

LWH IRRIGATION IMPACT EVALUATION

ENUMERATOR HANDBOOK & TRAINING MANUAL

AUGUST 2015

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PURPOSE OF THE IRRIGATION IMPACT EVALUATION HOUSEHOLD SURVEY

This survey will be conducted from August - October 2015 in Karongi and Nyanza Districts in Rwanda. This survey is part of an impact evaluation of the Land Husbandry, Water Harvesting and Hillside Irrigation (LWH) Project in Rwanda. The Ministry of Agriculture in Rwanda (MinAgri) is implementing the LWH project with technical assistance from the World Bank. The LWH project has been active since July 2010.

The questionnaire being used for the survey is divided into different modules. As the main objective of the LWH project is to increase the productivity and commercialization of hillside agriculture through irrigation and other land husbandry interventions, the agricultural modules are the most detailed. The survey module contains several sections related to irrigation, since the objective of the study is to better understand the impacts of irrigation on plot and household-level outcomes. In addition, the questionnaire contains modules on housing, labor, income/expenditures, shocks, agricultural extension, social networks and cooperation, financial access, and household assets.

The data collected as part of the impact evaluation will be critical to improving future rounds of this program. The results from the study will help clarify what the exact outcomes of the program are for the participants, which parts of the program are most important, and which parts could most be strengthened. In collecting this data, you will be helping to improve the livelihoods of future participating farmers of Rwanda.

SURVEY ETIQUETTE

Many respondents may have low education and literacy levels. If some questions are difficult for them to understand, be patient in explaining the questions. Do not rush through the survey, as that may cause result in inaccurate data.

When you arrive at a household, you must introduce yourself and explain briefly the purpose of your visit before starting the interview. It is very important to make a good first impression! Explain that all information collected will be completed confidential. Respondents' names and personal responses will **NEVER** be revealed to anyone. If they seem uncomfortable, then reassure them of this fact. It is **essential** that you do your best to make the respondents feel comfortable as they give you their answers. However, if they refuse to answer a certain question, you should not force them to respond.

You will need to ask respondents for their consent (See Appendix A). If a respondent does not consent to the survey, do not pressure them to take the survey. Report their response to your Supervisor. The survey asks you to interview the Main Agricultural Decision Maker in the household. The determination of the main agricultural decision maker should be made by the household.

Each interview should take roughly two and a half hours to complete. Please advise the respondent ahead of time to make sure that he/she will be available for the duration of the interview and for the plot mapping to take place afterwards. Make sure that both you and the respondent are sitting in a position or location that is private, free of distraction and is comfortable for both of you. You will be expected to complete 2 surveys per day on average.

When you arrive at someone's house for an interview, you should immediately identify yourself and explain why you are there. See an example introduction in Appendix B.

ENUMERATOR RESPONSIBILITIES

- Cooperate with other survey team members during the training and fieldwork to ensure that the survey is carried out in a timely and professional manner
- Complete 2 household interviews per day. If you have to miss a day of work for any reason you must tell ask your supervisor or a manager for approval at least one day in advance. Your specific household assignments will be given in the form of GPS sample points.
- During the interview: Be polite and respectful at all times. You must turn off your cell phone! Do not change the wording or sequence of questions. Never suggest answers to a respondent.
- Ask the supervisor if you have any questions or doubts during an interview or need clarification on any section of the questionnaire.
- Complete all questionnaires in the field; check each questionnaire thoroughly for completeness and accuracy at the end of each interview. Be sure responses were carefully selected, and you did not accidentally select the wrong button (ex: a Harvest of 50 metric tons of beans! Meant to be kg).
- Don't rely on the tablet to catch every error! If something doesn't make sense, ask the HH for clarification.
- Submit the survey on tablet after you finish it
- Revisit households for clarifications or corrections as instructed by the supervisor
- Participate in regular review sessions with supervisors and advise them of any problems as they arise
- Write comments at the end of survey if you have anything important regarding that particular survey before submitting it.

