

Enumerator Manual:
University of Oxford – CIAT
REACH Survey

Intrahousehold decision making and water
choices within a rural context

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Section 1: Introduction

This manual includes the information needed for enumerators to conduct fieldwork to collect data for the survey. This section explains the survey and its aims, defines key concepts, describes the implementation team, the roles and expectations of the enumerators (as well as field supervisors), how field activities will be implemented, and provides a general overview of the data collection tools.

Description and Aims of the Survey

The overall objective of this survey is to collect data to explore issues regarding intrahousehold dynamics around water allocation and use. Specifically, the study has 5 key areas of interest: 1) the relationship between individual rights over water and control over income and output from productive activities; 2) how water and land access and rights to use are related and the relationship to men's and women's livelihood strategies; 3) intrahousehold decision making dynamics, especially related to water collection choices and use; 4) who makes different decisions, how decisions are made, and how decisions align with different individual preferences; and 5) individual-level disagreement styles and how they impact the intrahousehold decision making processes and outcomes of those decisions.

This is a unique survey in that we intend to interview all adult household members of the selected households. This will ensure that we better understand the full range of intra-household dynamics.

Structure of Survey

The survey includes two types of questionnaires to be implemented in each household: 1) a household-level questionnaire, and 2) an individual-level questionnaire. The household-level questionnaire asks general questions related to the household overall. One adult household member, who is identified as the **individual who is well informed and makes decisions about the household's water portfolio, such as where to get water, who collects the water, how much is collected, and how it is used in the household**, will be asked to answer the household-level questionnaire.

The individual-level questionnaire will be administered to all adult household members (over 18 years old).

Study Site

The survey will be conducted in Kilifi County of Kenya. Excluding the more populated, urban centers, sub-locations in Kilifi, three sub-counties were selected. These are Kaloleni, Magarini, and Ganze subcounties. Within these sub-counties, two locations were randomly selected. From these, 50 villages were randomly selected.

For this survey it is important that we include polygamous and extended family households because we want to understand the full range of relationships and dynamics among various household members in different types of households. In our sample 24 percent of households are polygamous with 21 percent of households with co-wives living in the same household. Fifty percent of households are extended family households, and, of these, 47 percent have a mother-in-law and daughter-in-law in the same household. On average, there are 4 adult household members in the selected households.

Key Concepts and Definitions

Household

Following the official Kenyan definition of the household, a household consists of a person or group of persons, related or unrelated, who reside together in the same homestead or compound and are considered as one unit. They often share the same cooking arrangements, or they share some resources or daily tasks. They may be residing in several structures within a compound.

Note that the term 'family' does not have the same meaning as 'household'. A family consists of all persons related by consanguinity, adoption, or marriage whether or not they live far apart. To be members of the same household, all persons must live together as defined above. A household might be a family, a group of unrelated people living together, or a single person living alone.

The following are examples of household units:

- A single family or person living alone: a dwelling or hut occupied entirely by a single family or person living alone.
- Two or more families in a compound or homestead who live and eat together as one unit.
- Groups of unrelated people: a house containing two or more persons unrelated but who live together as a unit.
- For compounds/homesteads, consider whether the people live together on the same compound/homestead. They may or may not cook and eat together but generally share the compound, have some resources in common, and live together. (Polygamous households that live together on one compound/homestead.)

Households in Kilifi may be of different types. You will find the following types.

- A man living together with his wife with children in a homestead, and no one else living with them in that homestead.
- A man living together with his wife without his children in a homestead, and no one else living with them in that homestead.
- A man with more than one wife. The wives reside in the same compound but in different dwellings. The wives may sometimes share meals together or tasks.
- A man with more than one wife staying in the same dwelling, they may cook together or sharing daily tasks.
- A man and his wife living in the same compound (but in different dwelling) with their son and his wife. They share meals together, tasks, or have common resources.

These are considered multiple households:

- A big family living in large compound together. These may be brothers sharing a big compound together, sometimes together with their parents. Each of them has their own families (composed of man and wife). They each have their own dwelling on the compound, and they have their own cooking arrangements and make decisions separately.
- Widows who were previously married to one man (who has since died), living in one compound but in different houses, and each of them is undertaking tasks and decisions separately

- Widows previously married to one man (who has since died), living in different compounds, cooking differently, and each of them undertaking tasks and decisions separately.

CHECK: Say the father, his wife, and daughter live and take their meals together and in the same dwelling. The married son, his wife and two children prepare and take their meals together but separate from their father's family. How many households are there in the dwelling? Who should be interviewed?

Determination of households may not be easy. However, the following examples should guide you in deciding who should form a household.

- A household may consist of one or more persons and may occupy a whole structure or part of a structure or several structures in the same compound/homestead.
- For compounds or homesteads, consider whether the people live together on the same compound or homestead. They may or may not cook and eat together but generally share the compound and have some resources in common, live together, share resources. This may include co-wives in polygamous households.
- If two or more groups of persons live in the same dwelling unit, but always have separate eating arrangements and do not share daily tasks or resources, treat them as separate households.
- Domestic workers, farm workers and other such individuals who live and take meals with the household are to be identified as household members, even though they may not have blood relationship with the household head.

Household members

Household members must reside in the household for at least 6 of the 12 months preceding the interview, OR (i) be an infant who is less than 6 months old, (ii) newly married and now living in the dwelling, (iii) students and seasonal workers who do not live in another household, or (iv) other persons living together for less than 6 months but who are expected to live in the household permanently (or for a longer duration).

People who have lived in the household for more than 6 months of the past 12 months, but have permanently left the household (e.g. divorced or deceased) are not considered as members of the household.

Adult household members

Household members who are 18 years and older are considered adults.

Survey Implementation Team and Structure

The following table lists the survey implementation team and their roles.

Name	Role
Cheryl Doss Marya Hillesland	Principal Investigators – University of Oxford
Jennifer Twyman	Consultant, co-leading survey questionnaire design, enumerator training, and implementation support
Eileen Nchanji	Principal Investigator – CIAT
Mercy Mutua	Lead research officer at CIAT - Leading survey implementation and fieldwork
Field supervisors	Lead enumerator teams under Mercy Mutua's direction [REDACTED]
Enumerators	Interview households [REDACTED]
Drivers	Ensure teams get to where they need to go safely

Supervisors' Roles and Responsibilities

Supervisors are a senior member of the field team. They are responsible for the well-being of team members as well as the completion of the assigned workload and maintenance of data quality. During the field work, supervisors will

- Assign cases to the enumerators using COMPUTER ASSISTED PERSONAL INTERVIEWING SOFTWARE. The supervisor will assign enumerators (or pairs of enumerators) households to visit each day and any households to return to that need to be completed. Within each village, households have been randomly selected to be interviewed. Following Mercy Mutua's guidance, the supervisors will have contacted the village leaders before visiting the village. From the village leaders, the Supervisors will ask for directions to the selected households and will come up with a plan for administering the survey for their enumerator team.
- Take into account the linguistic competence of each enumerator and ensure that there is an equitable distribution of the workload.
- Make sure that assignments are carried out.
- Communicate any problems to Mercy Mutua or other CIAT leads.
- Make sure the team vehicle is used only for the project work.
- Check the quality and completion of the data collection. The supervisors will sign off on all interviews their team conducted, ensuring that it is complete, makes sense, and was conducted at the correct household.
- Answer the supervisor questions in the survey.
- Be available to troubleshoot any problems with the enumerators and will contact Mercy Mutua with issues that need help resolving.
- Communicate feedback from Mercy Mutua arising from data quality checks on areas that need to be addressed by specific enumerators to improve the quality of data being collected
- Buy gratitude tokens (e.g. 2 kg sugar or maize meal) for the households that will be interviewed and keep all receipts for accounting purposes
- Ensure all monies sent to enumerators from CIAT accounts office are signed against and well accounted for
- Collect tablets and any other equipment assigned to enumerators at the end of the survey for returning to CIAT office

Quality and completion of the data collection

Controlling the quality of the data collection is the most important function of the supervisor.

Throughout the fieldwork, you will be responsible for observing interviews. By checking the enumerators' work regularly you can ensure that the quality of the data collection remains high throughout the survey. It may be necessary to observe the interviewers more frequently at the beginning of the survey. In the beginning, the enumerators may make errors due to lack of experience or lack of familiarity with the questionnaire; these can be corrected with additional training as the survey progresses.

The supervisor should meet daily with the enumerators to discuss the quality of their work. In most cases, mistakes can be corrected and interviewing style improved by pointing out and discussing errors at regular meetings. At team meetings, the field supervisor should point out mistakes discovered during observation of interviews and/or noticed during the review of the completed cases.

You should expect to spend considerable time evaluating and instructing interviewers at the start of fieldwork. If they feel that the quality of work is not adequate, the interviewing should stop until errors and problems have been fully resolved. In some cases, an interviewer may fail to improve and will have to be replaced.

In addition, you will check each case in COMPUTER ASSISTED PERSONAL INTERVIEWING SOFTWARE, ensuring that questionnaires are edited for completeness, legibility, and consistency. Every case must be completely checked in the field. Often, small errors can be corrected just by the enumerator. In other cases, the enumerator will have to go back to the respondent to get the correct information. Timely review permits correction of questionnaires in the field.

Enumerators' Roles & Responsibilities

The success of the study depends on the quality of each enumerator's work. In general, the responsibilities of an enumerator include

- completing the Household Questionnaire,
- interviewing all eligible respondents in the household using the Individual Questionnaire,
- checking the completed interviews to be sure that all questions were asked and the responses have been recorded, and
- returning to households to interview respondents who could not be interviewed during the initial visit.

Before heading out each day, ensure that you have all the needed materials to complete your interviews.

Check that you know where you are going, which households you will be interviewing and whether you will be accompanying other enumerators.

A respectful, courteous attitude towards the respondents in the survey households is important. Enumerators need to be patient and business-like towards the respondents and other household members. During your interviews, enumerators should work efficiently and relatively quickly, but should not rush the respondents. After each interview you should always quickly go through your questionnaire to check for missed questions and then thank each respondent for their help and time. This will ensure that the survey is carried out successfully.

Here are some general tips on conducting interview:

- Establish rapport with the respondent
 - Approach the dwelling unit/household from the entrance
 - Keep a positive approach
 - Make a good impression
 - Stress the confidentiality of responses when necessary
 - Answer any questions from the respondent frankly
- Stay neutral throughout the interview. Never appear to approve or disapprove of any of the respondent's answers.
- Do not suggest answers to the respondents.
- If the respondent gives an ambiguous answer, try asking the following:
 - "Can you explain a little more?"
 - "I did not quite hear you. Could you please tell me again?"
 - "There is no hurry. Please take a moment to think about it."
- Do not change the wording or sequence of questions.

- If the respondent is giving irrelevant or elaborate answers, do not stop them abruptly or rudely, but listen to what they have to say. Then try to steer them gently back to the original question.
- Try not to make assumptions or form expectations about the ability or knowledge of the respondent.
- Keep a calm pace. Do not hurry the interview.
- Thank the respondent for answering the questions.

Enumeration equipment, supplies, and documents

- Tablet with questionnaire
- Chargers for Tablet
- Questionnaires – paper versions in case tablets fail
- Pencils
- Pencil sharpener
- Erasers
- Dry erase markers
- Visual aids with 40 pebbles or beans
- Enumerator Manual
- Official letter (and national ID) in personal carrying bag
- Notebook for observations
- Call back cards

Lost Materials

Take all necessary precautions not to lose any of your materials. The confidentiality of the survey will be compromised if completed questionnaires are lost or seen by unauthorized persons. If you do lose any materials, or you think they have been stolen, report immediately to your supervisor so that a decision can be taken on how to proceed.

[General Instructions for completing the questionnaire - all sections](#)

Preparatory Activities

Before you leave, ensure that you have all the needed materials to complete your interviews.

Check that you know where you are going, which households you will be interviewing and if you are accompanying other enumerators.

Contact Procedures

Each enumerator (or team of enumerators) will be assigned households to visit each day.

Supervisors will contact village elders from each of the selected villages to make appointments for the survey. Where possible supervisors will visit the village and leave a copy of the selected households with the village elder so that households can be informed of the intended visit before the actual survey date.

When you arrive to the household, you will first ask to speak with the name on the household tablet data sheet (the household head or other contact). You will introduce yourself, introduce the project,

and explain that you have been in contact with the village leader and have his permission. Then ask if you could speak to the ***person in the household who is well informed and makes decisions about the water collection and allocation in the household***. This person will be the primary respondent. They will answer the household-level questionnaire.

Start by interviewing the primary respondent using the household questionnaire.

Once the household questionnaire is complete, interview each adult (18 years of age and older) using the individual questionnaire. You may have to return 2 to 3 times to interview all adults in the household.

Working in enumerator pairs

For this survey enumerators will work in pairs to the extent possible. In each household, the pair must decide the primary enumerator to interview the primary respondent. While the primary enumerator interviews the primary respondent for the household-level questionnaire, the second enumerator will remain quiet (only interjecting if necessary). Both enumerators will fill out the household-level questionnaire. This is important since some of the answers feed into the individual level questionnaire.

After finishing the household-level questionnaire, the two enumerators will separate. The primary enumerator will continue interviewing the primary respondent and filling out the individual-level questionnaire. The second enumerator will ask to speak to the spouse if he or she is available. If they are not available, they will interview one of the other adult household members.

The enumerators will continue interviewing all the adult household members until they have all been interviewed. If an adult household member is not available, the enumerators will schedule a time to return and interview that person. The enumerators will return to the household up to three times in order to interview all adults.

If possible, and as feasible given the composition of the field team, male interviewers should interview the primary male respondent and female interviewers the primary female respondent.

Private Individual-level interviews

If at all possible, individual respondents should be interviewed separately, without other household members or outsiders present. **It is NOT ok for other household members to assist with recall for questions on the individual-level survey.** It is important that the respondents are able to be interviewed privately so that they are not influenced by the other respondent's and other people's responses. If respondents ask, "Why can't we respond to this next section together?" respond by saying that for the study it is necessary to obtain perspectives from different people in the household.

Topic of the survey

Although the research focuses on gender and interhousehold dynamics, at no point should you tell the respondent you are interested in gender so as not to skew or bias results.

Interview Visits

For every household selected, you must complete a form in CAPI, whether or not the questionnaire was completed with that household. If an interview cannot be completed this will be noted and a justification given; then, supervisors will identify a replacement household from the replacement household to give to the enumerator.

If the questionnaires at a household cannot be completed in one visit, this will be noted and a follow up interview will be scheduled.

UNIVERSAL CODES:

The following codes may be appropriate in any question in the household survey. In no case (with the exception of skip patterns) should a question be left blank. If you are unsure, make a note and ask your supervisor at the end of the questionnaire how to fill the particular question.

Not relevant	86
No response / Refused to respond	87
Other (specify)	88
None/no reason	89
Don't know	98
Missing	99 (Should primarily be used by data entry after data collection.)

The following codes are useful for some questions throughout the questionnaire and have the same response number each time they are used.

Non-Household member, female	-94
Non-Household member, male	-95
Should be delivered to us	-70
No one (else)	-77
Decision not made in the household	-88

Language of the Interview

The questionnaires are in English. In the training, interviews will be practiced in Swahili. It is very important not to change the meaning of the question when you rephrase it or interpret it into another language.

Section 2: Description of Household-Level Questionnaire

Household Identification

[This part relates to questions A01 – A06 and B01 – B02.]

The first section of the survey identifies the household. On the tablet, the Computer Assisted Personal Interviewing software will automatically load this information from the sample. You will need to locate the household from the information given.

Specific households have been selected to be interviewed. It is important that this is the house you visit.

When you arrive at the household, do your best to make the household members feel at ease. Open the conversation with a smile and greeting such as “good afternoon.” First ask to speak with the name on the household tablet data sheet to check that you found the correct household. Introduce yourself, introduce the project, and explain that you have been in contact with the village leader and have his permission. Then ask if you could speak to the **person in the household who is well informed and makes decisions about the water collection and allocation in the household**. This person will be the primary respondent. They will answer the household-level questionnaire.

Primary Respondent Identification

Please ask for the primary respondent’s information

. Is your enumerator code.

Is the enumerator code of the person you are working with, if you are working in pairs.

Are you leading the household interview?

00. Introduction and Consent

Convey the following information about the project and for the consent:

Thank you for the opportunity to speak with you. We are a research team from CIAT working with the REACH group within the University of Oxford.

We are conducting a survey to learn about decision-making on water choices within the household, as well as land, livestock, assets, and livelihoods. Your household has been randomly selected to participate in an interview, for which your answers will inform our research. The survey includes both a section to be asked about the household generally, and an individual section, which will be asked to every individual 18 years and older in the household.

Your participation is entirely voluntary. You can choose to not answer any question, and may withdraw from the interview at any point if you wish. Your answers will be completely confidential; we will not share information that identifies you. We will not share your answers with anyone outside the research team. We will not tell other household or community members how you responded.

