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REPUBLIC OF ZAMBIA
Ministry of Energy



2023 NATIONAL ENERGY ACCESS BASELINE SURVEY (NEABS)

INTERVIEWER 'S INSTRUCTION MANUAL

MINISTRY OF ENERGY

In conjunction with

ZAMBIA STATISTICS AGENCY
(LIVING CONDITIONS SECTION)

JULY, 2023

Chapter: 1

INTRODUCTION

1.1: Background and Purpose

The Ministry of Energy in collaboration with the Zambia Statistics Agency (ZamStats) is in process of undertaking a household-based National Energy Access Baseline Survey (NEABS).

Although energy access is a multi-dimensional concept, most of the documents available in Zambia have tended to take a binary approach of measurement of access to energy: connected or not connected, cooking with biomass or not, etc. For instance, the 2015 LCMS results show that 31.4 percent of the households in Zambia were connected to electricity relative to 68.5 percent not connected (LCMS Report, 2015).

Further, 32.9 percent of the households in Zambia used charcoal as a source of cooking energy (LCMS Report, 2015). However, the metrics currently in use overlook other key aspects of measurement of energy access such as quality of the connection, capability of other technologies to provide alternative energy sources such as home solar systems or mini grids. Assessment of energy access should take into account a wider range of factors (attributes) when measuring energy access i.e. affordability, reliability, supply quality, safety of the energy source, etc. (National Energy Policy, 2019).

To meet the national demands of the population in Zambia, the Ministry of Energy is scheduled to undertake the NEABS to collect data to be used to provide several national indicators to inform policy design and implementation. Among a wide range of national energy related indicators, the NEABS will provide the following:

- a)** Percentage of households with access to electricity
- b)** Number of people with access to electricity
- c)** Percentage of the business enterprises with access to electricity
- d)** Average number of days it takes getting connected to the grid and/or other forms of access
- e)** Percentage share of electricity consumption per sector,
- f)** Number or Percentage of Rural Growth Centres (RGCs) reached/electrified
- g)** Percentage of households' main energy source for cooking,
- h)** Percentage of households' main source for lighting,
- i)** Customer Average Interruption Duration Index (CAIDI)
- j)** Dry Season (DS) System Average Interruption Duration Index (SAIDI)
- k)** National installed electricity generation capacity (MW)
- l)** Load factor (Percentage electricity actually generated versus installed generation capacity)
- m)** Load shed/energy deficit (GWh)
- n)** Energy not served (GWH)
- o)** Total electricity generated in the country

- p) Percentage of renewable energy in the total national installed electricity generation capacity
- q) Percentage of renewable mix
- r) Percentage share of biofuel in petroleum products and cooking fuel
- s) Percentage of households/business with access to renewable energy
- t) Percentage of energy switch from fossil fuel to renewable energy
- u) Percentage of final energy conception for cooking
- v) Traditional biomass consumption total/per head of population
- w) Percentage of households using improved cooking stoves
- x) Percentage of electricity system losses
- y) Percentage of private investment in the electricity sub-sector
- z) Number of operators in the electricity sub-sector

The World Bank Multi-Tier Framework (MTF) will be used in the NEAS to develop the Baseline which will subsequently be used to monitor progress towards attainment of the goals of sustainable energy for all (SE4All).

OBJECTIVES

The main objectives of the survey are:

- a) To establish a National Baseline of Access to Energy
- b) To build capacity within Ministry of Energy and Zambia Statistics Agency (ZamStats) for monitoring the sustainable energy for all goal of universal access to modern and clean energy services (SE4All)
- c) To evaluate achievement of the set national energy access development targets and sustainable energy development goals
- d) To provide reliable data on the energy sector that can meet the needs of multiple stakeholders, including government, regulators, public services, project developers, civil society organizations, development agencies, financial institutions, appliance manufacturers, international programs, and academia.

The following topics will be covered in the NEAS Questionnaire:

- a) Demographic Characteristics
- b) Education Level
- c) Household assets
- d) Economic activities
- e) Energy Access and Utilization
- f) Household amenities and housing conditions
- g) Income
- h) Household expenditure and Consumption

1.2 Coverage

The survey will cover the whole country and will be conducted in Enumeration Areas (EA's) drawn from the 2022 census of population and housing frame. A sample of 400 Enumeration Areas (EAs) involving 8000 households was drawn country wide.