Training Protocols

1. All trainees are expected to be ready to start by 9:00 AM each day, to return on time from breaks, and to stay through 5:00 PM each day. Attendance will be taken. More enumerators are at the training that will be needed. Anyone not attending all training days, for the full day, will not be eligible for an Enumerator position.
2. The training will cover, one by one, all modules in the questionnaire.
3. Each module will be discussed in-depth, with the questionnaire and the survey manual side-by-side.
4. For each question, the English will be read aloud, followed by the Kinyarwanda. Translation issues will be fixed in real time by the Research Associate.
5. Answers to any questions or clarifications will be recorded in the training manual by the Research Associate in “track changes”, and by all trainees in their notebooks. An updated training manual will be distributed at the end of training.
6. Each set of modules will be followed by mock interview sessions, allowing the enumerators to practice the questions themselves and report and questions or concerns that arise.
7. The training includes classroom pilots of the paper questionnaire, classroom pilots of the tablet questionnaire, and a field pilot of the tablet questionnaire. All participants are expected to submit their paper and tablet surveys.
8. When working on the tablet template, everyone will carefully compare to the paper questionnaire. Any problems found with the template, and any suggestions, will be compiled by the Research Associate each day.
9. Several of the training days will begin with a quiz on the previous day’s material. The final day of training will include a Final Exam. These scores, along with performance on the Pilot Survey, participation and attendance at training will determine who is offered an Enumerator position.



QUESTIONNAIRE FORMAT

| Question Number | Question (Eng) | Question (Kinya) | Answer code | Answer (Eng) | Answer (Kinya) | Skip | Special instruction | Response |
|-----------------|----------------|------------------|-------------|--------------|----------------|------|---------------------|----------|
|-----------------|----------------|------------------|-------------|--------------|----------------|------|---------------------|----------|

Example 1: Question with single response:

| | | | | | | | | |
|-------|---|---|--------|-----------|-------------|-------------------------|--|--|
| PL_01 | Was this plot [plot_15a] irrigated for Season A 2015? | Ese uyu murima[plot_15a] wigeze wuhirwa mu gihembwe cy'ihinga A 2015? | 1 2 | Yes No | Yego Oya | if 1 then skip to PL_03 | | |
|-------|---|---|--------|-----------|-------------|-------------------------|--|--|

The “2” indicates that the household did not irrigate the plot being asked about during Season A 2015. The skip code indicates that the enumerator should now skip to Question PL_03 if the answer to the question is Yes.

Example 2: Questions with multiple choices but one response

| | | | | | | | | |
|-------|--|-------------------------------------|------------------|--|--|----------------------|--|--|
| PL_01 | How did you gain ownership of [Parcel1]? | [Umurima1] wawubonye mu buhe buryo? | 1 2 3 4 | Inheritance Purchase Government Land Grant Other | Umurage Twarawuguze Twawuhawe na Leta Ubundi buryo | If 1, 3 or 4--> c_10 | | |
|-------|--|-------------------------------------|------------------|--|--|----------------------|--|--|

Here, you can choose only one answer.

Example 3: Questions with multiple responses

| | | | | | | | | |
|-------|--|--|---------------------------------|--|--|--|--|--|
| DO_17 | Which part of the irrigation system stopped functioning properly (multiple entries possible) | Ni ibihe bikoresho byo kuhira byahagaze gukora neza (vuga ibishoboka byose)? | 1 2 3 4 5 6 9 | Primary Canal Secondary Valve (Valve that feeds Secondary Canal) Secondary Canal Pipe Tertiary Valve (Valve that feeds Tertiary Canal) Tertiary Canal Pipe Checkdam Other[Specify] | umuyoboro w'ibanze Aho bafungurira amazi aya mu mpombo imanura amazi Impombo imanura amazi Aho bafungurira amazi ngo aye mu mirima Impombo zivomerera Ikidamu Ibindi [bivuge] | | | |
|-------|--|--|---------------------------------|--|--|--|--|--|

Here, the respondent can choose multiple answers.