As the Individual who is well informed and makes decisions about the household's water portfolio, such as where to get water, who collects the water, how much is collected, and how it is used in the household, we would like to ask you the questions in the household section.

Before I start, do you have any questions or is there anything which I have said on which you would like any further clarification?

May I proceed with interviewing you and members of your household?

Please record the primary respondent's response in **CONSENT_HH**. If you have the primary respondent's consent, you may proceed with the interview. If you do not have the primary respondent's consent, fill-in the result of the visit under "Interviewer Visits" and move to the next case.

Before beginning, also complete **OTHERS_PRES** by noting whether anyone else is present at the start of the interview. As noted, the household interview can be conducted with others present but we would like to know if others are present or nearby (in the same room or space where the interview is being conducted).

01. Household Roster

This module is used to identify the members of the survey household and to collect basic information on the household members. Information on all household members should be collected. Household members are individuals who share the same household.

On the household roster, begin by listing the primary respondent first. Then the spouse(s) of the respondent and the respondent's children from oldest to youngest. Then all relatives followed by non-relatives who are household members.

In writing the names of household members, be sure to uniquely identify the individuals. If two individuals have the same name, ask about any nicknames or each individual's full name or other ways in which the two persons can easily be distinguished from each other.

Once the household roster is complete, you will be prompted by the Computer Assisted Personal Interviewing software to ask questions about each household member starting with the relation to the respondent. **NOTE: Surveys often ask the relationship to the head of household. In this survey, we need the relationship of each household member to the primary respondent.**

You will then ask for the household member's sex, age, whether the person is currently away and staying in another household, current marital status, and, if the individual is married, whether the person's spouse or partner lives in the household. For each child (individual 17 years and younger), there are additional questions on the child's educational status.

Note, that some respondents got ID cards to ensure they got the age correct. We suggest that this level of accuracy is not needed, especially if it takes an excessive amount of time; ages can be estimated.

02. Dwelling

This section asks questions about the dwelling structure and household amenities. You will begin by indicating the type of accommodation the household has, and the number of rooms excluding the bathrooms and kitchen.

Question **DW_time** asks about the length of time the household has resided in the dwelling. If the household has resided less than one year, enter 0, and then the number of months.

Question **DW_rent** asks on what basis the household occupies the dwelling. 'Borrow for free', pre-code 3, can be selected regardless of whether the household is authorized or unauthorized (i.e. squatting) to occupy the dwelling rent-free. If the dwelling is not rented or leased, owned, or borrowed for free, select option 88, 'other (specify)', and write their specific situation in the space provided.

Question **DW_accommodation** asks about the type of accommodation the household has.

A compound with multiple dwellings is a household unit that has multiple separate dwellings within the same living area.



A detached house - Is a stand alone dwelling unit.



A semi-detached household – is a dwelling unit that shares one common wall with the next house.



An apartment in a building, studio -This is a dwelling unit joined to others in a single multi-story building. Dwelling units above shops or commercial units in multi-story buildings are also classified as apartments. Some dwelling units in apartments may not be self-contained.



Room – a single room used for sleeping.

Room or rooms of a main house - A room or multiple rooms in a housing unit, where other households may live.

Servant or domestic employee quarters – These are designated rooms or quarters often within another household for servants or domestic employees and their families.

Other – Other types of dwelling structures.

Question **DW_dwellings** is to be answered if the type of dwelling in DW_accommodation is a “compound with multiple dwellings”. It asks for the number of dwellings on the compound.

Question **DW_rooms** asks about the number of rooms the household occupies. A room in a housing unit is considered room if it is surrounded by walls, if it has a height of at least 2 meters measured from the floor to the ceiling, and if it has an area of at least 4 square meters that can accommodate an adult’s bed. ****For compounds with multiple dwellings, this question is asked about the primary respondent’s main dwelling.*

- Exclude the kitchen. Minor rooms in the dwelling should also be excluded from the room count. These include bathrooms and toilets, storerooms, carport or garage, even if they meet the above criteria.

- Note that many houses in rural areas will consist of a single room. These should be included in the room count.
- A room used for both eating and sleeping counts as one room.
- If a room is divided by fabric, folding screens, cartons, plastic, or other temporary material, the room is considered as one room.
- However, you should include all other rooms, including rooms that are usually unoccupied, such as those that are reserved for guests. If there are rooms that are not being used/are not occupied, they should be included or counted. For example, if two people live in a house with seven bedrooms, all bedrooms should be counted.

Questions **DW_floors** and **DW_roof** ask for the main materials of the floor, and roof. These questions can be answered by your observation as you will be able to see for yourself which type of materials are used. If you are not sure however, ask the respondent. ****For compounds with multiple dwellings, this question is asked about the primary respondent's main dwelling.*

The roof is the upper part and cover of the housing unit resting on the walls, which protects the housing unit from rain, wind etc. If the housing unit is a multi-storied one, the material with which the roof of the top story is made should be taken for all the housing units beneath.

Question **DW_fuel** asks about the fuel used for cooking. Remember that this question asks about fuel for cooking, not fuel for heating or lighting. Information on the type of fuel used for cooking is a measure of the socioeconomic status of the household. The use of some cooking fuels can also have adverse health consequences. The category 'biogas' includes gases produced by fermenting manure in an enclosed pit. If the household uses more than one fuel for cooking, find out the fuel used most often. If any fuel other than the pre-coded ones is reported as being the main fuel used for cooking, select '89' and specify the type of fuel.

Questions **DW_toilet_type**, **DW_toilet_shared**, and **DW_toilet_location** ask if there is a facility located on the dwelling or yard, what type of facility the household uses, and if the facility is shared. A flush toilet uses cistern or holding tank for flushing water. If the response is flush/pour flush toilet, ask where the toilet flushes to (e.g. a sewer system, a septic tank, pit latrine, open drain or unknown). A pit latrine is a hole where excreta are deposited without flushing. A pit latrine with a slab is covered by a squatting 'slab' or platform that is constructed from materials that are durable and easy to clean. A ventilated improved pit latrine is ventilated by a pipe extending above the latrine roof that is covered with gauze mesh or netting. An open pit or a latrine without a slab is a latrine without a squatting platform or seat. Composting toilet is a toilet which excreta and carbon-rich material are combined (vegetable wastes, straw, grass, sawdust, and ash) to produce compost. A bucket refers to the use of a bucket for the retention of feces which is periodically removed for treatment, disposal or used as fertiliser. A hanging toilet is a toilet built over the sea, a river, or other body of water allowing excreta to drop directly into the water. No facility refers to open defecation. Under 'other', other types of toilets include container based sanitation, ecosan, arborloos.

03. Land Roster, crops, and water sources on parcel

The focus of this module is to list the land owned, held, leased out or rented in the past year, any water sources located on these lands and irrigation used for crops if the land is cultivated. It allows us to refer back to these pieces of land and any water sources in the next sections of the questionnaire. The first task is to ask the respondents to describe and list all land held by the household.

Once all land is identified through question 'LAND_id', you must go through each question in the module for an individual piece of land before preceding to the next one. For example, all relevant questions from 'LAND_dwelling' to 'LAND_irrigation_cans' should be answered for the first piece of land before moving to the second piece.

The enumerators will tell the respondents: *"Now I am going to ask you a series of questions about the land your household lives on and all land that is leased or sharecropped, owned, or rented out. I would like you to consider not only the land your household uses now, but also the land your household used in the last year. Please start with the piece of land where the dwelling is located and then the largest piece of land. From there move from the largest to the smallest piece of land in terms of area. By piece of land, we mean one continuous piece of land with identical (uniform) tenure (leased or sharecropped, owned or rented out) and not separated by physical characteristics such as a body of water or a road. Please describe each piece of land as specifically as possible in a way that others in the household will know because we will refer to these pieces of land in the other interviews."*

The respondent is to describe each piece of land to give each piece of land a name that uniquely identifies the land from other land.

During training the following example and clarification were given. We are interviewing one household on a compound with three brothers' separate households. The three brothers have land from their father that they share. However, in the last year the household we are interviewing only used/accessed one piece of the land; not the other pieces. In this case, we will only include the land that the household being interviewed used/accessed in the last year.

Question **LAND_dwelling** asks whether the dwelling is located on the given piece of land.

Question **LAND_buildings** asks whether there are any structures, buildings, or houses on the relevant piece of land.

Question **LAND_acquired** asks about how the piece of land was acquired. Precodes are granted by local leaders, inherited, rented, borrowed for free, cleared land or moved in without permission, shared crops in, and purchased. Land granted by local leaders which includes customary tenure. Customary tenure is a traditional method of owning land. Each community has traditionally developed a system of owning land. It may be owned either by the community, clan, families or individuals. If none of these options apply, select 'other (specify)', which is code 88, and have the respondent describe how they acquired the land.

In terms of "borrowed for free" some respondents will not say this directly, but this option should be chosen if they are living rent free on land owned by someone else (for example a family member).

Question **LAND_year** asks about which year the land was acquired.

Question **LAND_leased_out** asks whether the piece of land is currently leased out.

Question **LAND_current** asks about the primary current use of the piece of land. Options are residential, agricultural (including land that is fallow), aquacultural, pastoral, grazing, forest, and business or commercial. If the land's primary use is not listed, select the 'other (specify)', 88, option and have the respondent describe the land's primary current use, and if the respondent does not know the land's use, select 'don't know', 98.

Note, the primary current use should refer to any productive use. So, if the household has crops or livestock, the option for "agriculture" or the best relevant option should be chosen. Residential is only chosen if the only purpose of the land is for the home/house and there is no other relevant option.

Question **LAND_distance** asks how far the piece of land is from the dwelling. The unit used should be based on what the respondent answers because this will be the most accurate measurement we can receive (rather than having the respondent convert units themselves). *If they answer in minutes, verify that it is the distance walking.*

Question **LAND_water** asks whether there is access to water on this piece of land at any time during the year. This can include any temporary source such as a well from which water can be pulled only during the wet season.

Question **LAND_water_id** asks, if there is a water source on the piece of land, to describe the water source using a name that uniquely identifies it from other water sources. A water source is defined as the point of water collection. Each water source should be attributed to the piece of land which it is on. Respondents should describe the water source as specifically as possible and in a way that will be familiar to other household members because these water sources will be referred to in the individual interviews with other household members.

Question **LAND_water_use** asks if the household uses water from the source for any purpose.

Question **LAND_cultivated** asks whether the land was cultivated by the respondent's household in the previous long rainy season (March to June 2022).

Question **LAND_crops** asks which crops were planted on the piece of land if it was cultivated in the last agricultural season (long rainy season; March to June). All relevant crops should be selected.

One supervisor suggested that enumerators list the crops in their notebooks so they could refer to them when they get to the individual-level questionnaire.

Question **LAND_irrigated** asks whether the crops cultivated on this piece of land are irrigated.

In these questions, "irrigate" refers both an irrigation system and watering by hand/can/bucket. The translation used is similar to "watering" in English.

Question **LAND_supplement** asks about with water source is used to irrigate crops on this piece of land in the current agricultural season if the land is irrigated. The options are all the sources of water listed in **LAND_water_id** and "other, specify". If other is chosen, please be sure to have the respondent clearly describe the source (so that it can be added and matched to new water sources listed in the next module).

Question **LAND_irrigation_own** asks who owns the main water source the household uses for irrigation. The options are own household, relatives, public or shared resource, and privately owned by others. If the respondent specifies something else, select “other” and specify.

Question **LAND_irrigation_how** asks about how irrigation water is transported from the water source to the crops. Options are piped irrigation (irrigation that uses a pump to transport water), gravity irrigation (irrigation that consists of an elevated water source with a pipe at the bottom which utilises gravity to feed water for irrigation) and can/bucket irrigation (where a bucket is used to collect water and is then elevated to utilise gravity to transport water).

Question **LAND_irrigation_manage** asks who manages and maintains the irrigation system (if **LAND_irrigation_how** is a piped or gravity irrigation system). The options for this question include all household members or non-household members: 94 for female non-household member and 95 for male non-household member. Up to 3 people can be chosen. If more than 3 people are mentioned, ask for the main 3 people.

Question **LAND_irrigation_cans** asks those who responded to **LAND_irrigate_how** is by buckets or cans, who waters the crops. The options for this question include all household members or non-household members: 94 for female non-household member and 95 for male non-household member. Up to 3 people can be chosen; if more than 3 people are mentioned, ask for the main 3 people.

04. Water Portfolio: Water Sources Used by the Household in the last 4 weeks

The water portfolio section focusses on water sources used by the household. It collects information such as the type of water sources used, the cost of using the water source, who collects water, how much water is collected and what it is used for, water quality and safety perceptions, as well as conflict around the source and the source’s predictability.

Question **WS_source_list_ALL** asks about all the water sources (both used and not used) by the household in the last four weeks. This includes rainwater as a source, and includes all water uses, including productive and income activities, livestock, cropping, drinking, cleaning, bathing, and cooking. The water source is defined as the point of water collection. The respondent should describe the source as specifically as possible so that the sources are recognizable to other household members. Remember that a water source is defined as the point of water collection.

Question **WS_type** asks about the type of the water source. Options are water from a tap; borehole or tubewell; open well; closed well; protected spring; unprotected spring; stream, river, lake, dam, pond, stream, canal, temporary wet seasonal puddles; rock catchment; and irrigation channel, rainwater, retailer, traveling vendor, or tanker truck. If none of these options apply, select ‘other (specify)’, 88, and have the respondent describe the water source.

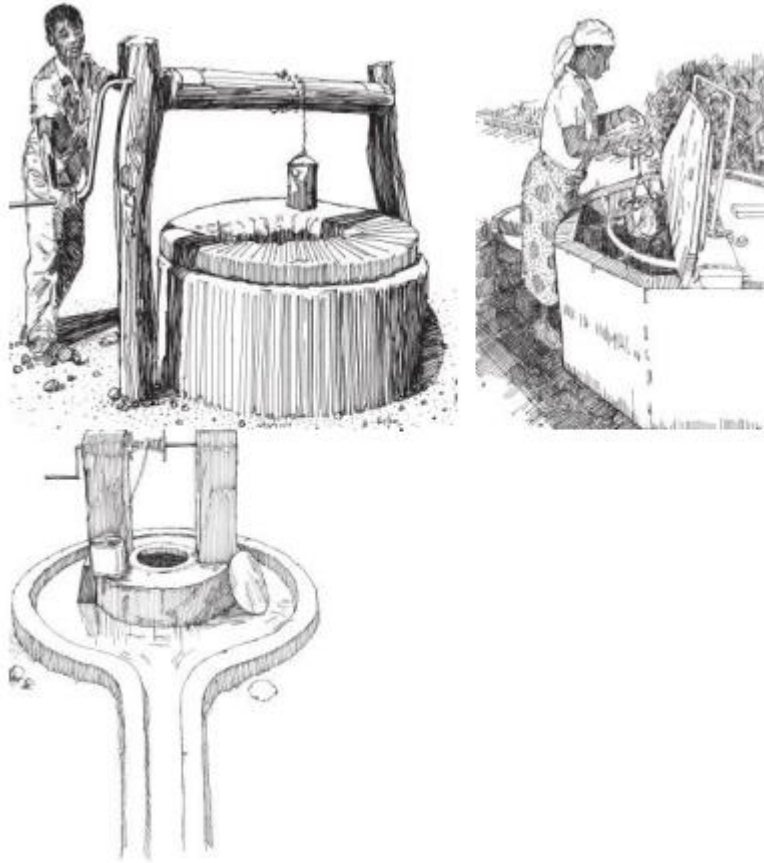
Boreholes and tubewells are deep, narrow holes driven, bored or drilled into the ground to extract groundwater; water is delivered via a pump which may be human, animal, wind, electric, diesel or solar-powered.



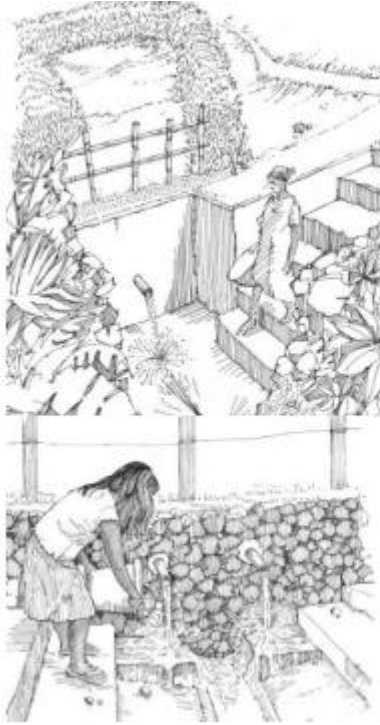
An open well is a dug well that is unprotected from runoff water (surface water such as rain running into the well), unprotected from bird feces or animals, or both.



A closed well is a dug well that is (1) protected from runoff water through a well lining or casing that is raised above ground level and a platform that diverts spilled water away from the well, and (2) covered so that bird droppings and animals cannot fall down the hole. Both conditions must be satisfied for a dug well to be considered closed.



