
27	7	9	4	1	2	3	1	2	2	4	3	1	6	7	0	2	9	9	8	4	3	4	6	9	3	0	8	5	4	7	6	2
28	2	2	8	4	0	8	9	6	9	1	0	7	5	5	4	2	7	3	1	9	3	7	8	2	1	0	6	8	9	5	7	4
29	9	5	9	4	7	4	1	8	9	3	6	5	6	0	4	5	1	1	5	3	5	9	1	6	9	5	9	9	1	1	4	3
30	4	6	1	3	8	5	4	9	6	3	6	9	3	2	0	8	5	1	0	9	9	6	8	0	1	1	6	6	6	1	3	3

<p style="margin: 0;">Vital Signs</p> <p style="margin: 0;">FARM FIELD</p> <p style="margin: 0;">Soil Data</p>	1. REGION ID:	<input type="text"/>	<input type="text"/>	5. HHID _____
	2. DISTRICT	<input type="text"/>	<input type="text"/>	ENUMERATOR:
	3. WARD	<input type="text"/>	<input type="text"/>	6. FIRST _____
	4. LANDSCAPE	<input type="text"/>	<input type="text"/>	7. LAST _____
	4a. E-PLOT ID	<input type="text"/>	<input type="text"/>	<input type="text"/>

A.FIELD ELIGIBILITY

FIELD ID	1	2	3	4	5	6	7
	<p>Is this field size larger than 100m²? (or 0.025 acres)</p> <p>YES . 1 NO . . 2 ▶ NEXT FIELD</p> <p><small>USE q3 FROM SECTION 2.FIELD ROSTER</small></p>	<p>Was the field cultivated during the Current or most recently completed Season?</p> <p>YES . . 1 NO . . . 2 ▶ 6</p> <p><small>USE q2b1 or q2c FROM SECTION 2.FIELD ROSTER</small></p>	<p>Was one of the 3 major crops grown on this field during the Current or most recently completed Season?</p> <p>YES . 1 NO . . 2 ▶ 6</p> <p><small>USE q2b2 or q2d1 FROM SECTION 2.FIELD ROSTER</small></p>	<p>Is this field purestand/ monoculture?</p> <p>YES . 1 NO . . 2 ▶ 6</p> <p><small>USE q3 FROM SECTION 4.CROPS BY FIELD</small></p>	<p>Is this field eligible for testing for first field?</p> <p>MARK WITH "1" IF ELIGIBLE</p>	<p>Is this field eligible for testing for second field?</p> <p>MARK WITH "1" IF ELIGIBLE ▶ NEXT FIELD</p>	<p>Is this field selected for testing?</p> <p>YES . . . 1 NO 2</p>
M1							
M2							
M3							
M4							
M5							
M6							
M7							
M8							

B.SOIL MEASUREMENTS

FIELD ID	8	9	10																	
	<p>What is the slope of the field?</p> <p>FLAT (<8%) 1 MODERATE (8%-22%) 2 STEEP (>22%) 3</p>	<p>Are there visible signs of soil erosion (sheet, rill or gully)?</p> <p>NONE 1 SLIGHT 2 MODERATE 3 SEVERE 4</p>	<p>What is the surface condition?</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%;">Rooted Plants</td> <td style="width: 5%;">Litter Cover</td> <td style="width: 5%;">Down- ed Wood</td> <td style="width: 5%;">Stone or Gravel</td> <td style="width: 5%;">Dung</td> <td style="width: 5%;">Dis- turbed Soil</td> <td style="width: 5%;">Undis- turbed, Bare & Porous Soil</td> <td style="width: 5%;">Undis- turbed, bare but sealed soil</td> <td style="width: 5%;">Sodic Soil</td> <td style="width: 5%;">Micro- floral Crust</td> </tr> </table>								Rooted Plants	Litter Cover	Down- ed Wood	Stone or Gravel	Dung	Dis- turbed Soil	Undis- turbed, Bare & Porous Soil	Undis- turbed, bare but sealed soil	Sodic Soil	Micro- floral Crust
Rooted Plants	Litter Cover	Down- ed Wood	Stone or Gravel	Dung	Dis- turbed Soil	Undis- turbed, Bare & Porous Soil	Undis- turbed, bare but sealed soil	Sodic Soil	Micro- floral Crust											

Farm Field Soil Measurement Metadata
Version: 1.0

	Form Value	Definition	Data Type	Values List	Example	Empty Value
Household Identification	Country	The VS country	String	None	TZA; Tanzania	Required
	Region ID	Two figure assigned to each region	numeric	none	01	Required
	District	A unique number assigned to each district	numeric	{1-54}	1	Required
	Ward	a unique number assigned to each ward	numeric	{1-54}	1	not required
	Landscape	Three figures assigned to each landscape	numeric	none	001	Required
	E-PLOT ID	The VS E-plot ID number (also known as 2a plots)	String3	None	104; 004	Required
	Household ID	Household ID from list provided	String	None	none	Required
Enumerator Details	Enumerator First name	First Name of person enumerating the data	string	None	none	Required
	Enumerator Last Name	Last Name of person enumerating the data	string	None	none	Required

Vital Signs Farm Field Soils Protocol 1.0

Farm Field Soils Variables
Version: 1

	Description	Number	Form Value	Definition	Data Type	Format	Width	Decimals	Range
A. FIELD ELIGIBILITY	This file contains data related to section A of the Farm Field Soils Entry, the random process by which fields are selected for soil measurement in farm fields	v1	hhid	household ID	discrete	character	14	0	
		v2	field	ID of field from Ag Survey	discrete	character	2	0	m1-m8
		v3	a_1	Is this field size larger than 100m2? (or 0.025 acres)	Discrete	int	1	0	1,2
		v4	a_2	Was the field cultivated during the Current or most recently completed Season?	Discrete	int	1	0	1,2
		v5	a_3	Was one of the 3 major crops grown on this field during the Current or most recently completed Season?	Discrete	int	1	0	1,2
		v6	a_4	Is this field purestand/ monoculture?	Discrete	int	1	0	1,2
		v7	a_5	Is this field eligible for testing for first field?	Discrete	int	1	0	1,2
		v8	a_6	Is this field eligible for testing for second field?	Discrete	int	1	0	1,2
		v9	a_7	Is this field selected for testing?	Discrete	int	1	0	1,2
B. SOIL MEASUREMENTS, part 1	This file contains data related to section B of the Farm Field Soils Entry, regarding slope, erosion	v1	hhid	household ID	Discrete	character	14	0	
		v2	field	ID of field from Ag Survey	Discrete	character	2	0	m1-m8
		v3	b_8	What is the slope of the field?	Discrete	numeric	2	0	1-3
		v4	b_9	Are there visible signs of soil erosion (sheet, rill or gully)?	Discrete	numeric	1	0	1-4
B. SOIL MEASUREMENTS, part 1	This file contains data related to section B of the Farm Field Soils Entry, regarding soil surface conditions	v1	hhid	household ID	Discrete	character	14	0	
		v2	field	ID of field from Ag Survey	Discrete	character	2	0	m1-m8
		v3	b_10_code	soil surface condition code	Discrete	numeric	2	0	1-10
		v4	b_10	What is the surface condition?	Continuous	numeric	2	0	1-10