Example 4: Questions with number and unit

| | | | | | | | |
|--------|---|--|------------|--|--|---------------------|--|
| CRP_18 | How much [CROP] have you sold from the season A 2015 harvest? | Umaze kugurisha [BIHINGWA] bingana iki wavanye mu musaruro w'igihembwe cy'ihinga A 2015? | Quantity | | | if 0 skip to CRP_26 | |
| CRP_19 | units | | unit codes | | | | |

If you ask a respondent how much of a crop they sold, they might say something like “four 25kg sacks.” In that case, you would enter “4” for CRP_18 and you would enter the code for “25 kg sack” for CRP_19 (in this case, the unit code happens to be 2). Unit questions should never appear in your interview; instead, those are for you to fill in based on the units the farmer uses to tell you the quantity. If a respondent doesn't know the answer to a question with a number and a unit, or refuses to tell you, the tablet will skip the unit question.

On the tablet, these questions show one at a time. Once you have entered the quantity and pressed the “forward” arrow, it will ask you the unit. On the tablet, it will preload the CROP and PLOT DESCRIPTION information you have entered for each question, to help you keep track of the crop you are asking about.

INSTRUCTIONS FOR FILLING QUESTIONNAIRE

- The survey will be conducted completely using tablets. There is no option to fill a paper form and then enter it to the tablet later on, so it is important that you become comfortable using the tablet while performing the interview.
- Ask all questions to the respondent even if you think that the answer is obvious.
- The tablet will automatically skip to the correct question based on the respondent's answer to previous questions (for example, if the respondent says they did not sell any of their crops yet, the tablet will not show the rest of the questions regarding crop sales).
- Use the answer codes presented by the tablet. All answer codes are pre-loaded.
- Mark decimal points clearly using a period (full stop), not a comma. Always use a zero if the answer is less than 1.

Example: *Incorrect: ".5" "0,5"* *Correct: "0.5"*

- In some cases, when writing OTHER as the answer, you must specify what it stands for. The tablet will prompt you to do so. Write the answer in the answer space provided. Writing in Kinyarwanda is fine, you do not need to write in English.
- When asking the number of minutes to reach any place, record the time taken for **ONE WAY** only.
- When asking the cost to reach any place, record the total cost to travel **BOTH WAYS**

Below is the list of **SPECIAL CODES** when respondent is unable to answer your question. Do your best to help them answer, but if they can truly not respond, use the following codes. For questions where you select an answer on the tablet, "Don't Know" and "Refuse to answer" will appear for you to select. Please do your best to probe, to avoid the use of these codes.

-99 – Missing – use if respondent cannot answer because the appropriate documents are missing.

Example: Respondent can't find his/her government ID. However, National ID numbers are very important! Please do your best to get them.

-88 – Do not Know – Use if the respondent cannot give an answer because they do not know, even after probing. *Example:* Age of husband.

-66 – Refuse to Answer – If a respondent refuses to answer, even after probing.

Selecting the Correct Respondents

1. When appointments are arranged for interviews, they will be told about 2.5 hours of the agricultural decision-maker's time is needed.
2. The respondent for the study is the main agricultural decision maker for the household and the one most knowledgeable about household agriculture. If that person is not available at the time of the interview, ask when they will return. If they will return when the survey team is still in the village, you must wait to interview that person. Otherwise, you can interview someone else in the house that is knowledgeable about agriculture. This person must be an adult (>16 years of age). If the main decision-maker and anyone knowledgeable is not available while the team is in the village, report to your Supervisor as much information as possible as to when the HH will be available. An enumerator will come back at a later date to interview the HH.
3. For the Income and Expenditures section, Assets Section, Rural Finance Credits and Shocks Section, we would like to interview someone knowledgeable about household finances. The first step should be to ask whether the current respondent feels best suited to answer these questions. If they do, proceed by interviewing the current respondent. If they do not, we will ask which member of the household is best suited to answer this questions. If this individual is available, proceed by interviewing them for the above mentioned sections. If this person is not available and is likely be available by the time the team leaves the village, make an appointment to revisit the household. If this individual misses three subsequent appointments, please leave these sections blank. This should be very rare.
4. For the Food Security module of the OI survey, you will need to interview an adult female in the HH. If an adult female is not available at the time of the survey, but will be before the team leaves the village, save the survey on your tablet and come back at a later time (set an appointment). Note: If the financial decision-maker has not yet been interviewed, please be sure to make an appointment at the same time to be able to finish these two alternative respondent sections of the survey. If no adult female will be available before the survey team leaves the village, or none exists in the HH, or if three appointments with the female respondent are missed, an adult male may be interviewed.