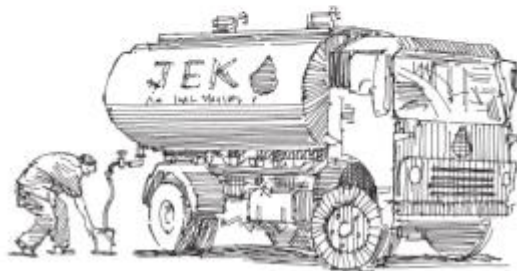
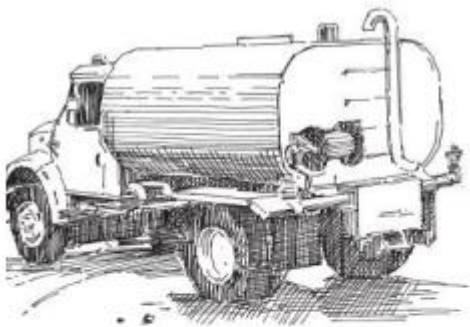
A protected spring is a spring which is protected from runoff, bird droppings and animals by a 'spring box' which is typically constructed of brick, masonry, or concrete and is built around the spring so that water flows directly out of the box into a pipe without being exposed to outside pollution.



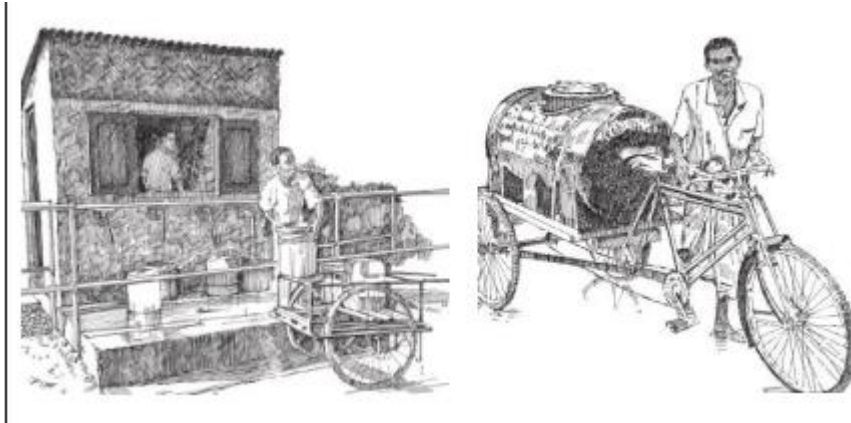
An unprotected spring is a spring that is subject to runoff and/or bird droppings or animals. Unprotected springs typically do not have a 'spring box'.



A tanker truck is water obtained from a provider who uses a truck to transport water into the community. Typically, the provider sells the water to households.



A travelling vendor is water obtained from a provider who transports water into a community using a cart and then sells the water. The means for pulling the cart may be motorized or non-motorized (e.g. a donkey).



Question **WS_sourcepipe** asks, if the source is water from a tap or plumbing, whether the tap is connected to a utility piped water system, a community piped water system or a private piped supply.

A utility piped water system is a piped water system provided and maintained by a water utility. These typically service a large community. A water utility is a company whose purpose is to provide water services to households, businesses etc.

A community piped water system is a piped water system which services multiple households in a community and is provided and maintained by those being serviced by the system.

A private piped supply is a piped water supply provided and maintained by the household on the household's land.

If the respondent does not know, choose "don't know" and continue with the next question.

Question **WS_well_pump** asks, if the water source is a well, whether the well has a pump.

Question **WS_well_manual** asks whether the pump is operated by hand or motorized if the water source is a well that has a pump.

A pump operated by hand requires a person to push the handle to retrieve water from the system.



A motorized pump operates using electricity, diesel, solar or wind energy to retrieve water from the system.

Question **WS_location** asks about where the water source is located. The options are 1) inside the respondent's dwelling; 2) in another household member's dwelling; 3) on household land; 4) on neighbor's land; 5) on community land; 6) in your village; 7) in another village; or 88) other (specify).

Question **WS_source_confirm** asks which parcel of land the water source is on, for those reported to be on household land (WS_location=3). The options will be the list of the pieces of land the household listed in the Land module.

Question **WS_land_tenure** is for water sources not located in household dwellings or on household land. It asks about how the land where these water sources are located is owned or held. Note, that this question is about the land ownership/holding. The options are 1) privately owned or held by individuals; 2) land in settler or formerly settler occupied areas (this was described by enumerators as pre-colonial land that was allocated by the government to the people); 3) government or state land; 4) trust land vested in local authorities; 5) group ranches – demarcated area(s) of rangeland to which a group of pastoralists, who graze their individually owned herds on it, have official land rights; 6) other customary lands; or 88) other (specify). If the respondent does not know, choose this option.

Question **WS_source_community** asks whether other people can use the given source and, if so, whether these people are from the community, or neighbours or family members. Neighbours refer to those people residing near the household.

Question **WS_source_communityid** asks about the community names of the water sources shared by the community, in which case it can be described as a community source. The source should be described in a way that other community members would be familiar with it and various names/descriptions can be given for one source.

Question **WS_difficult** asks about water sources not located in the dwellings, about whether it is difficult to travel to the water source. The options are 1) yes, it is physically demanding but accessible route; 2) yes, difficult or nearly impassable route; or 3) no (it's not difficult to travel to the source).

Question **WS_safety1** asks about women's and girl's safety and may be a sensitive question, so it should be asked sensitively. The question asks if the respondent would say that women and girls feel unsafe going to collect water from the relevant water source due to threats of harassment and violence. The options are given on a 3-point likert scale: 'no, it is safe', 'yes, it is a small worry', and 'yes, it is a large concern'.

Question **WS_conflict_com** asks about the likelihood of conflict or disagreement with others in the community about using water from the relevant source. The options are given on a 3-point likert scale: 'not at all likely', 'somewhat likely', and 'very likely'.

Question **WS_conflict_hh** asks about the likelihood of conflict or disagreement between members of your household about using water from the relevant source. The options are given on a 3-point likert scale: 'not at all likely', 'somewhat likely', and 'very likely'.

Question **WS_reliability** asks about the reliability of water from the given source. Options are provided on a 4-point scale: 'always available', 'usually available', 'sometimes available', and 'rarely or never available'.

Question **WS_source_used** asks if the water source was used by the household in the last 4 weeks. If the source was used by the household, the respondent will be asked questions WS_freq to WS_month. If the water source was not used in the last four weeks, the respondent will be asked questions WN_can_use to WN_wait.

Question **WS_freq** asks, how often the household collects water from the source. The option that is closest to the respondent's answer should be chosen: daily, at least once a week but not daily, one or more times a month but less than once a week, or less than once a month.

Question **WS_fee1** asks whether the household pays for the water from the given source. This is considered 'yes' even if the payment has not been cleared.

Question **WS_fee2** asks about the payment structure for water from the source if the household pays for water. The options are per container, metered connection, fixed monthly fee, included in rent/electricity bill, per use, and periodic/ad hoc repair or maintenance fee. If none of these apply, select 'other (specify)' and have the respondent describe the payment structure.

Metered connection means that the amount of water used by the respondent is measured by a water meter and the amount the household pays is dependent on how much water the household uses as measured by the water meter. This is typically paid monthly.

A fixed monthly fee means the household pays the same amount for water each month regardless of how much water they use.

Included in rent/electricity bill means that the cost of water is included in the rent or electricity bill. The cost of water may or may not be indicated on the bill.

Per use means that the household pays each time they use water.

Periodic/ad hoc repair or maintenance fee means that the household pays only for maintenance and repair of the water system.

Question **WS_fee3** asks, if the payment structure is 'per container', how many containers the household gets at one time.

Question **WS_fee4** asks how much is paid for water. For this question, note the amount paid. The units correspond to the payment structure in WS_fee2 and include per container, per use, monthly fee, or periodical maintenance fee.

Question **WS_fee5** asks for how many liters of water is paid for at a time as per the previous question.

Question **WS_use** asks about the purposes for which the household uses water from the given source over the last four weeks. Select all options that apply, including 'other (specify)' if they mention a use not mentioned in the other options; ensure they describe the use.

Question **WS_safe** asks, if the source is used for drinking water or food preparation and cooking, whether the respondent thinks their water was always safe to drink without treatment over the last 4 weeks.

Question **WS_unsafe1** asks, if the respondent does not feel their water from the respective source was always safe to drink over the last 4 weeks, why do they think the water is not safe to drink all the time. Select all options that apply including 'other (specify)' if they mention a reason not mentioned in the other options; ensure they describe the reason. Multiple responses are possible. We added to the options: dirty/color (in the same line as "looks bad") and added option "salty water".

Question **WS_time** asks how long it take to carry water back from the source. The method of transport is taken from WS_mode.

Question **WS_mode** asks how someone in the household travels to and from the source. The most common way should be selected.

Question **WS_wait** asks how much time is typically spent waiting and collecting water at the source. This includes time they spend doing other activities while waiting at the source such as talking with other people.

Question **WS_collectors** asks, if the source is outside the compound and not delivered, who typically collects water from the source. Up to three IDs can be entered; household member IDs will refer to the codes from the household roster. Non-household member IDs can be entered as '94' for female non-household members and '95' for male non-household members.

Question **WS_day** asks how many times each person (people mentioned in WS_collectors) typically collects water from the given source in a day.

Question **WS_week** asks how many times each person (people mentioned in WS_collectors) typically collects water from the given source in a week for those who do not collect water each day (WS_day==0).

Question **WS_month** asks how many times each person (people mentioned in WS_collectors) typically collects water from the given source in a month for those who do not collect water each week (WS_week==0).

Question **WS_treated** asks, for the water the household is drinking or using for food preparation, whether anything was done to the water to make it safer to drink or consume.

This is a continuation of the water portfolio. While the previous section focused on water sources that are used by the household (in the last 4 weeks), this section focuses on water sources that were not used in the last 4 weeks.

Question **WN_can_use** asks whether the household members have access to the source; if they could use the source if they wanted to.

Question **WN_not_use** is asked of those who respond “yes” to the previous question (WN_can_use) and ask for the main reason why the household members did not use water from the source in the last four weeks. The options are 1) variable availability; 2) too expensive; 3) too far; 4) too long a wait in line; 5) walk or travel too strenuous; 6) journey to water source is not safe; 7) water quality is poor (water is not safe to use); 8) dislike taste; 9) dislike color; 10) possible conflict with others; and 88) other (specify). Please carefully choose the best option for the main reason why the household did not use the source, noting that some options are similar. For example, there are several options about the journey to the water source; so carefully choose the option that best represents why the household members did not use the source. Enumerators noted that this question was a bit difficult to elicit responses. Respondents often said they had a source at home. They were instructed to probe, “Why did you choose the primary source and not this source?” Listen carefully to responses to choose the best option from the list. This may be related to distance, or time waiting, etc.

Question **WN_no_access** is asked of those who responded that they do not have access to the water source – they answered “no” to question WN_can_use. It asks why the household members are not able to access the water source. Please ask the question and choose the answer that best represents the respondents answer. The options are 1) not part of the water association; 2) did not pay required fee; 3) not on good terms with the land holder; 4) broke down; 5) not enough water available; or 88) other (specify).

Question **WN_fee1** asks whether there is a fee charged for using water from the source.

Question **WN_fee2** is asked about the sources that charge a fee for use. It asks how much the fee is. For this question, note the fee amount charged and the unit of payment. The units are fee per container, fee per use, monthly fee, and periodic maintenance fee. If none of these apply, select ‘other (specify)’ and have the respondent describe the fee structure.

Question **WN_fee5** asks how many liters is paid for at the price given in the previous question.

Question **WN_notused_safe1** asks, whether the respondent believes the water from this source would be safe to drink or use food preparation and cooking.

Question **WN_notused_safe2** asks, if they feel the water from the source is not safe for drinking and food preparation and cooking, why they feel the water is not safe to drink. Select all options that apply including ‘other (specify)’ if they mention a reason not mentioned in the other options; ensure they describe the reason.

Question **WN_time** asks how long it takes to go to the source one way. I.e. either, how long it takes to travel to the source OR how long it takes to travel back from the source. The method of transport is taken from WN_mode.

Question **WN_mode** asks how would the respondent travel to the water source (if it is located outside the household compound). The most likely (or most common) way the person would travel should be selected.

Question **WN_wait** asks how much time would be spent waiting and collecting water at the source. This includes time they spend doing other activities while waiting at the source such as talking with other people.

06. HWISE – Household level water insecurity

[This section has been adapted from the HWISE User Manual, which can be found in its entirety at <https://www.ipr.northwestern.edu/wise-scales/measure-water-insecurity/implementation-materials/index.html>.]

The Household Water Insecurity Experiences (HWISE) Scale (hwise.org) is used to identify where and when water insecurity occurs, as well as who is water insecure and to what extent. The HWISE Scale asks respondents to reflect on the household's experiences of water availability, accessibility, use, acceptability, and reliability throughout the prior four weeks. The HWISE Scale assumes that households with greater water insecurity will affirm more experiences and/or affirm greater frequency of experiences.

There are 12 HWISE items, which respond to the 12 questions in this module. Responses to items are never (0 times), rarely (1–2 times), sometimes (3–10 times), often (11–20 times), and always (more than 20 times).

Please note, that all the questions refer to the last 4 weeks.

For this module, it is important that the respondents answer all questions (to the extent possible) because if any question is missing (or answered 'don't know' or 'not applicable') the water insecurity score cannot be calculated. Thus, the following probing questions can be used to help convey the underlying meaning of each question.

Question **HWISE_worry** asks about how often, in the last 4 weeks, anyone in the household worried about not having enough water for all household needs.

Probing questions: Your household needs could include washing clothes, bathing yourself and/or your children, watering animals, washing dishes and utensils, cleaning your home, or other activities that require water.

In this question, we are wondering about the worry of not having enough water.

Question **HWISE_interrupt** asks about how often, in the last 4 weeks, the household's main water source was interrupted or limited in any way.

Probing questions: There are many types of interruptions. By interrupted, we mean that your water could have been turned off by the government or company that provides it. It could have stopped flowing due to issues with the supply or supplier, a storage tank no longer containing water, or the vendor you regularly use to purchase water from not being available. Or perhaps there is a drought and the spring you normally use is dry such that you have to use another source to get water. This item does not exclusively refer to piped water sources.

Question **HWISE_clothes** asks about how often, in the last 4 weeks, anyone in the household was unable to wash clothes because of a problem with water.

Probing questions: This question refers only to water for washing clothes. Water used for laundry can come from within the household or outside the household (e.g. at a tapstand or river).

Question **HWISE_plans** asks about how often, in the last 4 weeks, anyone in the household had to change schedules or plans because of problems with water.

Probing questions: This question refers to your day being interrupted by problems with water. In some places, people have to travel to get water, which takes time and can interrupt plans. Interruptions include if you want to go visit a friend but cannot because you have to go get water, waking in the middle of the night to get water, or because there are problems caused by flooding that you have to deal with instead.

Question **HWISE_food** asks about how often, in the last 4 weeks, anyone in the household had to change what they ate because of problems with water.

Probing questions: This question refers to water only used for cooking or preparing foods. This question means that your household may have changed what was eaten because there was not enough water to wash, prepare, or cook a preferred food. For example, you couldn't wash vegetables, or didn't have enough water to boil beans.

Question **HWISE_hands** asks about how often, in the last 4 weeks, anyone in the household had to go without washing hands after a dirty activity because of problems with water.

Probing questions: This question refers to water for washing hands. Sometimes you may need to do dirty/unclean activities like changing diapers, using a toilet, smearing mud or dung on walls or floors to insulate your home, cleaning, or taking care of animals, and you may not have enough water to wash your hands after. If you choose not to wash your hands, this is different than not having enough water to wash them.

Question **HWISE_body** asks about how often, in the last 4 weeks, anyone in the household had to go without washing their body because of problems with water.

Probing questions: This question refers to anyone in the household not being able to wash their body because there isn't enough water for bathing. Sometimes household members need to bathe, but there isn't enough clean water to do so. Or, there may be enough water for some members of the family to bathe but not others.

Question **HWISE_drink** asks about how often, in the last 4 weeks, anyone in the household did not have as much water to drink as they would like.

Probing questions: This question refers to drinking water in your household. In some places, there is not always enough water for everyone to drink as much as they would like. Or, there may be drinking water for some people, but not others.

Question **HWISE_anger** asks about how often, in the last 4 weeks, anyone in the household felt angry about the water situation.

Probing questions: This question refers to anger or other negative emotions you feel because of getting and using water. By your water situation, we mean how you get water, not having enough water, not having enough of the kinds of water you prefer, being worried about the quality of your water, water issues affecting your life and schedule, and anything else related to getting and using water that may cause you to feel angry.

Question **HWISE_sleep** asks about how often, in the last 4 weeks, anyone in the household has gone to sleep thirsty because there wasn't any water to drink.