1.3 Survey instruments

The National Energy Access Baseline Survey (NEABS) includes several instruments which the enumerator must become familiar with. These include;

- The survey questionnaire
- Interviewers' Instruction Manual
- Listing app
- EA maps
- Tablet

Chapter: 2

PERFORMANCE AND DUTIES OF INTERVIEWERS

2.1 Importance of Interviewer Performance

Field interviewers are the eyes and ears of the data collection team. The interviewer serves as a link between those who analyze and use the data and the respondents who furnish the data. The information collected in any survey is only as good as the interviewers working on the survey. Quality depends on all interviewers following the same procedures. Only when the same techniques have been used for all interviews can the data be effectively analyzed, and interventions confidently implemented.

2.2 Ethics and Rules of Conduct of Interviewers

As an interviewer, it is your responsibility to **keep completely confidential** anything you learn and observe during an interview. Never disclose any facts about anyone you interview to any unauthorized person(s) outside the survey process. Respondents should be told that the information they provide will be used for statistical purposes only and that their names will not be associated with their answers when the data are analyzed.

Things You Must Do

- You must introduce yourself on every visit and explain to the respondent the reason for your visit before starting the interview.
- You must read and intensively study your manual to become thoroughly familiar with its contents in order to do your work efficiently.
- You must ask the questions in exactly the same way to each respondent and in the same order in which they are presented in the questionnaire. This will enable the interviews to be comparable. The question order needs to be standard from respondent to respondent.
- You must make every effort to write legibly (in the listing books and sketch book) and keep the documents/equipment's you are working on clean and free from damage.
- You must attend to all 'call-backs' as early as possible and must be punctual in keeping all appointments made.

Note: You are solely responsible for all documents issued to you in connection with the survey, and you must ensure that they are always secure. Remember that absolutely no one not employed and sworn-in

by ZamStats can be allowed to see the information you collect, nor must you discuss such information with anyone.

Things You Must Not Do

- You must not solicit or permit any unauthorized person to assist you with your survey work. No matter how intelligent they are, they will not have had the training you have or the authority to participate in interviewing.
- You must not combine survey work with any canvassing for personal gain, church, political party or any other organization.
- You must **NEVER** become involved in religious or political discussions while you are on the job.

2.3 List of Basic Duties and Responsibilities

You, the interviewer, are the key to the success of the survey. You alone have direct influence on the accuracy of the data collected. Since it is more practical and economical to concentrate on collecting accurate data than correcting inaccurate data after collection, you must make every effort to become familiar with this survey and follow its instructions carefully. It will be of utmost importance that you:

- Attend the training course and all other scheduled meetings
- Study this manual very carefully and remember the main points that are explained here
- Become fully familiar with the questionnaire
- Complete all the data collection activities as required i.e. listing, sampling, and enumeration.
- Review each completed questionnaire for accuracy and completeness
- Submit completed questionnaires to your Supervisor as promptly as possible
- Enumerate all the Households sampled in the EA
- Ensure that all survey materials are looked after properly and returned to the supervisor after the survey exercise is over
- Perform any other Survey related functions which the supervisor may assign from time to time
- Keep all information received completely confidential.

At times you will find that the actual situation in the field will make your job difficult. You should seek common-sense solutions to the difficulties you are likely to encounter. For example, you may be going in an area where there is no network; in that instance you should download the questionnaires well in advance.

2.4 Timeliness of the submission of questionnaires

Prompt submission of the questionnaires is crucial for timely processing. If submission of the *questionnaires* is delayed, it will be impossible to process them on a timely basis. The value of the data for planning and decision-making is directly related to its timeliness.

Chapter: 3

GENERAL INTERVIEWING PROCEDURES

3.1 Preparing for the interview

There are four important steps that must be taken before you visit the household.

a) Reviewing the Interviewer's Manual

This includes reviewing the general interviewing procedures, the specific field procedures and the question-by-question instructions.

b) Reviewing the Questions on the Survey Questionnaire

Before you begin interviewing, practice using the questionnaire to build up your confidence. A successful interview requires an interviewer who fully understands the survey questionnaire and can use it easily and correctly. Losing your place on the tablet can disturb the person being interviewed.

c) Organizing Survey Materials

Be sure you know what survey materials you need and that you have them with you before going into the field to interview.

d) Appearance and Behavior

The first thing a respondent notices about the interviewer is his/ her appearance. It is important to create a good impression by being polite, neat and courteous.

3.2 Establishing a good working relationship

A comfortable relationship between the interviewer and the respondent is the foundation for good interviewing. The person's impression of you during your visit will largely determine the atmosphere during the interview. If you seem bored, uninterested or hostile, the respondent will probably act in a similar way.