SECTION A (ID): HOUSEHOLD IDENTIFICATION

PLEASE FILL OUT THIS SECTION OF the SURVEY CAREFULLY.

The HH Code will be pre-loaded based on the household listing.

ID_06 – ID_09: Here you should record the address of the respondent's primary residence not the location of their plot. The locations of the plot will be recorded separately.

SECTION B (ROS): HOUSEHOLD ROSTER

Be sure to include **all people** who are regularly living in the household. Write HH members in the following order:

FIRST: List Head of HH followed by spouse and children. If several wives, record in order of marriage.

SECOND: List other HH members related to the head of household or his spouse(s).

THIRD: List other HH members NOT related to the head of household or his spouse.

FOURTH: List any people absent currently but who are HH members, for example persons temporarily absent for less than six months due to school, seasonal work, holiday, hospital/clinic, etc

HH_01: Be careful of the members that you include in the HH roster. If you have any questions, call your Supervisor.

HH_05: Fill in an age for all family members. Record only *completed years*. If they are 2.5 years old, then you should record "2". If a baby has not completed its first year, record "0".

HH_05A: You should do your best to get the national ID number of every adult individual in the HH (age>18). If the individual does not know their national ID number, even after probing, you may write "-99" in the tablet. This should be very rare.

HH_10A, HH_11A: Record **individual earnings** from the activity. In cases where the household is engaged in an activity jointly with another member of the household, ask them for their share. We want to avoid a situation where we are double counting a contribution from multiple members of the household.

HH_13: You should probe to see whether the individual had a secondary activity, other than the activity that you recorded in the previous question (HH_10). If they did not contribute in any other way economically, then record a "15" here.

HH_15A: The respondent should be the **primary agricultural decision-maker** for the household (the person recorded in ROS_15). The household should identify the person whom they deem to be the

main agricultural decision maker. Typically, the main agricultural decision maker will be the household head.

SECTION C: Plot Roster

This module focuses on plots cultivated by the household but also asks about parcels which the HH owns. The definition of these two land-related entities can be confusing so please see the definition below.

A parcel is a unit of land ownership. We can define a parcel as a contiguous piece of land that is owned by a household. Sometimes the household will have a land title for this unit of land. In other cases, the household may have customary or no title. In the case of an official land title, this will be the unit of land corresponding to the UPI.

A plot is a contiguous area of **cultivated or cultivatable land**. You must probe very carefully to get all plots cultivated by the HH during the recall period. Include any plots that were cultivated on – this includes plots that were rented by the HH. In some cases, the plot will correspond exactly to a Parcel (this is rare) but typically, it is a cultivated section within a Parcel.

The sample plot is a plot that has been previously identified and described as part of the household listing. The sample plot is a plot that is particularly of interest to the study, although households should not necessarily be made aware of its importance.

Parcel Recording Protocols: We record the five largest parcels owned by the household starting with the largest and recording them in decreasing order of size (i.e. largest to smallest).

Plot Recording Protocols: For the plots, we will proceed from largest to smallest. Please note that there is a limit of 10 plots that can be recorded.

AG_04A – The water catchment is the area within the project site, where if rain were to fall, it would drain into the primary water source for the irrigation system. The command area catchment is the area above the command area, above the primary canal or pipe system, until the top of the hill. The command area is the area that could possibly be irrigated, downhill from the command area catchment.

AG_10b_10g – Please prompt for information on previous owner especially vigorously if the land was sold within the last three years.

AG_12 – We are interested in the self-reported size of the parcel even if the parcel size is indicated on the respondent's land title. If the respondent does not know the size of their Parcel, ask them to the length and width in meters and do the multiplication (i.e. 4 meters long, 2 meters across = $4*2=8$).