Probing questions: This question refers to not having enough water to drink in your household and feeling thirsty when you are going to sleep. For example, people can go many hours without drinking water because they do not have enough, they are saving it for other household members, or the water available isn't suitable for drinking

Question **HWISE_nowater** asks about how often, in the last 4 weeks, there was no useable or drinkable water whatsoever in the household.

Probing questions: This question refers to not having any water in your household that can be used for household activities or for drinking. For example, in some places, people do not have enough storage to keep water or are unable to get enough water to have for immediate needs as well as to store for later needs. In other places, water may be flooding a home, but none of the water that has gone into the house is useful for drinking, washing, cooking, or other activities.

Question **HWISE_shame** asks about how often, in the last 4 weeks, anyone in the household felt ashamed (stigmatized, or excluded) because of problems with water.

Probing questions: There are many reasons why people might feel ashamed, excluded, or stigmatized because of problems with water. This could include not being able to provide visitors with water if they stop by your home or feeling unclean due to lack of water.

Tip: If participants do not feel confident in their answers, or are having a difficult time responding, probe the participant about how many times these items have occurred in one week. Multiply this number by four to get a cumulative response.

07. FIES – Household level Food Insecurity

This module will be used to create a food insecurity measure for the household in the last 4 weeks.

Question **FIES_worry** asks about whether the respondent or other members of the household have been worried about not having enough to eat due to a lack of money or other resources. Remember that this question asks about the last 4 weeks.

Question **FIES_unable** asks if there was a time in the last 4 weeks where the respondent or other members of the household were unable to eat healthy and nutritious food due to a lack of money or resources.

Question **FIES_fewkinds** asks if there was a time in the past 4 weeks where the respondent or another member of the household ate only a few kinds of food because of a lack of money or resources.

Question **FIES_skip** asks if there was a time in the past 4 weeks where the respondent or another member of the household skipped a meal because there was not enough money or resources to get food.

Question **FIES_less** asks if there was a time in the past 4 weeks when the respondent or another member of the household ate less than they thought they should because of a lack of money or other resources.

Question **FIES_ranout** asks if there was a time in the past 4 weeks when the respondent's household ran out of food because of a lack of money or other resources.

Question **FIES_hungry** asks if there was a time in the past 4 weeks when the respondent or another member of the household were hungry but did not eat because there was not enough money or other resources for food.

Question **FIES_noeat** asks if there was a time in the past 4 weeks when the respondent or another member of the household went without eating for a whole day because of a lack of money or other resources.

08. Shocks

This module collects data on whether anyone in the household, or the household as a whole, has been affected by a serious shock in the last year. A serious shock is defined as an event that led to a serious reduction in asset holdings, caused the household income to fall substantially or resulted in a significant reduction in consumption.

Question **SHOCKS_household_member** asks whether, in the last year, the household or anyone in the household has been seriously affected by a serious shock. A shock is an event that led to a serious reduction in a person's asset holdings, caused a person's or household's income to fall substantially, or resulted in a significant reduction in consumption.

Question **SHOCKS_experienced** asks, if the respondent or their household has been affected by a serious shock in the last year, what type of shocks did they experience. It is important in this question not to prompt the respondent, but only to listen to what they say and record it under the most applicable option; if no option seems applicable, select 'other (specify)' and write down what they have said. Record up to five shocks that apply. The list of shocks are shown in the table below with select definitions given.

Shock	Definition
Death of a household member	
Death of another friend or relative that you depended on	
Serious injury or illness, self	
Serious injury or illness of a kin	
Inability to do a usual income generation activity of a household member including oneself	
Serious family/kin conflict	Conflict with family or kin to the extent that it creates a shock. This may be, for example, because the family/kin works in the household or for the respondent, or because the household relied on the family or kin to provide food or water.
Lost support from family and friends to household	
Separation from a spouse	
Termination of institutional support (not due to death)	
Destruction of property (including livestock, vehicles), due to any MAN-MADE event	Destruction of property refers to property that is no longer in a state in which it can be used as it typically is. Man-made events include war, vandalism (e.g. a person illegally destroying the household's property), or theft
Destruction of property (including livestock, vehicles), due to any natural calamity event	Destruction of property refers to property that is no longer in a state in which it can be used as it typically is. Natural calamity events include flooding, storms, drought, impacts of stray animals, and fire.

Severe drought	
Severe flood	
Severe shortage of water	
Severe shortage of food	
Violence/conflict	
Loss of livestock	
Crop failure	
Increase in food prices	
Increase in input prices	
Increase in water prices	
Displacement	

Section 3: Description of Individual-Level Questionnaire

Once the household level interview is complete, all adult household members should be interviewed using the individual-level questionnaire.

On the tablet, the Computer Assisted Personal Interviewing software will guide you in your selection of household members eligible for the individual questionnaire. Begin with the primary respondent. Once the interview is completed with the primary respondent, ask to speak with the other eligible members of the household. As mentioned above, it may take more than one visit to the household to interview all household members eligible for the individual questionnaire.

00. Individual level consent

At the start of each individual interview, be sure to record the **person's household ID number** or confirm that the person being interviewed matches the chosen individual interview in the tablet.

Do your best to make the person feel at ease. Open the conversation with a smile and greeting such as “good afternoon” and then proceed with your introduction, conveying the following information:

Your participation is entirely voluntary. You can choose to not answer any question, and may withdraw from the interview at any point if you wish. We will not share your answers with anyone outside the research team. We will not tell other household members or community members how you responded. Your answers will be completely confidential; we will not share information that identifies you.

Before I start, do you have any questions or would you like any further clarification about anything I have said? May I proceed with interviewing you?

Then, record their reply in **CONSENT_IND**.

Please note that the individual interview should be conducted in private with no one else around to the extent possible. Please answer question IND_PRES by indicating if anyone else is present at the start of the interview (this includes children and anyone else). If so, list the household members' ID codes and if there are non-household members present, indicate female non-household members with option '94' and male non-household member with option '95'.

01. Relationships and Education

This section asks about the person's relationship to the other household members, their level of education, religion, and ethnicity. The purpose of this module is to collect data on the key aspects of the respondent's identity. This data will be used when analysing the data to investigate how aspects of people's identity impact their outcomes.

Question **HH_member** will automatically be filled in by the Computer Automated Personal Interviewing software. This will be input directly from the 'HH_member' question of section 1 of the household questionnaire, 'Household Roster'; the question in the 'Household Roster' module was also titled 'HH_member'. Each household member should correspond to the same individual ID code as in the 'Household Roster' module of the household questionnaire.

Question **IND_relationship** asks about the respondent's relationship to each member of the household. A non-relative is someone who lives in the dwelling with the household, shares meals, and does not pay rent.

Options include spouse or partner, daughter/son, son-in-law or daughter-in-law, grandchild, mother/father, mother/father-in-law, sister/brother, other relative, adopted/foster/stepchild, niece/nephew, uncle/aunt, sister/brother-in-law, grandparent, domestic employee who lives with the household, other employee who lives with the household, other non-relative, an option for relations not included in the options, and an option for if the respondent does not know.

*** Note that this question is skipped for the primary respondent as the primary respondent already filled it in in the household-level questionnaire.*

Note: In the study site, may need to clarify relationships. It was explained that sometimes children of all co-wives are considered children (and brothers and sisters). Similarly, the co-wives may all be called "mother". Similarly, men may be called "brother", "father", "grandfather" regardless of blood relationship. So, the enumerators may need to clarify the specific relationships.

Question **ED_literacy** ask about individual's self-reported literacy in any language. If the respondent can read and write, please list all languages that they are able to read and write.

Question **ED_school** asks whether he/she currently is attending school.

Question **ED_grade** asks for asks for the highest grade completed. Please note that HIGHEST GRADE COMPLETED refers to the last grade completed. If the respondent is currently attending school, the highest grade completed should be their previous grade. For instance, if the respondent is in the first year of a bachelor program, the highest grade completed would be the last grade of secondary school. A grade/year is considered completed when the respondent is accepted in the next grade or he/she obtained the end-of-year certificate/degree that corresponds to that grade.

Question **ED_religion** asks about the religious beliefs of the respondent. The options are 'Roman Catholic', 'protestant/other Christian', 'Muslim', and 'no religion'. If they value another belief system, select 'other (specify)' and note down their belief system.

Question **ED_ethnicity** asks about the ethnicity of the respondent. The options are 'Turkana', 'Kalenjin', 'Kamba', 'Kikuyu', 'Kisji', 'Luhya', 'Luo', 'Maasai', 'Meru', 'Mijikenda/Swahili', 'Somali', 'Taita/Taveta',

and ‘Embu’. If the respondent replies with another option, select ‘other (specify)’ and note that answer down.

During training, we sub-divided option “Mijikenda” into the nine sub-tribes. (In Swahili “kenda” means 9.) These sub-tribes: Chonyi, Ribe, Kauma, Rabai, Kamba, Digo, Duruma, Jibana, and Giriama.

02. Individual level water insecurity (IWISE)

[This section has been adapted from the HWISE User Manual, which can be found in its entirety at <https://www.ipr.northwestern.edu/wise-scales/measure-water-insecurity/implementation-materials/index.html>.]

The Individual Water Insecurity Experiences (IWISE) Scale is adapted from the HWISE Scale. The IWISE Scale asks respondents to reflect on their own, personal experiences of water availability, accessibility, use, acceptability, and reliability throughout the prior four weeks.

There are 12 IWISE items, which respond to the 12 questions in this module. Responses to items are never (0 times), rarely (1–2 times), sometimes (3–10 times), often (11–20 times), and always (more than 20 times).

Please note, that all the questions refer to the last 4 weeks.

For this module, it is important that the respondents answer all questions (to the extent possible) because if any question is missing (or answered ‘don’t know’ or ‘not applicable’) the water insecurity score cannot be calculated. Thus, the following probing questions can be used to help convey the underlying meaning of each question.

Question **IWISE_worry** asks about how often, in the last 4 weeks, the worried about not having enough water for all his/her needs.

Probing questions: Your needs could include washing clothes, bathing yourself and/or your children, watering animals, washing dishes and utensils, cleaning your home, or other activities that require water.

In this question, we are wondering about the worry of not having enough water.

Question **IWISE_interrupt** asks about how often, in the last 4 weeks, the household’s main water source was interrupted or limited in any way.

Probing questions: There are many types of interruptions. By interrupted, we mean that your water could have been turned off by the government or company that provides it. It could have stopped flowing due to issues with the supply or supplier, a storage tank no longer containing water, or the vendor you regularly use to purchase water from not being available. Or perhaps there is a drought and the spring you normally use is dry such that you have to use another source to get water. This item does not exclusively refer to piped water sources.

Question **IWISE_clothes** asks about how often, in the last 4 weeks, the respondent’s clothes could not be washed because of a problem with water.

Probing questions: This question refers only to water for washing clothes. Water used for laundry can come from within the household or outside the household (e.g. at a tapstand or river).

Question **IWISE_plans** asks about how often, in the last 4 weeks, the respondent had to change his/her schedule or plans because of problems with water.

Probing questions: This question refers to your day being interrupted by problems with water. In some places, people have to travel to get water, which takes time and can interrupt plans. Interruptions include if you want to go visit a friend but cannot because you have to go get water, waking in the middle of the night to get water, or because there are problems caused by flooding that you have to deal with instead.

Question **IWISE_food** asks about how often, in the last 4 weeks, the respondent changed what they ate because of problems with water.

Probing questions: This question refers to water only used for cooking or preparing foods. This question means that you may have changed what you ate because there was not enough water to wash, prepare, or cook a preferred food. For example, you couldn't wash vegetables, or didn't have enough water to boil beans.

Question **IWISE_hands** asks about how often, in the last 4 weeks, the respondent had to go without washing hands after a dirty activity because of problems with water.

Probing questions: This question refers to water for washing hands. Sometimes you may need to do dirty/unclean activities like changing diapers, using a toilet, smearing mud or dung on walls or floors to insulate your home, cleaning, or taking care of animals, and you may not have enough water to wash your hands after. If you choose not to wash your hands, this is different than not having enough water to wash them.

Question **IWISE_body** asks about how often, in the last 4 weeks, the respondent had to go without washing their body because of problems with water.

Probing questions: This question refers to the respondent not being able to wash their body because there isn't enough water for bathing. Sometimes a person needs to bathe, but there isn't enough clean water to do so.

Question **IWISE_drink** asks about how often, in the last 4 weeks, the respondent did not have as much water to drink as they would like.

Probing questions: This question refers to drinking water. In some places, there is not always enough water for everyone to drink as much as they would like.

Question **IWISE_anger** asks about how often, in the last 4 weeks, the respondent felt angry about the water situation.

Probing questions: This question refers to anger or other negative emotions you feel because of getting and using water. By your water situation, we mean how you get water, not having enough water, not having enough of the kinds of water you prefer, being worried about the

quality of your water, water issues affecting your life and schedule, and anything else related to getting and using water that may cause you to feel angry.

Question **IWISE_sleep** asks about how often, in the last 4 weeks, the respondent has gone to sleep thirsty because there wasn't any water to drink.

Probing questions: This question refers to not having enough water to drink and feeling thirsty when you are going to sleep. For example, people can go many hours without drinking water because they do not have enough, they are saving it for other household members, or the water available isn't suitable for drinking.

Question **IWISE_nowater** asks about how often, in the last 4 weeks, the respondent had no useable or drinkable water whatsoever.

Probing questions: This question refers to the respondent not having any water that can be used for personal activities or for drinking. For example, in some places, people do not have enough storage to keep water or are unable to get enough water to have for immediate needs as well as to store for later needs. In other places, water may be flooding a home, but none of the water that has gone into the house is useful for drinking, washing, cooking, or other activities.

Question **IWISE_shame** asks about how often, in the last 4 weeks, the respondent felt ashamed (stigmatized, or excluded) because of problems with water.

Probing questions: There are many reasons why people might feel ashamed, excluded, or stigmatized because of problems with water. This could include not being able to provide visitors with water if they stop by your home or feeling unclean due to lack of water.

Tip: If participants do not feel confident in their answers, or are having a difficult time responding, probe the participant about how many times these items have occurred in one week. Multiply this number by four to get a cumulative response.

03. Water Access

This section aims to understand individual level water access to different water sources.

Question **WATER_source** automatically lists the names and/or descriptions of each water source that the household uses or has access to. It is automatically generated from the household level questionnaire modules on the water portfolio.

You will convey, “I am going to name and describe each water source in the community including the sources the household used and did not use in the last four weeks.” Then you will describe each water source to the respondent.

Question **WATER_additional_sources** asks the respondent if there are any other water sources that are not included in the list **WATER_source**.

Question **WATER_additional_names** is asked if the respondent answers ‘yes’ that there are other water sources. It asks them to name and describe these other water sources.

If there are additional water sources, the respondents are directed to complete the additional water sources module (03 Water (2)).

NOTE: To reduce the likelihood that you will have a number of additional water sources listed at the individual-level questionnaire, choose the key informant of the household-level questionnaire based on how well informed the person is about the household’s water collection use.

Question **WATER_tenure** asks how the water source is owned or held (this question is not relevant for water sourced from traveling vendors or shops). Options include 1) household members; 2) neighboring household; 3) a group of neighbors; 4) communal (a group beyond neighbors); 5) local government; 6) private utility company; 7) public utility company; 8) public or state property. If another type of ownership is mentioned, please select ‘88 – other’ and specify the type of ownership/holding/tenure.

Question **WATER_purpose** is for those who have the right to use water from the source. It asks for what purposes the respondent can use water from the source. Multiple selections are possible. The options include domestic purposes, crops, livestock, aquaculture/fishing, non-agricultural income earning activities, to bottle and sell, all domestic and productive activities, or other (specify).

Question **WATER_access_scarcity** asks the respondent if they have the right to use the water when water is scarce at the source.

Question **WATER_purpose_scarce** is for those who do have the right to use water from the source when water is scarce. It asks for what purposes the respondent can use water from the source when water is scarce. Multiple selections are possible. The options include: domestic purposes, crops, livestock, aquaculture/fishing, non-agricultural income earning activities, to bottle and sell, all domestic and productive activities, or other (specify).

Question **WATER_no_access** is for those who responded that they did not have the right to use water from the source in **WATER_access**. It asks why they don’t have the right to use the water. The options include not part of the water association, did not pay required fee, not on good terms with the land holder, conflict, or other. If conflict is chosen, please specify the type or conflict, or with whom there is a conflict. If other is chosen, specify the reason given. Note, that multiple selections are allowed for this

question. (May need option for “not accessible” to cover the example given that it is a private rainwater collection system at a neighbor’s house – it is a water source in the community but not really accessible to the household members.)

Question **WATER_prevent** is for all respondents. It asks whether the person has the right to who can and cannot use the water source either alone or jointly with someone else.

Question **WATER_change** asks whether the respondent has the right to add, change, or improve the water source. This right can be a right they hold alone/exclusively or jointly with others.

Question **WATER_collect** asks if the respondent (himself/herself) collected water from the source for any purpose in the last four weeks.

03B. Water (2) – Additional Water Sources

This module is only used if the respondent mentions that there are other water sources that were not included in the household level questionnaire.

Question **water_additional_names** is not a question. It is a list copied from the previous module (J02) and is used to identify water sources for the survey.

Question **WSA_type** asks about the type of the water source. Options are water from a tap; borehole or tubewell; open well; closed well; protected spring; unprotected spring; stream, river, lake, dam, pond, stream, canal, temporary wet seasonal puddles; rock catchment; and irrigation channel, rainwater, retailer, traveling vendor, or tanker truck. If none of these options apply, select ‘other (specify)’, 88, and have the respondent describe the water source. (These sources are described in detail in the Water Module of the household questionnaire.)

Question **WSA_sourcepipe** asks, if the source is water from a tap or plumbing, whether the tap is connected to a utility piped water system, a community piped water system or a private piped supply.

A utility piped water system is a piped water system provided and maintained by a water utility. These typically service a large community. A water utility is a company whose purpose is to provide water services to households, businesses etc.

A community piped water system is a piped water system which services multiple households in a community and is provided and maintained by those being serviced by the system.

A private piped supply is a piped water supply provided and maintained by the household on the household’s land.

Question **WSA_well_pump** asks, if the water source is a well, whether the well has a pump.

Question **WSA_well_manual** asks whether the pump is operated by hand or motorized if the water source is a well that has a pump.

A pump operated by hand requires a person to push the handle to retrieve water from the system.

A motorized pump operates using electricity, diesel, solar or wind energy to retrieve water from the system.

Question **WSA_location** asks about where the water source is located. The options are 1) inside the respondent's dwelling; 2) in another household member's dwelling; 3) on household land; 4) on neighbor's land; 5) on community land; 6) in town; 7) in another town; or 88) other (specify).

Question **WSA_source_confirm1** is to be answered by those who respond that the water source is on household land in S1_location; it is used to identify which piece of household land the water source is located.

Question **WSA_land_tenure** is for water sources not located in household dwellings or on household land. It asks about how the land where these water sources are located is owned or held. Note, that this question is about the land ownership/holding. The options are 1) privately owned by individuals; 2) land in settler or formerly settler occupied areas; 3) government or state land; 4) trust land vested in local authorities; 5) group ranches – demarcated area(s) of rangeland to which a group of pastoralists, who graze their individually owned herds on it, have official land rights; 6) other customary lands; or 88) other (specify).

Question **WSA_source_community** asks whether other people can use the given source and, if so, whether these people are from the community, or neighbours or family members. Neighbours refer to those people residing near the household.

Question **WSA_source_communityid** asks about the community names of the water sources shared by the community, in which case it can be described as a community source. The source should be described in a way that other community members would be familiar with it and various names/descriptions can be given for one source.

Question **WSA_difficult** asks about water sources not located in the dwellings, about whether it is difficult to travel to the water source. The options are 1) yes, it is physically demanding but accessible route; 2) yes, difficult or nearly impassable route; or 3) no (it's not difficult to travel to the source).

Question **WSA_safety1** asks about women's and girl's safety and may be a sensitive question, so it should be asked sensitively. The question asks if the respondent would say that women and girls feel unsafe going to collect water from the relevant water source due to threats of harassment and violence. The options are given on a 3-point likert scale: 'no, it is safe', 'yes, it is a small worry', and 'yes, it is a large concern'.

Question **WSA_conflict_com** asks about the likelihood of conflict or disagreement with others in the community about using water from the relevant source. The options are given on a 3-point likert scale: 'not at all likely', 'somewhat likely', and 'very likely'.

Question **WSA_conflict_hh** asks about the likelihood of conflict or disagreement between members of your household about using water from the relevant source. The options are given on a 3-point likert scale: 'not at all likely', 'somewhat likely', and 'very likely'.

Question **WSA_reliability** asks about the reliability of water from the given source. Options are provided on a 4-point scale: 'always available', 'usually available', 'sometimes available', and 'rarely or never available'.

Question **WSA_water_source_used** asks if the additional water source was used by household members in the last four weeks. For water sources that were used, respondents will answer questions WSA_freq to WSA_wait; while for water sources that were not used, questions WNA_can_use to WNA_wait.

Question **WSA_freq** asks, in the last 4 weeks, how often the household collects water from the source. The best option should be chosen: if daily, choose daily. If one or more times a week (but not daily) choose at least once a week. If one or more times a month (but not as often as once a week), choose at least once a month. If it is less frequently than once a month, choose occasionally.

Question **WSA_fee1** asks whether the household pays for the water from the given source. This is considered 'yes' even if the payment has not been cleared.

Question **WSA_fee2** asks about the payment structure for water from the source if the household pays for water. The options are per container, metered connection, fixed monthly fee, included in rent/electricity bill, per use, and periodic/ad hoc repair or maintenance fee. If none of these apply, select 'other (specify)' and have the respondent describe the payment structure.

Metered connection means that the amount of water used by the respondent is measured by a water meter and the amount the household pays is dependent on how much water the household uses as measured by the water meter.

A fixed monthly fee means the household pays the same amount for water each month regardless of how much water they use.

Included in rent/electricity bill means that the cost of water is included in the rent or electricity bill. The cost of water may or may not be indicated on the bill.

Per use means that the household pays each time they use water.

Periodic/ad hoc repair or maintenance fee means that the household pays only for maintenance and repair of the water system.

Question **WSA_fee3** asks, if the payment structure is 'per container', how many containers the household gets at one time.

Question **WSA_fee4** asks how much is paid for water. For this question, note the amount paid and the unit of payment. The units correspond to the payment structure in WS_fee2 and include per container, per use, monthly fee, or periodical maintenance fee.

Question **WSA_fee5** asks for how many liters (and refers to the amount of water that is paid for in the previous question).

Question **WSA_use** asks about the purposes for which the household uses water from the given source over the last four weeks. Select all options that apply, including 'other (specify)' if they mention a use not mentioned in the other options; ensure they describe the use.

Question **WSA_safe** asks, if the source is used for drinking water or food preparation and cooking, whether the respondent thinks their water was always safe to drink without treatment over the last 4 weeks.

Question **WSA_unsafe** asks, if the respondent does not feel their water from the respective source was always safe to drink over the last 4 weeks, why do they think the water is not safe to drink all the time. Select all options that apply including 'other (specify)' if they mention a reason not mentioned in the other options; ensure they describe the reason.

Question **WSA_time** asks how long it takes each person who collects water from the source to go to the source one way. I.e. either, how long it takes to travel to the source OR how long it takes to travel back from the source. The method of transport is taken from **WS_mode**.

Question **WSA_mode** asks how each person (people mentioned in **WS_collectors**) travels to and from the source. The most common way the person travel should be selected.

Question **WSA_wait** asks how much time each person who collects water from the source spends waiting and collecting water at the source. This includes time they spend doing other activities while waiting at the source such as talking with other people.

Question **WSA_collectors** asks, if the source is outside the compound and not delivered, who typically collects water from the source. Up to three IDs can be entered; household member IDs will refer to the codes from the household roster. Non-household member IDs can be entered as '94' for female non-household members and '95' for male non-household members.

Question **WSA_day** asks how many times each person (people mentioned in **WS_collectors**) typically collects water from the given source in a day.

Question **WSA_week** asks how many times each person (people mentioned in **WS_collectors**) typically collects water from the given source in a week for those who do not collect water each day (**WS_day**==0).

Question **WSA_month** asks how many times each person (people mentioned in **WS_collectors**) typically collects water from the given source in a week for those who do not collect water each day (**WS_day**==0).

Question **WNA_can_use** asks whether the household members have access to the source; if they could use the source if they wanted to.

Question **WNA_not_use** is asked of those who respond “yes” to the previous question (WN_can_use) and ask for the main reason why the household members did not use water from the source in the last four weeks. The options are 1) variable availability; 2) too expensive; 3) too far; 4) too long a wait in line; 5) walk or travel too strenuous; 6) journey to water source is not safe; 7) water quality is poor (water is not safe to use); 8) dislike taste; 9) dislike color; 10) possible conflict with others; and 88) other (specify). Please carefully choose the best option for the main reason why the household did not use the source, noting that some options are similar. For example, there are several options about the journey to the water source; so carefully choose the option that best represents why the household members did not use the source.

Question **WNA_no_access** is asked of those who responded that they do not have access to the water source – they answered “no” to question WN_can_use. It asks why the household members are not able to access the water source. Please ask the question and choose the answer that best represents the respondents answer. The options are 1) not part of the water association; 2) did not pay required fee; 3) not on good terms with the land holder; 4) broke down; 5) not enough water available; or 88) other (specify).

Question **WNA_fee1** asks whether there is a fee charged for using water from the source.

Question **WNA_fee2** is asked about the sources that charge a fee for use. It asks how much the fee is. For this question, note the fee amount charged and the unit of payment. The units are fee per container, fee per use, monthly fee, and periodic maintenance fee. If none of these apply, select ‘other (specify)’ and have the respondent describe the fee structure.

Question **WNA_notused_safe1** asks, whether the respondent believes the water from this source would be safe to drink or use food preparation and cooking.

Question **WNA_notused_safe2** asks, if they feel the water from the source is not safe for drinking and food preparation and cooking, why they feel the water is not safe to drink. Select all options that apply including ‘other (specify)’ if they mention a reason not mentioned in the other options; ensure they describe the reason.

Question **S2_mode** asks how would the respondent travel to the water source (if it is located outside the household compound). The most likely (or most common) way the person would travel should be selected.

Question **S2_time** asks how long it takes to go to the source one way. I.e. either, how long it takes to travel to the source OR how long it takes to travel back from the source. The method of transport is taken from **WN_mode**.

Question **S2_wait** asks how much time would be spent waiting and collecting water at the source. This includes time they spend doing other activities while waiting at the source such as talking with other people.

After completing this module, return to the Water module to answer the remaining questions related to each water source (those previously identified and those that were added). This includes the following questions:

- WATER_tenure_add
- WATER_own_add
- WATER_access_who_add
- WATER_access_add
- WATER_purpose_add
- WATER_access_scarcity
- WATER_purpose_scarce
- WATER_no_access
- WATER_prevent
- WATER_change
- WATER_collect

03 Water (3)

Question **WATER_best** asks the respondent which water sources are the best for the household to use for drinking water. Up to three sources can be listed; they should be listed in order, starting with the first choice (the best), then the second best/choice, then the third best/choice.

Question **Water_factors** asks what three factors are most important when deciding which water sources to use for drinking water. For this question, the respondent should rank the top three choices by listing the top/most important factor first, then the second most important, and then the third most important. The options include monetary cost/fee, taste and color, perceived quality/ not contaminated/ safe water, safety of travel to the source – physical safety of the person collecting water, reliability, predictability, no conflict over the water source with others (in the household, community members, etc.), easy to access/ not far, not physically strenuous, time collecting, ease of collection. If another factor/reason is given, please select other and specify it.

Question **WATER_collect** asks who the respondent thinks should collect the water regardless of who actually does it. List up to three household members (using the ID codes), or choose female non-household member, or male non-household member. Alternatively, the respondent could say they prefer that water is delivered directly to them, in which case this should be indicated, and no household member ID codes should be used.

04. Preferences

The purpose of this module is to understand individual adult household member preferences for water use. For these questions, there is a list of 18 different water uses (including “other, specify”). There are three different scenarios with varying amounts of water available to be allocated to the different uses. The idea is to understand water use preferences under different scenarios of water scarcity. After asking about these three scenarios, the respondent is asked about how the household used water yesterday.

Respondents for this module: All adult household members.

For this set of questions use the **Visual Aid for the Preferences tool**. Use the visual aid and bottle caps or beans or stones to represent a half liter of water (2 beans/stones/bottlecaps/shells = 1 liter).

Question - PREF_use1:

If your household had 2 10-liter jerrycans (20 liters) of water for the day and you alone could make all the decisions about how the water is used, how would you allocate the water in the household in a way that is best for you and your family?

Enumerator will show respondent a chart with all the different uses including productive uses of water. The enumerator will ask the respondent to place the liters on different parts of the chart. (1 half liter = 1 bottlecap or bean)

For this question, ensure that the respondent understands how much a half liter of water is (show an example if possible). Then, tell them that each pebble, bottlecap or bean represents half a liter of water and there are 20 liters of water available (represented by 40 pebbles, bottlecaps or beans (40 half liters)). Next, show the visual aid with the different water use activities and ensure they understand what each activity is. The next step is to ask them how they would allocate the water in the household in a way that is best for them and their family. They will allocate the 40 pebbles, bottlecaps or beans among the different uses.

Note that it is possible some of the activities will not receive any water allocation.

If there is another water use activity they would like to allocate water to that is not in the list, please use the “other” category and specify what activity they added.

You will be asked to record the number of liters allocated to each water use (2 pebbles, bottlecaps or beans per liter). There will be an automatic check of the number of beans.

Be sure to enter “0” for those activities that did not receive any water.

Question - PREF_reuse1:

How much water would be reused? (in liters)

Enumerator: Enter 0 if none

This is a follow up question to understand if any water would be reused. Record the response in the space provided. Note, that this is about reuse overall (not by specific water use activity).

Question - PREF_use2

If your household had 1 10 liter-jerrycans (10 liters) of water for the day and you alone could make all the decisions about how the water is used, how would you allocate the water in the household in a way that is best for you and your family?

Enumerator will show respondent a chart with all the different uses including productive uses of water. The enumerator will ask the respondent to place the liters on different parts of the chart. (1 liter = 2 bottle cap or bean).

This question is similar to PREF_use1 except now the amount of water has been reduced to 10 liters (20 half liters). Explain to the respondent that now you would like to understand how they would allocate water if they only had 10 liters. Give them 20 pebbles, bottlecaps or beans and remind them that each one represents half a liter of water and that now there are 10 liters (20 half liters) of water available (represented by 20 pebbles, bottlecaps or beans). Next, use the visual aid with the different water use activities again and ask them how they would allocate the water in the household in a way that is best for them and their family. They will allocate the 20 pebbles, bottlecaps or beans among the different uses.

Note that it is possible some of the activities will not receive any water allocation.

If there is another water use activity they would like to allocate water to that is not in the list, please use the “other” category and specify what activity they added.

You will be asked to record the number of liters allocated to each water use (2 pebbles, bottlecaps or beans per liter). There will be an automatic check of the number of beans.

Be sure to enter “0” for those activities that did not receive any water.

Question - PREF_reuse2

How much water would be reused? (liters)

Enumerator: Enter 0 if none

This is a follow up question to understand if any water would be reused. Record the response in the space provided. Note, that this is about reuse overall (not by specific water use activity).

Question - PREF_allocation_use4

Ask how water was allocated to each activity yesterday in the household.

Note, that the question now changes, and we ask about yesterday’s water use. Ask them how water was allocated among the different activities yesterday.

If there is another activity they allocated water to yesterday that is not in the list, please use the “other” category and specify what activity they added.

Record responses by noting the number of liters allocated to each water use.

Be sure to enter “0” for those activities that did not receive any water.

Question - PREF_reuse4

How much water (in liters) was reused?

Enumerator: Enter 0 if none

This question asks respondents how much water that was used yesterday (among all the activities) was reused. Record the response; enter “0” if none of the water was reused.

Question - PREF_typical

Is this a typical day [current season]?

Yes – 1

No – 2

Ask if yesterday was a typical day in the current season. (Current season refers to the current agro-climatic season – dry season, long rainy season, short rainy season.)

05. Decision-Making Authority in the Household Using Beans, Pebbles, or Shells

This section is about who makes different types of decisions and how decisions are made. The idea is to use beans or pebbles to represent the amount of power each decision-maker has in making the different types of decisions.

There is a visual aid for this module.

BN_activity is a list of decision-making activities. The following decisions are included:

- Which water source the household uses for drinking water
- How much can be spent on regular water expenditures, including fees, transportation, costs for delivery and treatment for domestic purposes
- How water is allocated and used in the household
- Whether to purchase large water assets such as guttering and tanks for rainwater collection, water containers, carts for transportation, piped water connections, private tube wells, water pumps, or things that would purify or treat the water
- Health care for yourself
- Health care for your children or the children in the household (under 12)
- How the money you earn is used

Question **BN_decision** asks who normally makes decisions about the [ACTIVITY in BN_activity]. Sometimes this question is difficult to answer because the activity no longer requires an active decision, it is more of a routine activity. If this is the case, probe to ask who initially made the decision (before it became a routine activity). Enter up to 4 household member ID codes and/or female or male non-household members (94 or 95). If the respondents say the decision is not made in the household, mark this option and skip to the next [ACTIVITY in BN_activity].

Note that probing about when the decision was made is important to ensure that the respondent is thinking about the decision-making process.

Question **BN_number** is an automatic calculation made by the program. It is the number of decision-makers (1 to 4) from the previous question.