AG_23: Plot descriptions must be detailed (ex: Plot near the Old Mango tree, begins 20m beneath the primary canal) Use landmarks that will not change from season to season (like crops), so that we are able to identify the plot when we come back to survey next time. This determines the plots that the tablet will ask about in the rest of the survey.

ag_28: If the respondent does not know the size of their plot, ask them to estimate the length and width in meters and do the multiplication. If the respondent has a land title, write the total amount on the land title, even if some of the area within the land title is not cultivated (ex: house).

ag_30a: Radical terraces should always be LWH terraces. LWH is a government/MinAgri project.

AG_33, AG_34, and AG_35: Relevance questions: These questions are very important as they will be used to determine the number of plots that we ask about in subsequent sections. Here we would like to take plots that the household cultivated seasonal crops on and plots where they put in any type of labor on their permanent crops. In other words, if they planted or harvested permanent crops during the season being asked about, then the answer should be “Yes.” If they worked on the permanent crops (exerted or hired any labor) but did not plant or harvest in this season, the answer to this question should also be yes.

Sample Plot Identification

The **sample plot** is a plot that we either described during the household listing (most cases) or one that will be randomly selected for research purposes. In several sections, we ask questions that are specific to the sample plot. The tablet will preload a description of the sample plot and ask whether any of the plots you have already spoken about match the sample plot description. If so, please select the plot that matches the sample plot description. If you are not sure, please feel to ask the household which of the plots described, if any, corresponds to the sample description. However, do not prompt them to choose one of the plots they have already described. If none of the plots match, the tablet will randomly select a plot to serve as the sample plot. From now on, this plot that the computer has chosen will be the sample plot.

SECTION D1: CROP

Notes on Seasons: This survey covers Seasons 2014 C, 2015 A, and 2015B. The standard months are listed below. Be sure to capture all of the crops the HH grew. Consider a crop to belong to the season if it was planted within these months, regardless of when it was harvested. If you are not sure which season a crop falls in, please ask your Supervisor for clarification.

Season C 2014: July 2014 – August 2014.

Season A 2015: September 2014 – February 2015

Season B 2015: March 2015 – June 2015

Again, we are capturing both seasonal crops and permanent crops.

For permanent crops, we are interested in recording information for crops that were planted, harvested or otherwise worked on through HH or hired labor during the season. If the permanent crop was not planted in the season, we may have “0” responses for questions having to do with inputs. Similarly for production questions in cases where the HH has not yet harvested the permanent crop.

PC1_01: Here, we are trying to gauge the percentage of the plot used for cultivation during this season. The plot may be larger than the area cultivated this season.

PC1_03: List all the crops cultivated on this plot.

After PC1_03: List three primary crops cultivated on each [plot] in the command area, command area catchment and on the most significant agricultural plot cultivated outside of these areas. The following questions in this section.

PC1_04: This question refers to the percentage of the cultivated land in PC1_01 that has been cultivated.

PC1_05: Seed here is used in a broad sense. Covers anything from which a plant can grow and includes cutting for sweet potatoes and cassava.

PC1_08: If they did not spend any money on it i.e. they either saved seed or received it from the Government or NGO for free, record 0.

$$\text{Quantity Harvested} \geq \text{Quantity Sold} + \text{Quantity Eaten} + \text{Post-Harvest Losses}$$

PC1_10: Captures amount of crop **sold already**

PC1_11: Captures amount **already eaten**

PC1_10E: Make sure this is the total amount earned. If the HH had multiple sales, you must ask them the amount earned at each sale and record the sum.

PC1_14: This question asks for the primary reason the HH grew this group and allows multiple responses. Select “1” if the household grew this particular crop, based on the advice of the LWH project or a project agronomist. Select “2” if the household grew this crop as part of an arrangement with an external investor. It is possible that the household grew the crop based on the advice of the LWH agronomist and because the crop was chosen as part of the investor’s arrangement. In this case, the respondent can choose both. If the HH grew the crop because of government policy, please select 5 and if personal choice was a factor, please select 6.