Select the appropriate visual aid (or draw the correct number of circles on a piece of paper). Use the BN_number to determine which visual aid to use. The visual aid consists of circle to represent each decision-maker. Select the visual aid with 2 circles for two decision-makers. Three circles for three decision-makers. And four circles for four decision-makers.

Be sure the respondent understands who each circle represents by writing clearly (and largely) the names of the decision-makers (or some symbol) with your pencil or marker.

Question **BN_authority** asks about whose views matter most with regard to decisions made on [ACTIVITY]. The respondent uses the beans or pebbles to represent how much power each decision-maker has in making decisions related to the [ACTIVITY in BN_activity].

To ask the question, choose the appropriate visual aid based on the number of decision-makers; write names clearly and legibly in the circles. Make sure the respondent understands who each circle represents. Then give the number of beans/pebbles according to the number of decision-makers:

2 decision-makers – 6 beans, pebbles, or shells

3 decision-makers – 9 beans, pebbles, or shells

4 decision-makers – 12 beans, pebbles, or shells

The enumerator will say, “I am giving you [X] beans and I want you to share them between the decision-makers according to the power each has in making the decision. How is household decision-making shared? Whose views matter most when it comes to [ACTIVITY]? ”

Then mark the number of beans or pebbles in each circle next to the appropriate decision-maker.

There was a concern mentioned about what to do if more than 4 decision-makers were identified but I did not get the notes about how to deal with this.

05A. Decision-Making – intrahousehold conflict strategies

This module aims to understand the different types of strategies individuals follow when they have a difference in opinion with the others in the household regarding the following activities:

- Which water source the household uses for drinking water;
- how much can be spent on regular water expenditures, including fees, transportation, costs for delivery and treatment for domestic purposes;
- how water is allocated and used in the household;
- large household expenditures; and
- health care for the respondent.

For each of these activities, the respondent is asked what aspects are important to the respondent with regards to [ACTIVITY]? This is to get the respondent thinking about the activity and their preferences in when decisions are made about the activity. There is no need to write anything down here. Listen carefully and probe, if there is no response.

***This is important to get the respondent thinking about the decision-making process and differences in opinion. This probing will also help ensure that respondents recognize that a decision was made at some point (and limit the number of people reporting that the decision was not made in the household).

Then, for the same activity, follow up by asking whether the respondent has ever had a difference in opinion with others regarding [ACTIVITY]. *Differences in opinion does not necessarily mean that they voiced their opinion or that there was a vocal disagreement. It means the respondent is aware there are differences in a point of view, even if nothing has been said to the others.* If the respondent has had a difference in opinion, follow up by asking series of questions about his or her approach when they have a different opinion than others: **DM_avoid** through **DM_tactic**.

You'll start with **DM_avoid**: “When you have a difference in opinion with the others in the household regarding [ACTIVITY] how likely are you to try avoid disagreements by not talking about them?”

Convey to the respondent there is no right or wrong answer.

You will then ask “When you have a difference in opinion with the others in the household regarding [ACTIVITY]...

- ... how likely are you to try to persuade others your idea is best or to take control of the situation?" (**DM_control**)
-how likely are you to yield your position to some extent and expect others to do the same?" (**DM_half**)
- ...how likely are you to agree as a way to try to preserve the relationship or to satisfy their needs even when you disagree?" (**DM_preserve**)
- ...how likely are you to present your perspective and expect others to do the same in search for new solutions that do not require you or anyone else to yield?" (**DM_newsolutions**)

The response options for each of these questions are (i) not at all, (ii) small extent, (iii) medium extent, (iv) to a high extent.

The respondents may begin to tell you a story about a conflict regarding the activity. You can use it to assess how likely they are to engage in each strategy. Be keen and pick on any tactic mentioned, and immediately ask the extent question: "how likely are you to try to...".

Since individuals often use more than one tactic when engaging in a disagreement, we ask for the main tactic. In **DM_tactic**, the respondent is asked which of the five tactics resembles him or her the most when he or she has a difference in opinion regarding each of the [ACTIVITY]:

- I aim to avoid any conflicts or disagreements
- I try to persuade others my solution is best or take control of the situation
- I give in some and expect others to do the same
- I aim to preserve the relationship by agreeing even if I disagree
- I present my perspective and expect others to do the same in search for new solutions.

You will likely need to read these out for the respondent.

05B. Decision-Making Vignettes

This part presents the respondent with five different vignettes about two different situations regarding water use in the household. Following each of the vignettes the respondent is asked whether they resemble the person portrayed in the story with "yes" and "no" being the response options. Then, if their answer is yes, they are asked whether they are completely the same or somewhat the same. In contrast, if they answer no, they are asked whether they are completely different or somewhat different.

Note there are 2 versions of this module. One module has vignettes focused on sources for drinking water and the other version focuses on water expenditures. The two different versions will be randomly assigned to half of the households such that half of the households get version 1 and the other half get version 2.

For this module, the enumerators discussed being careful with names. If a person has the same name as the one in the vignette ensure they understand that it is another (hypothetical) person – if necessary, use another name entirely.

Also, if needed, enumerators can take notes in their notebooks.

A new visual aid or “cheat sheet” was created for enumerators to use to keep track of the styles the respondent says they resemble. This can be done by placing marks on the (new) visual aid about conflict/disagreement styles the person resembles.

06. Land

This module collects information regarding the respondent’s decision-making by themselves or with others for their harvest, and the respondent’s rights regarding formal land ownership.

This module automatically pulls up each piece of land listed in **LAND_id** in the ‘Land Roster’ module of the household questionnaire.

Question **LAND_rights** asks whether the respondent can use the relevant piece of land for either agricultural or non-agricultural purposes. Non-agricultural purposes include income generating activities, grazing, residential, pastoral, aquacultural, or any other activity.

Question **LAND_ownership_joint** asks, who owns or holds use rights to the relevant piece of land. As many IDs can be entered as needed, including the respondent if he/she identifies as an owner, to get all owners. Household member IDs will refer to the codes from the household roster. Non-household member IDs can be entered as ‘94’ for women/female and ‘95’ for men/male.

Question **LAND_title** asks whether there is a document for the relevant piece of land issued by the Land Registry, Cadastral Agency or other agency. Documents include – but are not limited to – a title deed, certificate of ownership, certificate of hereditary acquisition, lease, survey plan or rental contract.

Question **LAND_document** asks, if there is a document issued by the Land Registry/Cadastral Agency, what type of document it is. If none of the options are relevant, select ‘other (specify)’, precode 88, and have the respondent describe the type of document they have. Make sure to only select the first document that the respondent states. The following table describes the different types of documents.

Title deed – Freehold or Leasehold, Title Deeds in Kenya are issued by Ministry of Lands, Housing and Urban Development at the Ministry' regional registries offices	1
Certificate of customary ownership - The Community Land Act 2015 recognizes, adjudicates and documents customary land rights for registration. Customary ownership is at the same footing as freehold and leaseholds. Certificate from the Community Land Registrar.	2
Certificate of occupancy - The Certificate of Occupancy in Kenya is a legal document usually issued by your local government agency or the housing/building department declaring a building’s compliance with relevant building codes and other laws, and indicating it to be in a condition suitable for human habitation. You may find a certificate of occupancy necessary when you need to sale or take a mortgage on a house as well as when you need to occupy for everyday living	3
Certificate of Hereditary - Inheritance of land is one of the most common ways through one can own land. However, in many cases, after the parent has subdivided land and given it to his children under customary system, the inheritors make no effort to obtain title deed. This may be because the parent didn’t have a title or they are unable to go through the tedious and	4

expensive system of land subdivision, survey and documentation. Will from Parents. Or Certificate or letter from Chief.	
Acquisition listed in registry	5
Survey plan - survey plan is a specialized map of a parcel of land . It determines and delineates boundary locations, building locations and physical features. The plans are issued by the Ministry of lands and Physical Planning through the Department of Survey.	6
Rental contract, registered	7
Leases, registered – leasehold certified but without a title deed	8
Sale letter of agreement / letter of allotment	9
Process of transferring title deeded land, registered / grant - document that shows transfer is the passing of interest to another person/people, freehold or leasehold owned from one party to another. May not have a title deed yet but working towards that.	

Question **LAND_name** asks whether the respondent’s name is among those listed on the ownership document for the piece of land as owner or rights use holder.

Question **LAND_othersnames** asks the respondent to list other people listed on the ownership document for the relevant piece of land as owners or rights use holders. Up to three IDs can be entered; household member IDs will refer to the codes from the household roster. Non-household member IDs can be entered as ‘94’ for females and ‘95’ for males. Add “other, specify”. This was included because enumerators noted the frequency that a deceased father or other person could be listed as an owner.

Question **LAND_sell** asks if the respondent has the right to sell the piece of land either alone or jointly with someone else. If they answer ‘no’, make sure to ask whether no one has the right to sell the land.

Question **LAND_sell_joint** asks who, other than the respondent, has the rights to sell the land. Up to three IDs can be entered; household member IDs will refer to the codes from the household roster. Non-household member IDs can be entered as ‘94’ for females and ‘95’ for males.

Question **LAND_bequeath** asks whether the respondent has the right to bequeath the land either alone or jointly with someone else. If they answer ‘no’, make sure to ask whether no one has the right to bequeath the land.

Question **LAND_bequeath_rights** asks who, other than the respondent, has the right to bequeath the land. Up to three IDs can be entered; household member IDs will refer to the codes from the household roster. Non-household member IDs can be entered as ‘94’ for females and ‘95’ for males.

Question **LAND_cultivated** is automatically filled by the Computer Assisted Personal Interviewing software from the question ‘LAND_cultivated’ in the ‘Land Roster’ module of the household

questionnaire. It is about whether the land was cultivated in the last season. The remaining questions are asked of lands that were cultivated in the last season.

The last season corresponds to April (when planting took place) to June/July (when crops were harvested).

Question **LAND_manage_crops** asks who manages the relevant piece of land. By this we mean who makes agricultural management decisions about the piece of land, such as what to grow, what inputs to use, if and how to irrigate, and when to harvest. Up to three IDs can be entered, including the respondent if he/she identifies as an owner. Household member IDs will refer to the codes from the household roster. Non-household member IDs can be entered as '94' for women/female and '95' for men/male.

Question **LAND_grow_crops** asks who decides what to grow on the relevant piece of land. Up to three IDs can be entered, including the respondent if he/she identifies as an owner. Household member IDs will refer to the codes from the household roster. Non-household member IDs can be entered as '94' for women/female and '95' for men/male.

Question **LAND_harvest_joint** asks who decides what to do with any of the harvest from the relevant piece of land. Up to three IDs can be entered, including the respondent if he/she identifies as an owner. Household member IDs will refer to the codes from the household roster. Non-household member IDs can be entered as '94' for women/female and '95' for men/male.

Question **LAND_harvestsold** asks whether any amount of harvest or product made from the harvest from the relevant piece of land sold.

Question **LAND_market** asks, if some harvest or product from harvest was sold, who decided where to sell the harvest. Up to three IDs can be entered, including the respondent if he/she identifies as an owner. Household member IDs will refer to the codes from the household roster. Non-household member IDs can be entered as '94' for women/female and '95' for men/male.

Question **LAND_harvest_sales** asks who decided how to use the earnings from the sales. Up to three IDs can be entered, including the respondent if he/she identifies as an owner. Household member IDs will refer to the codes from the household roster. Non-household member IDs can be entered as '94' for women/female and '95' for men/male.

07. Livestock

The focus of this module is all livestock assets owned by the household at the time of the survey. Livestock codes are provided in the LIVESTOCK_id column and livestock names are provided in the LIVESTOCK_name column.

Livestock names and definitions:

First, ask if anyone in the household owns each type of livestock. Only ask the other questions if they answer in the affirmative.

Livestock name	Definition
Oxen	A castrated bull used as a draught animal
Bull	An uncastrated male bovine animal

Cow	
Calves	A young domestic cow or bull
donkeys	
Camels	
Pigs	
Goats	
Sheep	
Chickens	
Other poultry (Ducks, quail, turkeys, geese, guinea fowl, and pigeons)	
Rabbits	
Fish/Aquaculture	
Beehives	
Other (specify)	

Ownership questions:

Question **LS_hh_owns** asks whether anyone in the household owns any of the relevant livestock. If none, are owned by anyone in the household go to the next type of livestock.

Question **LS_total** asks how many of the livestock is owned by household members.

If fish/aquaculture they will report the number of ponds (or cages if in the sea).

If bee hives, they will report the number of hives.

Question **LS_ownership_exc** asks how many of the relevant livestock asset the respondent owns exclusively/alone. If none, enter '0'.

Question **LS_ownership_jt** asks how many of the relevant livestock asset the respondent owns jointly with someone else. If none, enter '0'.

Question **LS_jt_owners** asks who else are joint owners of the livestock asset. Up to three IDs can be entered. Household member IDs will refer to the codes from the household roster. Non-household member IDs can be entered as '94' for women/female and '95' for men/male.

Livestock Care and Decision-making Questions:

Question **LS_decision_sell** asks who can make the decision to sell the relevant livestock asset. Up to three IDs can be entered, including the respondent if he/she identifies as an owner. Household member IDs will refer to the codes from the household roster. Non-household member IDs can be entered as '94' for women/female and '95' for men/male.

Question **LS_manages** asks about who manages livestock. Managing livestock means to be responsible for the financial aspects of the livestock and for ensuring the proper care and feeding of the animals; it may also include supervising others in the care of animals. Up to three IDs can be entered, including the respondent if he/she identifies as an owner. Household member IDs will refer to the codes from the household roster. Non-household member IDs can be entered as '94' for women/female and '95' for men/male.

Question **LS_cares** asks about who cares for the livestock. Caring for livestock involves feeding the livestock and ensuring they have enough water to drink. Up to three IDs can be entered, including the respondent if he/she identifies as an owner. Household member IDs will refer to the codes from the household roster. Non-household member IDs can be entered as '94' for women/female and '95' for men/male.

Question **LS_cares_water1** asks, if the respondent cares for the livestock, whether the livestock are taken to a water point or whether the water is brought to the livestock. If both options occur, select 'both'.

Question **LS_cares_water2** asks, if the respondent cares for the livestock, which water sources are used for water for the livestock. Use water source IDs identified previously (in the household level or individual level questionnaires – water and land modules).

Question **LS_produce** asks if any products were produced from the relevant livestock asset in the last year. Products include eggs, meat, milk, wool and hide.

Question **LS_produce_decisions** asks who makes the decisions about what to do with any of the products produced from livestock. Products include eggs, meat, milk, wool and hide. Up to three IDs can be entered, including the respondent if he/she identifies as an owner. Household member IDs will refer to the codes from the household roster. Non-household member IDs can be entered as '94' for women/female and '95' for men/male.

Question **LS_produce_sold** asks whether any of the products produced from the livestock were sold.

Question **LS_earnings_decisions** asks who decided how to use the earnings from selling the products produced from the livestock. Up to three IDs can be entered, including the respondent if he/she identifies as an owner. Household member IDs will refer to the codes from the household roster. Non-household member IDs can be entered as '94' for women/female and '95' for men/male.

Question **LS_animal_sold** asks whether any of the livestock were sold in the last year.

Question **LS_decision_sell** asks, if the livestock was sold, who decided to sell the livestock. Up to three IDs can be entered, including the respondent if he/she identifies as an owner. Household member IDs will refer to the codes from the household roster. Non-household member IDs can be entered as '94' for women/female and '95' for men/male.

Question **LS_earnings_animal** asks who decided how to use the earnings from selling the livestock. Up to three IDs can be entered, including the respondent if he/she identifies as an owner. Household member IDs will refer to the codes from the household roster. Non-household member IDs can be entered as '94' for women/female and '95' for men/male.

Livestock Hiding Questions:

These questions could potentially be sensitive and should be asked carefully. Enumerators should not refer to it as hiding livestock. These questions should be asked about all types of livestock (regardless of previous answers about ownership). However, if there are other household members present, do not ask these questions and indicate this is the case in LS_hiding with 67.

Question **LS_hiding** asks if the respondent owns any livestock that other household members do not know about. If other household members are present, please do not ask this question and note that it was not asked for this reason.

Question **LS_hiding_who** asks who in the household does not know about the livestock. A list of all household members will be provided, and the respondent can choose as many as needed or there is an option that 'no one in the household knows'.

Question **LS_hiding_number** asks how many livestock the respondent owns that the other household members do not know about.

Question **LS_hiding_included** asks whether these livestock were reported in the total livestock owned in LS_total.

Question **LS_hiding_keep** asks where these additional livestock are kept.

Livestock Hiding Questions:

These questions could potentially be sensitive and should be asked carefully. Enumerators should not refer to it as hiding livestock. These questions should be asked about all types of livestock (regardless of previous answers about ownership). However, if there are other household members present, do not ask these questions and indicate this is the case in LS_hiding with 67.

Question **LS_hiding** asks if the respondent owns any livestock that other household members do not know about. If other household members are present, please do not ask this question and note that it was not asked for this reason.

Question **LS_hiding_who** asks who in the household does not know about the livestock. A list of all household members will be provided, and the respondent can choose as many as needed or there is an option that 'no one in the household knows'. "Don't know" was also included as an option.

Question **LS_hiding_number** asks how many livestock the respondent owns that the other household members do not know about.

Question **LS_hiding_included** asks whether these livestock were reported in the total livestock owned in LS_total.

Question **LS_hiding_keep** asks where these additional livestock are kept.

08. Assets

The focus of this module is all assets owned by the household at the time of the survey. Asset codes are provided in the ASSET_id column and asset names are provided in the ASSET_name column.

Assets are shown in the table below with some definitions provided.

Asset name	Definition
Jerrican/small water container	Plastic water container, often 20L but various sizes
ROTO/large water storage barrel or container (covered)	
Water storage barrel (uncovered)	Large water container
Solar device	
Generator	
Water pump	
Water filtration system	A water filter such as a ceramic, sand, composite, reverse osmosis filter system
Guttering and tanks for water harvesting	
Wood stove	
Biogas stove	
Kerosene stove	
Cylinder gas stove	
Electric stove	
Bicycle	
Motorcycle	
Cart (hand pushed)	
Cart (animal drawn) - for transporting people and goods	
Private car	
Livestock water trough	
Refrigerator	
Working mobile phone smart	Mobile phone smart, or smartphone, is a phone that can make and receive calls and texts, take photos, access the internet and support applications (apps). For this survey, 'working' means that phone can fulfill its primary purpose (as described earlier in this definition).
Working mobile phone simple	A simple mobile phone is a phone that can primarily make and receive calls and texts. They can occasionally access the internet and take photos. For this survey, 'working' means that phone can fulfill its primary purpose (as described earlier in this definition).
Television	
Radio	

Question **ASSET_productive** asks if the respondent uses any of the asset (regardless of whether there are any owned by household members – the person may use a loaned asset).

Question **ASSET_ownership** asks whether the respondent owns any of the asset. They can own it either jointly or exclusively.

09. Employment

This section asks about the respondent's wage employment and self-employment and income earning activities. Wage employment is work for which basic remuneration is not directly dependent on the revenue of the employer. Remuneration can be in the form of an hourly or daily wage, a salary, a rate per task completed, commission, or any other form of payment including in the form of housing, food, or other types of goods or services.

Self-employment and income earning activities are any businesses or activities, large or small, with the intention of earning an income. Examples include a fruit stand business, car repair business, taxi business, construction enterprise, shoe repair business, guarding cars, brewing beer, collecting wood or water for sale, hairdressing, street vending etc. Self-employment and income earning activities includes any agricultural activities, such as land preparation, land investments, sowing, weeding, and harvesting on the holding where the goods to be produced are intended to be sold. It also includes any livestock activities, such as feeding, caring, managing, tending to chickens, goats, horses, cattle, or other livestock when the products from the animals are intended for sale or the animals are bred to sell. **It is important to probe further about these activities by asking the respondent if he/she managed the production of any crops that are intended for sale, or helped in the production of any crops that are intended for sale managed by someone else, or if the respondent engaged in any livestock activities, such as feeding, caring, managing, tending to chickens, goats, horses, cattle, or other livestock on the holding for which the products (eggs, meat, manure for fertilizer, wool, hide) are intended for sale, or for which the livestock is raised to sell.**

Question **EM_wage** asks if the respondent engaged in any wage employment in the last 12 months. If the respondent answers yes, then they are asked to list (or describe) all the wage employment they had in the last 12 months in question **WAGE_list**.

Question **EM_bus** asks if the respondent engaged in any income generating activity (excluding cropping and livestock activities, which should be reported in EM_wage. If the respondent answers yes, then they are asked to list/describe all the different businesses and/or income generating activities they have had in the last 12 months in question **BUS_list**.

Question **EM_cont** asks about any unpaid work done in a household or family business and unpaid work to help a household member with his or her wage work in the last 12 months. An example of unpaid work done in a household or family business is work done by a son to prepare the land for crops that will be sold in the market by the father. The son is not paid for his work. Another example is a family

member working in the household store or shop without being paid. An example of unpaid work to help a household member with his or her wage work is weaving baskets without being paid for a household member who is paid for each basket woven. If the respondent answers yes, then they are asked to list/describe these activities in question **CONT_list**.

Question **EMP_main** asks about the respondent's main job in the last week and in the last 4 weeks. The main job is the job/activity (either paid or unpaid) in which the respondent worked the most overall in the last 4 weeks. The options include all the activities listed in **WAGE_list**, **BUS_list**, and **CONT_list**.

Question **EMP_pay** asks the respondent how he or she is remunerated; whether it is for wage or salary, through profits from the business, other cash payments such as commission or tips, payments through inkind, or piece-rate payments. A salary is a fixed income for services, which is usually paid on a weekly, biweekly or monthly basis, unlike a wage, which is generally paid on an hourly basis. The salary of an employee is usually specified in an employment contract. Commission is an amount paid that is usually paid to individuals such those in sales that is linked to the quantity of the good or service sold. Payment inkind is work undertaken not for cash but for meals, accommodation, transport etc., instead of cash. Piece-rate payments are payments based on the number of tasks completed or units produced.

Question **EMP_wage** asks, if the respondent is engaged in waged employment, what is the salary or wage they receive. Ensure that you capture the unit for their payment (per hour, per week, per month or per year).

Question **EMP_contract** asks whether the respondent has a written or verbal contract for each wage employment activity.

Question **EMP_joint** asks whether the relevant business or income activity is run jointly with someone else.

Question **EMP_joint_id** asks, if the business or income activity is jointly run with someone else, who is it run with. Up to three IDs can be entered. Household member IDs will refer to the codes from the household roster. Non-household member IDs can be entered as '94' for women/female and '95' for men/male.

Question **EMP_share** asks, if the business or income activity is jointly run, what is the share/part of the business or income activity, out of 100%, the respondent has.

Question **EMP_family_owner** asks, if the respondent contributes to family labour, whose business or income activity it is. Up to three IDs can be entered. Household member IDs will refer to the codes from the household roster. Non-household member IDs can be entered as '94' for women/female and '95' for men/male.

Question **EMP_location** asks for the location the respondent typically works.

Question **EMP_hours** asks how many hours over the past week the respondent has worked in the given activity.

Question **EMP_regularity** asks about the regularity of the work. The options are 'seasonal', 'occasional', 'project or task-based', 'fixed term', and 'permanent/long-term'.

Question **EMP_industry** asks what kind of trade or business is related to this job. This is the industry sector in which the respondent works. There are 9 industry sector codes:

1. Agriculture, forestry, and fisheries
2. Mining and quarry industry
3. Processing industry
4. Electricity, water supply and utilities
5. Construction
6. Wholesale and retail trade
7. Transport and communications
8. Finance and business
9. Social services

Each one is described in more detail in the table.

Agriculture, forestry, and fisheries	Agriculture, forestry, and fisheries includes all work in and related to agriculture, livestock, forestry and timber, fisheries, hunting.
Mining and quarry industry	Mining and quarry industry includes stone cutting and all other mining activities.
Processing industry	<p>The processing industry includes processing work in any of the following:</p> <ul style="list-style-type: none"> • Meat production and processing • Dairy products • Fruit and vegetable processing • Fish products processing and canning • Mill industry • Bread production • Other food processing and canning activity • Distilleries • Breweries • Soft drinks production • Tobacco processing and tobacco industry • Textile industry • Rope industry • Dress-making and ready-to-wear clothes • Leather industry • Shoemaking industry • Sawmills and timber production • Craft production • Furniture production • Printing and publishing activity • Chemical industry, agrochemicals, medicines, etc. • Soap and cosmetics production • Rubber and plastic products production • Brick industry

	<ul style="list-style-type: none"> • Cement industry • Metal structures production • Other production activities
Electricity, water supply and utilities	The electricity, water supply and utilities includes all work in and related to electricity distribution, water supply, sanitary services such as sewerage and waste collection, and other utilities.
Construction	Construction includes construction of residential and public buildings as well as roads and bridges.

Wholesale and retail trade	<p>Wholesale and retail trade includes work in all of the following:</p> <ul style="list-style-type: none"> • Wholesale trade in fuel • Wholesale trade in agricultural products • Other wholesale trade • Trade in cars and car parts • Retail trade in furniture and furnishing • Retail trade in electric appliances and devices • Construction material dealers • Retail trade in food and beverage • Retail of healthcare, personal hygiene equipment and pharmaceutical products • Petrol stations • Retail trade in clothes • Retail trade in shoes • Retail trade in office furniture and stationery • Retail trade in second-hand goods • Other retail trade • Bars and restaurants • Hotels and recreation homes • Street trade in foodstuff
Transport and communications	<p>Transport and communications includes work in all of the following:</p> <ul style="list-style-type: none"> • Railway transport • Public transport with buses & minibuses • Intercity and village bus and minibus transport • Taxi transport • Road transport • Motor vehicles leasing

	<ul style="list-style-type: none"> • Inland water transport • Air transport • Other types of transport • Packaging, forwarding and delivery services • Storage and store management • Communications
Finance and business	<p>Finance and business includes work in</p> <ul style="list-style-type: none"> • Banking • Savings funds, credit institutions • Insurances • Real estate • Legal services • Accounting services • Engineers and architects • Advertising • Other business services
Social services	<p>Social services includes work in</p> <ul style="list-style-type: none"> • Administration • Primary and basic schools • Colleges, universities and vocational schools • Business schools, training in computers and management • Technical and commercial schools • Other schools and training centers • Health services for patients, including medical and dental offices • Medical and diagnostic laboratories • General and surgery hospitals • Research and scientific institutes • Veterinary clinics and animal care centers • Other professional, scientific and technical services • Other social care institutions • Business association • Religious organization • Political organization • Other civil organization • Radio and TV broadcasting • Artist • Library / museum • Entertainment club • Electrical repair • Motor vehicle repair

Question **EMP_tasks** asks for the main tasks or duties of the work. Write out the tasks and duties of the work. This answer should be as detailed as possible and include whether the respondent does routine manual work or is a skilled labourer, supervisor work or manager. You should write in a precise, detailed and clear way the description of the respondent's profession in which he or she works. For example, if the respondent answers "I am a shop assistant", please ask what exactly he or she sells (foodstuff, clothes, electrical devices). Ask if the respondent supervises anyone as part of their work in the clothing store. If the shop is a clothing store and the respondent does not supervise anyone, write "shop assistant of a clothing store."

To distinguish between the supervisor and manager you will need to probe the respondent more about his or her responsibilities. Both Managers and Supervisors organize, coordinate, control and direct the work done by others. Managers, however, usually have the additional responsibility around the operational direction of a business or organizational unit, such as, the quantity and quality of goods to be produced; budgets (how much money is to be spent and for what purposes); and the selection, appointment and dismissal of staff. Supervisors may provide advice managers on these matters, but do not have authority to make decisions.

Here are some important terms that will help you describe the responsibilities and tasks of the work. You should know these terms as well and use them when describing the tasks and responsibilities of the respondents' jobs.

- **Workers:** Workers is used as a general term that encompasses all types and levels of work.
- **Managers:** Managers plan, direct, coordinate and evaluate the overall activities of enterprises, governments and other organizations, or of organizational units within them, and formulate and review their policies, laws, rules and regulations.
- **Supervisors:** Supervisors may plan, organize, coordinate, control and direct the work done by others. Unlike managers, they do not have the responsibility for and make decisions about the overall strategic and operational direction of a business or organization.
- **Labourers:** Labourers perform simple and routine tasks.
- **Operators:** Operators often operate machinery.
- **Professionals:** Tasks performed by professionals usually include: conducting analysis and research, and developing concepts, theories and operational methods; advising on or applying existing knowledge related to physical sciences, mathematics, engineering and technology, life sciences, medical and health services, social sciences and humanities; teaching the theory and practice of one or more disciplines at different educational levels; teaching and educating persons with learning difficulties or special needs; providing various business, legal and social services; creating and performing works of art; providing spiritual guidance; preparing scientific papers and reports. Supervision of other workers may be included.
- **Technicians and associate professionals:** Technicians and associate professionals perform technical and related tasks connected with research and the application of

scientific concepts and operational methods, and government or business regulations. They often support the work done by professionals and/or managers. They may supervise others but their work is usually under the guidance of others.

- **Assistants:** Perform basic tasks under the supervision of professionals, managers, or others.
- **Chefs:** Chefs design menus, create dishes and oversee the planning, organization, preparation and cooking of meals in hotels, restaurants and other eating places, on board ships, on passenger trains and in private households.
- **Cooks:** Cooks plan, organize, prepare and cook meals, according to recipes or under the supervision of chefs.

Note that “labourers” are workers who work under other people’s supervision and management and typically includes manual tasks. In construction this may include digging and filling holes and trenches using hand-held tools; shovelling and spreading excavated materials, sand, soil and gravel; sorting, loading, unloading, stacking and storing tools, materials and equipment and transporting them around work sites.

As another example, if the respondent manages a large commercial farm, you would write, “Production manager of large-scale agricultural operation” or “Production manager of large-scale fishery operation.” On the other hand, if the respondent grows and sells crops and breeds livestock on his or her own household farm, you would write “Crop and animal producer on own holding.”

If the respondent works as a labourer on the household farm or another farm doing routine tasks, you would write “agricultural labourer who does routine tasks for another farm of household” Tasks performed may include digging, raking and shovelling, using hand tools; loading/unloading and stacking supplies, produce and other materials; watering, thinning, weeding and tending crops by hand or using hand tools; planting, harvesting, picking and collecting produce by hand; feeding, watering and cleaning animals and keeping their quarters clean; monitoring livestock, reporting on their condition; preparing and operating nets, lines and other fishing tackle and deck equipment; grading, sorting, bunching and packing produce into containers; performing minor repairs on fixtures, buildings, equipment, vessels and fences.

If the respondent’s main job is a hairdresser or beautician in a household business, and they run and manage the business, you would write “runs and manages a hairdressers or beautician business.” If the respondent’s main job is as a nanny, baby-sitter, or childcare worker, you would write “childcare worker.” If the main respondent assists someone else in selling food or goods in a stand (and does not manage the store), write “sales assistant of food and goods stand in local market”. If the individual does not have a set location and sells bananas in the street or by going from house to house, write “sells bananas in the street” or “sells bananas door to door.”

Your supervisor will review your text and will use it to select the International Standard Classification of Occupations (ISCO) code that best fits the description. As such, it is very important to be as precise and detailed as possible.

Question **EMP_water** asks whether water is used for the given business/income earning activity or contribution to family labour.

Question **EMP_water_source** asks, if the given business/income earning activity or contribution to family labour uses water, which water sources are used for the activity.

Question **EMP_water_decisions** asks who normally makes the decisions regarding which water source is used for the given activity. Up to three IDs can be entered. Household member IDs will refer to the codes from the household roster. Non-household member IDs can be entered as '94' for women/female and '95' for men/male.

Question **EMP_water_collect1** asks whether anyone in the household collects water from any source for the given activity.

Question **EMP_water_collect2** asks, if someone collects water for the given activity, who does so. Up to three IDs can be entered. Household member IDs will refer to the codes from the household roster. Non-household member IDs can be entered as '94' for women/female and '95' for men/male.

Question **EMP_water_collect3** asks who makes the decisions about who collects the water for the given activity. Up to three IDs can be entered. Household member IDs will refer to the codes from the household roster. Non-household member IDs can be entered as '94' for women/female and '95' for men/male.

10. Life Satisfaction

This module asks respondents how satisfied they are with their life.

Question **LS_life** asks respondents to rate how satisfied they are with their life on a scale from '1 – completely dissatisfied' to '5 – completely satisfied'. If the respondent has trouble answering directly, the enumerator can probe using the description associated with each number: completely dissatisfied, dissatisfied, neither dissatisfied nor satisfied, somewhat satisfied, completely satisfied.

Question **LS_activity** asks how the respondent feels about the activities he/she was involved in during the last week. The options are happy, neither happy nor unhappy, or unhappy.

11. FIES (individual)

This module will be used to create a food insecurity measure for the individual. Remember that each question in this module refers to the last 4 weeks and is specific to the individual (rather than the household). Respondents are reminded of this in most questions through the wording of the question.

Question **FIES_worry** asks about whether the respondent has been worried about not having enough to eat due to a lack of money or other resources. Remember that this question asks about the last 4 weeks.

Question **FIES_unable** asks if there was a time in the last 4 weeks when the respondent was unable to eat healthy and nutritious food due to a lack of money or resources.

Question **FIES_fewkinds** asks if there was a time in the past 4 weeks when the respondent ate only a few kinds of food because of a lack of money or resources.

Question **FIES_skip** asks if there was a time in the past 4 weeks when the respondent skipped a meal because there was not enough money or resources to get food.