PC1_15-PC1_17: These questions refer to all the plots that were cultivated during Season A that have not already been asked about as part of the earlier crop questions. For this section, we are interested in the total combined production on these plots NOT the amount produced by plot. Therefore, you will have to sum the total production from multiple plots if the respondent has cultivated the same crop on multiple plots. For example, if the respondent has cultivated onions on two different plots (Plot 1 and Plot 2). The response for PC1_16 should be as follows:

Amount of Maize Harvested on Plot 4 + Amount of Maize Harvested on Plot 5

SECTION D2: Plot-specific Irrigation

PI1_01: List all the options that apply (multiple options are acceptable here).

PI1_05: Transverse furrows are small ditches on a plot that run perpendicular to the embankment.
Longitudinal furrows are small ditches on a plot that run parallel to the embankment.

PL_09b_14c: This number should be equal to or less than the number of people the household shares a tertiary valve with (i.e. the response to PL_09).

SECTION D3: HH Farm Labor

General Note on this Section:

Person-days: person-days are the total number of days worked by all members of the household combined. If one person worked for one day on a task, that counts as one person-day. If two people both worked for one day, that counts as two person-days. Here, it does not matter whether the people are men, women or children.

Examples:

- 1) The head of household works for 10 days on a task: 10 person-days
- 2) The head of household and his wife both work for 10 days: 20 person-days
- 3) The head of household works for 10 days, and the wife and three children each work for 5 days: 25 person-days

PL1_01: Select just one member of the respondent's household.

PL1_05, PL1_09:

For these sections, we record total labor payments made per activity not the amount paid per individual.

Examples:

- 1) HH pays 2,000 RwF each to two workers for harvesting (one male and one female).
TOTAL PAYMENT: 2,000Rwf + 2,000Rwf = 4,000Rwf
RECORD ONLY THE TOTAL (Rwf 4,000)

- 2) HH pays 1,000 RwF one male worker for harvesting and 3,000 RWF to one female worker for harvesting
≥TOTAL PAYMENT: 1,000Rwf + 3,000Rwf
RECORD ONLY THE TOTAL: Rwf 4,000 Rwf

- 1) and 2) give the same answer. That is ok. We are concerned only with Total Payment. We are not concerned with care how many laborers are paid or how much each laborer gets paid.

SECTION D4: Inputs

This section asks questions about inputs used on all of the plots the HH cultivates in the command area, command area catchment and their most significant agricultural plot outside this area. There is also a question that asks about the use of and amount spent on a given input on the rest of the plots combined.

PN1_06: Here, we would like to know how much of the input was used on this plot. The amount of input used on each of these plots and the amount of inputs summed together should not be greater than the amount of input recorded in PN1_04X. In other words, they should not have used more input on these plots than they said they used in total.

$$PN1_04X \geq IN_02_plot1 + IN_02_plot2 + IN_02_plotx$$

PN1_02: We are interested in the amount of this input used on all other plots combined (all plots other than the ones asked about in PN1_06. For example, if the HH has two plots other than the ones we asked

about in PN1_06 that they a particular inputs on, you will need to sum up the amount of input used on each of these plots and record that number here.

PN1_04X: This question is not plot-specific. We are asking about the total amount of the input that the household used during the season.

SECTION D0: General Irrigation

IG_4 – An irrigator or operator is someone who is paid by the LWH project to engage in operations and maintenance tasks for the LWH project. A block president is the head of an individual block who is responsible for coordinating and troubleshooting problems related to water usage.

IG_11 - Do not read the response options, prompt or coach the respondent towards a particular response. Record all the answers a respondent gives.

IG_22 – The respondent may only choose one answer.

IG_27 – A tertiary valve is a metallic, terrace-level water outlet, connected to a secondary pipe, intended to be used by households to irrigate.

SECTION E (EX): EXTENSION

This section asks whether each type of extension provider (for example, TUBURA agent, LWH agronomist, lead farmer, etc) visited the household during a particular season.

SECTION I: HOUSING

HN_01, HN_02: If the construction materials for the house and the flooring are directly observable, you may record these directly without asking the household. However, if you have any doubt about the materials, please pose the questions to the respondent as you would normally.