Question **FIES_less** asks if there was a time in the past 4 weeks when the respondent ate less than they thought they should because of a lack of money or other resources.

Question **FIES_ranout** asks if there was a time in the past 4 weeks when the respondent ran out of food because of a lack of money or other resources.

Question **FIES_hungry** asks if there was a time in the past 4 weeks when the respondent was hungry but did not eat because there was not enough money or other resources for food.

Question **FIES_noeat** asks if there was a time in the past 4 weeks when the respondent went without eating for a whole day because of a lack of money or other resources.

12. Financial

This section addresses access to loans or credit from formal and informal sources, including relatives and friends.

Question **FIN_loan** asks about whether the respondent could take out a loan if they wanted to, and if yes, question **FIN_loan_source** asks about the source of that loan (e.g. This includes banks and formal lenders, NGOs, informal lenders, neighbors, friends, relatives, groups); multiple selections are permitted.

Question **FIN_loan_taken** asks about if such a loan has been taken in the last 12 months, and if yes the question **FIN_loan_taken_source** asks the source of that loan; multiple selections are possible.

13. Associations

The purpose of this module is to get information regarding men's and women's access to groups with a focus on water management groups. This section looks at whether the respondent is a member of community groups, and the water maintenance and management activities the groups are involved in.

A few things to note:

- Groups in the community can be either formal or informal and customary groups.
- Many groups have multiple activities. For instance, an agricultural group may have a microfinance component. When this is the case, choose the group category that represents the primary activity. If the agricultural group provides many extension services, including microfinance, then agricultural group, not credit or microfinance group, should be selected. Ask the respondent to describe the group in greater detail if you are unclear.

Question **ASC_type_name** is not a question; it is a list of types of groups/organizations. The following types of groups are included in this module.

Water or irrigation associations	Water user associations (e.g. a group responsible for managing a water point)
	Irrigation group
Credit, savings, or self-help groups	Credit, savings, or self-help group (including SACCOs / merry-go-rounds / VSLAs)
Agriculture, livestock, fisheries, or producer groups	Agricultural / livestock / fisheries producer's group (including marketing groups)
Trade or business associations or cooperatives	Trade or business association
Flood rescue teams or groups	Disaster risk group in your community
Mother's groups	Community group of mothers
Other groups	Any other group – write the type of group.

Other types of groups mentioned by enumerators:

- Men's groups
- Youth groups
- Religious groups
- Funeral societies
- Self-help groups
- Security groups/community policing groups

Question **ASC_groups** asks if there are any of each type of group/organization in the community.

Question **ASC_group_name** asks for the names/description of the groups that are in the community.

Question **ASC_membership** asks if the respondent is part of the group (for each group named).

Question **ASC_water_irri_type** asks about the aim of the group if it is a water user association or irrigation group. This may be to manage and regulate water resources, maintenance, or other.

Question **ASC_water_irri_source** asks about which sources of water the group maintains or manages.

Question **ASC_water_secure1** asks whether the group helps secure water for domestic purposes, agricultural activities, or other income activities.

Question **ASC_water_secure2** asks for those that answer yes to the previous question, for which purposes.

14A. Whole of Half or Half of Whole

This module allows us to elicit responses regarding subjective assessments of a hypothetical married woman's economic conditions under different scenarios that involve her spouse and that pertain to agricultural land ownership.

The module consists of ten questions. However, how many questions are administered to the respondent will depend on the answers they provide to the previous question. In each of the questions the respondent is presented with two scenarios. The respondent is then asked to evaluate which of the presented scenarios is preferable to the woman in the hypothetical married couple, with (i) Scenario 1, (ii) Scenario 2, and (iii) Scenarios 1 and 2 are equally preferable being the response options. If the respondent selects options (ii) or (iii), the respondent skips to the last two questions of the module.

In the first question, the respondent is presented with two scenarios. In the first scenario, the members of a hypothetical couple jointly own a plot of agricultural land that is 2 acres. In the second scenario, the members of the couple each exclusively own a plot of agricultural land. In this second scenario, the male plot is 1.75 acres and the female plot is 0.25 acres.

In the next six questions, the distribution of acres between the female and the male plots in the second scenario change, but scenario 1 remains the same. The acre distribution in scenario 2 will vary as follows:

- Male plot 1.75 acres, female plot 0.25 acres.
- Male plot 1.5 acres, female plot 0.5 acres.
- Male plot 1.25 acres, female plot 0.75 acres.
- Male plot 1 acre, female plot 1 acre.
- Male plot 0.75 acres, female plot 1.25 acres.
- Male plot 0.5 acres, female plot 1.5 acres.
- Male plot 0.25 acres, female plot 1.75 acres.
- The man has no land and the female has a plot of 2 acres.

The last two questions are about land with and without a source of water. In **AV_waterland**, the scenarios are 1) the couple jointly owns a plot of land that is 2 acres and has a natural water source (like a spring); and 2) the man exclusively owns a 1 acre plot of land with a water source and the woman exclusively owns a 1 acre plot of land without a water source. Again, the respondent is asked which scenario would be most desirable for the woman

The last question, **AV_waterland2**, presents the following two scenarios. 1) the couple jointly owns a plot of land that is 2 acres and has a natural water source (like a spring); and 2) the man exclusively owns a 1 acre plot of land with a natural water source and the woman exclusively owns a 1 acre plot of land with a water source. The respondent is asked which scenario would be most desirable for the woman.

The module repeats the previous example but instead of a married couple, the land is now owned by brothers and the respondent is asked to choose which scenario would be most desirable for the second brother.

The next part of the module then presents scenarios about a married couple owning goats. In the first question, the respondent is presented with two scenarios. In the first scenario, the members of a hypothetical couple jointly own 5 goats. In the second scenario, the members of the couple each exclusively own some goats. In this second scenario, the man owns 4 goats and the woman owns 1 goat.

In the next six questions, the distribution of goats between the man and woman in the second scenario change, but scenario 1 remains the same. The distribution of goats in scenario 2 will vary as follows:

- Man 3 goats, woman 2 goats.
- Man 2 goats, woman 3 goats.
- Man 1 goat, woman 4 goats.
- Man 0 goats, woman 5 goats.

The respondent is asked to evaluate which of the presented scenarios is preferable to the woman in the hypothetical married couple, with (i) Scenario 1, (ii) Scenario 2, and (iii) Scenarios 1 and 2 are equally preferable being the response options.

14B. Tool 2 – Ownership Rights if a marriage dissolves

This module allows us to elicit responses regarding subjective assessments of a hypothetical married woman's economic conditions under different scenarios that involve her separating from her husband and that pertain to different types of assets: goats, cows, and land. In this module, it is important that we understand the local customs so the hypothetical couple should be relatable to the respondents; however it should be made clear that in these scenarios that this is a middle-aged (30s perhaps), well-off couple (something to indicate that perhaps the woman could own assets exclusively). If the respondents respond that women cannot own assets (goats, cows, or land), then the enumerator should probe to clarify whether that means the husband would get the asset in case of separation or if it would go to someone else (neither the husband or wife).

Goats

The respondent is presented with a scenario in which the members of a hypothetical couple jointly own three goats that they purchased after they were married. The respondent is then asked to evaluate who would get the goats if the couple were to separate with (i) the wife, (ii) the husband, (iii) both, and (iv) neither, being the response options. If option iii) both is selected, then the enumerator should ask how the goats would be divided and note how many the husband and wife would each get.

The respondent is presented then with the following three variations of the scenario and asked to respond to the same question:

- The wife owns 3 goats that her husband had gifted her.
- The wife owns 3 goats that she had purchased herself with her income.
- The husband owns 3 goats that he had purchased himself with his income.

There was a discussion around the difference between being given goats and being gifted goats. Given, is when the person lacks something and the other person gives them the thing. On the other hand, gifted, implies some sentimental attachment. So, if a husband gives goats, the wife will have no sentimental attachment to those goats. If the husband gifts her the goats, the wife will associate the goats with the husband and may then just want to leave the goats, which remind her of the husband, if the marriage ends and they separate permanently.

Cows

The respondent is presented with a scenario in which the members of a hypothetical couple jointly own one cow that they purchased after they were married. The respondent is then asked to evaluate who would get the cow if the couple were to separate with (i) the wife, (ii) the husband, , and (iv) neither, being the response options. Then, the respondent is presented with the following three variations of the scenario and asked to respond to the same question:

- The wife owns 1 cow that her husband had gifted her.
- The wife owns 1 cow that she had purchased herself with her income.
- The husband owns 1 cow that he had purchased himself with his income.

Land

The respondent is presented with a scenario in which the members of a hypothetical couple jointly own a plot of agricultural land that they purchased after they were married. The respondent is then asked to evaluate who would get the plot if the couple were to separate with (i) the wife, (ii) the husband, (iii) both, and (iv) neither, being the response options. Then, the respondent is presented with the following four variations of the scenario and asked to respond to the same question:

- The wife owns a plot of agricultural land that she purchased herself.
- The husband owns a plot of agricultural land that he purchased himself.
- The wife owns a plot of agricultural land that she inherited
- The husband owns a plot of agricultural land that he purchased himself.

14C. Tool 3 – Meaning of Ownership

This module allows us to elicit responses regarding assessments of a hypothetical woman's rights over a goat under different scenarios. The module is divided in three sections that describe three different family structures for the hypothetical woman: living with her husband and his parents (couple with in-laws), living with her husband (couple without in-laws/parents), and unmarried woman living with her parents (daughter living with parents).

Couple with in-laws

The respondent is presented with a scenario in which the woman saves her money to purchase a (female) goat and she lives with her husband and his parents. First, each scenario is presented, and the respondent is asked if it resembles households in the community. Then, after going through each scenario, the respondent is asked to evaluate which one of the scenarios is most like households in your community. The scenarios are

- The woman owns the goat and any offspring from the goat. She can decide what to do with the milk and whether to sell or give away the kids.
- The woman owns the goat and can decide what to do with the milk. But her husband must agree if she wishes to sell or give away the goat or the kids.

- The woman owns the goat and can decide what to do with the milk. But her in-laws must agree if she wishes to sell or give away the goat or the kids.
- The goat belongs to the household. As the household head, her father-in-law makes decisions about whether to sell the goat or the kids.

Couple households

The respondent is presented with a scenario in which the woman saves her money to purchase a (female) goat and she lives with her husband. First, each scenario is presented, and the respondent is asked if it resembles households in the community. Then, after going through each scenario, the respondent is asked to evaluate which one of the scenarios is most like households in your community. The scenarios are

- The woman owns the goat and any offspring from the goat. She can decide what to do with the milk and whether to sell or give away the kids.
- The woman owns the goat and can decide what to do with the milk. But her husband must agree if she wishes to sell or give away the goat or the kids.
- The goat belongs to the household. As the household head, her husband makes decisions about whether to sell the goat or the kids.

Daughter living with parents

The respondent is presented with a scenario in which the woman saves her money to purchase a (female) goat and she is unmarried and living with her parents. First, each scenario is presented, and the respondent is asked if it resembles households in the community. Then, after going through each scenario, the respondent is asked to evaluate which one of the scenarios is most like households in your community. The scenarios are

- The woman owns the goat and any offspring from the goat. She can decide what to do with the milk and whether to sell or give away the kids.
- The woman owns the goat and can decide what to do with the milk. But her father must agree if she wishes to sell or give away the goat or the kids.
- The goat belongs to the household. As the household head, her father makes decisions about whether to sell the goat or the kids.

14D. Asset Vignettes Tool

This module allows us to elicit responses regarding subjective assessments of a hypothetical married couple under different scenarios that involve the wife and the husband owning agricultural land with variations on ownership, mode of acquisition, and selling rights.

There are three versions of this module.

In the first version of the module, the respondent is presented with a scenario where the members of a hypothetical couple have **purchased a plot of land together after they were married.**

After describing the situation, the respondent is presented with 4 different statements and asked two questions. First, which of the statements is most common in the community. And, second, asked only to married respondents, asks which of the statements is most like the respondent. The statements are

- Neither can sell the land without the other's agreement.
- Peter can sell the land on his own, regardless of what Grace wants. Grace cannot sell the land.
- Grace can sell the land on her own, regardless of what Peter wants. Peter cannot sell the land.
- Either can sell the land without the other's agreement.

These questions are then repeated for version 2 and 3. In the second version of the module, **the wife has a plot of land that she inherited.** In the third version of the module, **the husband has a plot of land that he inherited.**

End of Interview

After completing the questionnaire, be sure to thank the respondent for their time.

The last module is to be answered by the enumerator. It asks about whether the individual interview was conducted separate from others, if anyone else was present during the interview, and if so, who was present. The enumerator should answer these questions as soon as the individual interview is complete.

***Enumerators were instructed that others from the enumeration team were not considered to be other people present for the interviews.

Also, the enumerator should note any challenges with completing the interview/questionnaire, such as unwillingness or difficulty in responding to any of the questions.

INTERVIEWER VISITS

This is to be filled in at the end of the interview. After completing the interview, these questions will appear. You will fill the date of the interview, the name of the last respondent, and the result of the interview. You will also record the GPS coordinates of the household. Please note, that whenever possible GPS coordinates will be taken of every household visited, regardless of whether the interview was completed (e.g. households where the interview was refused for some reason). In these cases, we would still like the GPS coordinates if possible; if the respondents do not allow it, then we will not collect this information.

Supervisor Questions **A09 – A11**

Enumerator will select their supervisor's code.

A11 will be completed by the field supervisor once the household interviews are complete. The supervisor will check the survey and sign off that it is fine.

Other Notes

Visual Aids

During the pilot, some enumerators encountered respondents who were visually impaired or where there were language barriers that made it difficult to explain the visual aids. In such cases, it is important to be patient and do your best to describe in detail the information that is needed. If possible, the enumerators should take notes to indicate any such problems. (These can be added at the end of the individual interview or kept in a separate notebook and reported to supervisors.)

Saving

Enumerators were instructed to save various times throughout the interview.

Challenges – working in pairs and length of interviews

Enumerators expressed that working in pairs and the length of time to complete interviews would be a challenge to complete all interviews in the timeframe given.

According to Mercy and the supervisors, interviews will start at about 9am; enumerators will leave around 8 or 8:30 each morning to arrive at the first household of the day to start at 9am. And, they were instructed not to start a new interview after 5pm but ultimately these timing issues are up to each supervisor and their teams to figure out what works best for them.

Goals per enumerator (or pair of enumerators) were discussed. This initially was 2.5 households per pair of enumerators. Later this was modified to 5.5 individuals (plus household level interview) per enumerator per day; this corresponds to 11 individuals per enumerator pair.

During the pilot enumerators reported that the household level questionnaire took up to 2 hours to complete; it was longest for those households with several members, several pieces of land; and several water sources.

Some strategies were discussed for completing the target amount of interviews each day. One was to stay on task, try to keep the conversation oriented towards the questions and limit the extra conversation. We estimate that the interviews should take 45 – 60 minutes per person.

Another challenge discussed was that some household members were located in different places and that it took a long time to get to where they are located. Example, some of the members were 2-3 km from the home.

Sometimes respondents asked that enumerators wait 5 minutes so they could finish a task before being interviewed and while 5 minutes was fine, sometimes they would take 20 minutes or more which was excessive for enumerators to wait.

Enumerators also seemed to think that in large households of 11 people (and they were all available the same day), it was easy to meet the target number of interviews in a day because they did not have to move; all the interviews could be conducted at the one household in the same day. And, it only required 1 household level interview.

Ideally enumerators will work in pairs. This process was discussed during the training. They also discussed how they would start in pairs each day but could separate depending on the household structure; it was decided that it is important that enumerators do not sit and wait on each other too long. They need to continue to other households to ensure that all interviews are completed in the timeframe given.

While visual aids took time to explain, most enumerators and respondents like them because they are different and break up the monotony of asking question after question and give respondents more participation. They were, however, particularly challenging for older respondents and those with vision problems.

FIES/HWISE, these modules are tedious and quite repetitive, especially for the primary respondent who answers both the household level and individual level. They often said they had already answered these questions. Enumerators were instructed to carefully explain that FIES/HWISE is asked of the household while FIES (ind) and IWISE are asked about individual experiences. (Enumerators don't expect much difference between the household and individual levels especially the responses of the primary respondent.)

One example from the pilot: An older woman who was listed as a separate household in the listing. Her husband lived nearby (on the same piece of land but in a different dwelling) with his new wife. The woman insisted she was separated. The land was owned by the husband and she shared land and water sources with him and his new wife (although otherwise she had nothing to do with them). Since she was listed as a separate household in the listing by the village elder and considered herself separate from her husband, we agree that in this case, she is a separate household. For the group of enumerators this was a bit tough because her husband was alive and living on the same piece of land. First, they did not consider her separated because her husband was alive. We explained that she would be considered separated; if her husband were dead, she would be considered a widow. Her husband and his new wife should not be listed as household members. Since he was a land owner, they would choose the option for non-household member, male for owner.