HN_04: Record only PRIMARY SOURCE of water. Only 1 answer is allowed here.

SECTION J: FARMER GROUPS

GR_01: When we ask about group membership in a self-help group, we are asking whether or not the respondent perceives someone in their household to be a member of the group (not whether they are by an external definition). Therefore, you should provide a description of the group (an organization that is active in the areas of production and savings/borrowing created by the LWH project) but not probe too deeply on the question of membership. A respondent may choose multiple groups.

GR_06: A water user group or block is an organization created at the level of the secondary pipe by the LWH project for the purposes of managing irrigation infrastructure and ensuring adequate operations and maintenance of the above infrastructure.

GR_12: A Water User Association is an organization that was created at the site-level to manage irrigation infrastructure and ensure adequate operations and maintenance of that infrastructure (water use).

GR_20: An irrigator or operator is an individual employed/paid by the LWH project to help irrigate at the secondary and tertiary levels and to conduct operations and maintenance work on the infrastructure.

SECTION J: SOCIAL NETWORKS and COOPERATION

General note: These questions should be asked with respect to the sample plot. A neighbor is defined as someone who cultivated on the same bench but on either side of the respondent. Other members of your block is meant to signify all those in the block besides the neighbor. Questions about other members of your block (SN_15-SN_23) will only be asked to households who have sample plots in the command area.

SN_8, SN_21: Sharing hiring labor is defined as either hiring labor jointly with neighbors or other members of your block or alternatively, using the labor that has been hired by your neighbors or other members of your block on your plot.

SECTION K (INC & EXP): INCOME & EXPENDITURES

Income and expenditure section – Make sure that there is consistency. Probe and make sure that they are reporting all their income. We should be capturing income and expenditure for the entire household and not for individual respondents.

For this section, enumerators should interview the member of the household present who knows the most about household finances.

Record “0” if a household did not spend or get income for a particular category.

PART 1: Income

NOTE: Record **household** income, **not** personal income. Record 0 if the HH did not earn any money from a category (do not leave any question blank).

IE_01: Include all livestock products: butter, milk, yogurt, cheese, eggs, meat. Does not include selling of livestock, which is captured in the assets section.

IE_02: Record only non-monetary gifts and transfers here from anyone outside the HH and monetary transfers in INC_03.

IE_04-IE_06: Occasionally, the LWH project has paid farmers to carry out these activities in project sites.

INC_07: An irrigator or operator is an individual employed/paid by the LWH project to help irrigate at the secondary and tertiary levels and to conduct operations and maintenance work on the infrastructure. Record any income the household earned from this occupation here (note: this should be relatively rare among the households that you interview).

PART 2: Expenditures

*Note that this section is divided into **frequent and infrequent expenditures**. Make sure that for IE_20 to IE_25 you want to know how much the household spent in the **past 1 week** and for IE_40 to IE_61 you want to know how much the household spent **from July 2014 to June 2015**. For both types, we do not need to know about specific purchases but the total amount they spent on all purchases of that item.*

NOTE: Record **household** expenditures, **not** personal expenditures. Record 0 if the HH did not spend any money on a category (do not leave any question blank).

Frequent purchases: Capture expenditure for the **PAST ONE WEEK**.

IE_21: Include all money spent on airtime (by all HH members) and any money spent on internet (for example, at internet café)

IE_23: Leisure here refers to activities such as going to bar, watching sports and watching movies. Include all money spent on alcoholic beverages here.

Infrequent purchases: Capture expenditure from **July 2014 to June 2015**.

Note: For this section, enumerators must first record whether the purchase was made by cash or in-kind. If the latter, we want the respondent's estimate of the value of the payment in the questions labeled b). For example, if school fees were paid in-kind then, the respondent should code the response to IE_40 as 2 and the approximate value of these payments over the course of the last year in IE_41.

IE_41: School fees covers all expenditures including tuition, costs of books/notebooks and uniform.

IE_50: Excluding fees accounted for in the Farmer Groups section (for Water User Groups/Water User Association). Include only fees charged by the financial institution, not amounts deposited.

IE_48: Include all expenditures on medicines and any payments to doctors, nurses or other medical providers. If the HH has health insurance, only include additional payments for health care.

IE_58: include animal feed, medicines, any veterinary care, fees for vaccinations.

SECTION L: RURAL FINANCE

IMPORTANT: *Respondents may feel uncomfortable telling you the details about the money they keep in different places. At the beginning of this section, remind them that all answers they give are confidential and will not be shared with anyone. If they refuse to answer any questions, re-state that this information is confidential but be polite and never pressure them to give you information they do not wish to share. If they still do not answer, indicate "-66" and move to the next one.*

RF_02: Here, you should record the total amount of formal savings the household holds across all accounts. For example, if the household has two formal savings accounts and Account 1 has a balance of 2,000 RWF and Account 2 has a balance of 3,000 RWF, you should sum the amount in each formal account and record 5,000 RWF for this response.

RF_03: Record the most recent deposit in any formal account.

RF_04a: A Rotating Savings and Credit Association is a group that meets regularly to engage in savings and borrowing together. Typically, households contribute savings regularly and then are able to withdraw from the group pooled savings when it is their turn.

RF_4b: If there are multiple forms of informal savings, sum up the amounts saved across all of these sources and record that number here.

SECTION R (CRD): CREDIT

All questions here apply to all loans, no matter the amount.

CD_01: Consider all requests for loans, regardless of whether or not the respondent eventually received the loan.

CD_05: Record the main purpose of the loan here (i.e. the use for which the HH intends to spend the majority of the money).

CD_08: A group loan is one that an individual takes through a larger group (i.e. a cooperative, SHG, etc.)

Module U: FOOD SECURITY (WDDS)

The respondent for this module should be an adult female. Please see the section “Selecting a Respondent” for further details on how to proceed when this person is unavailable.

FS_02: This question asks about the number of days not the number of times a HH has consumed a given food item. Therefore the response should always be out of 7 (5 days out of 7). We do not care whether the household consumed the food item twice per day during those 5 days.

Module X: FUTURE EXPECTATIONS

Scenarios: These scenarios before XF_11 and XF_13 should be read dispassionately and without much emotion. This should not sound like a marketing pitch or as if we have an interest in the investment arrangement. The household should not come away with the sense that we are working for the investor.

XF_11 – Site refers to LWH project site. This question and the ones following XF_11A, and XF_12 should only be read for households interviewed in Nyanza.

XF_13 – Site refers to LWH project site. This question and the ones following should only be read for households interviewed in Karongi.

Module Y: PLOT MAPPING

Where you see {HH_CODE}, replace it with the actual household code. For example, when the household code is 1234, replace {HH_CODE} with 1234.

MP_01 – While standing just outside the house, check “Satellite” and make sure your accuracy is no worse than 5m. Next, go to “Mark Waypoint”. Move the cursor up to the waypoint name, select it, and change it to {HH_CODE}. Select “Done”, then select “Done”.

MP_02 – Consider the path you will take to reach the sample plot and the household's plots in the command area and command area catchment. If any of the household's remaining plots can be reached with less than 15 minutes walking from this path, select those plots (this includes all plots that are less than 15 minutes from the respondent's household, the sample plot, or any of the plots in the command area and command area catchment). Consult the respondent regarding which of the household's remaining plots can be reached.

MP_03 – First, check “Satellite” and make sure your accuracy is no worse than 5m. While standing on one side of the plot (IMPORTANT: Do **NOT** start at a corner when mapping a plot. Start in the middle of one side of the plot, as this will improve the accuracy of the plot map), select “Area Calculation”, then select “Start”. Walk slowly around the plot. At each corner, wait at least 5 seconds before continuing to walk. When you've returned to the point where you started, select “Calculate”, then select “Save Track”. The default name of the track will be a date and time, for example “01-SEP-2015 12:00:00”. Replace the first four characters of default name with {HH_CODE}. In the example, the new name of the track will be “{HH_CODE}EP-2015 12:00:00”. If you accidentally delete the name, you can press the back button once, and then select “Save Track” again. After finishing, select “Done”, then select “OK”, then press the back button twice.