Remember that persons tend to react favorably if they think the interviewer is someone they will enjoy talking to. This means that you have to impress the respondent as being someone who is friendly and understanding. Through your behaviour you can create an atmosphere in which the respondent can talk freely.

3.3 Using the survey questionnaire and asking the questions

The goal of the interview is to collect accurate data by using the questionnaire and following standard interviewing practices. To reach this goal, the interviewer needs to understand the survey questionnaire, including how to ask the questions, how to follow the instructions in the questionnaire and how to identify the various types of questions.

In asking the questions, observe the following rules:

a) Remaining Neutral

You must maintain a neutral attitude with the respondent. You must be careful that nothing in your words or manner implies criticism, surprise, approval, or disapproval of either the questions asked or the respondent's answers.

You can put respondents at ease with a relaxed approach and gain their confidence. The respondent's answers to the questions should be obtained with as little influence as possible by the interviewer. Another interviewer should be able to obtain the same answers as you.

The questions are all carefully worded to be neutral. They do not suggest that any answer is preferable to another. When a respondent gives an ambiguous answer, never assume what the respondent means by saying something like 'Oh, I see, I suppose you mean... is that right?' If you do this, very often the respondent will agree with your interpretation, even though it is not correct.

b) Asking Questions in the Order Presented

Never change the order of the questions in the questionnaire. The questions follow one another in a logical sequence; to change that sequence could alter the intention of the questionnaire. Asking a question out of sequence can affect the answers you receive later in the interview.

c) Asking Questions as Worded

Do not change the question. If the respondent does not seem to understand the question, simply repeat it. In order for the information from the questionnaire to be put together as intended by the analysis team, each question must be asked in exactly the same way to each respondent.

In some unusual cases, the respondent may simply not be able to understand a question. If it is apparent that a respondent does not understand a question after you have repeated it using the original language, you can rephrase it in simpler or colloquial language. However, you must be careful not to alter the meaning of the question when doing this.

Sometimes, respondents will ask you to define words in a question or explain some part of a question. When this occurs, consult the 'General concepts and

definitions' in Chapter 4 of this manual. All the important words and terms are defined there.

d) Avoid Showing the Questions to the Respondent

Respondents can be influenced by knowing what questions are coming next or by seeing the answer categories that are not asked together with the questions.

3.4 Instructions in the questionnaire

In addition to the questions you must ask, the questionnaire contains instructions for you, the interviewer. The instructions are for you to use the questionnaire correctly and must be followed closely.

'Skip' Instructions

The data collection application will also guide you to follow the skip instructions. If questions are not to be asked, the questions will be grayed out and not available for input. Likewise, it is important that you go to the correct question when necessary. If you are careless, you may skip some questions incorrectly and miss some essential questions.

Note: If you miss any questions, the program will mark the entire section blue and if you successfully answer all questions in a section, the system will turn the section green. An error message in red will appear if you enter an invalid answer.

EXAMPLE: Question 7

INTERVIEWER: What is (name)s Nationality?

1= Zambian

2= Non-Zambian → go to Question 9

Question-specific Instructions

In addition, there are 'question-specific' instructions for you in the questionnaire. These instructions usually alert you to a consistency check that has to be made at the time of the interview or tell you how to record an answer. In all cases, these instructions are printed in **boldface** and *italicized*.

3.5 Probing

(a) Probing and Why It Is Necessary

Probing is the technique of questioning by the interviewer to obtain a full, complete and relevant answer. An answer is probed whenever it is not meaningful or complete, that is when it does not adequately answer the question.

In everyday social conversation, people normally speak in vague and loose terms. Therefore, it is understandable that respondents may at first answer questions in a way, which is not clear or specific. It is essential, however, to encourage respondents to express themselves more precisely and in very specific terms.

Respondents sometimes miss the point of a question. They will provide an answer of a kind but they do not answer the question. It is easy to be misled by

a respondent who is talkative and gives a full and detailed response - a response, however, which is quite beside the point and irrelevant. In most cases, respondents give an irrelevant answer because they have missed an important word or phrase in the question. Sometimes, respondents will think that they are answering a question when all they are doing is simply repeating an answer, which was already given, or repeating parts of the answer. A respondent can talk a great deal and still be merely repeating the already given answer in different words.

Probing therefore, has two major functions:

- To motivate respondents to expand upon or clarify their answers;
- To make the respondent's answer precise so that irrelevant and unnecessary information can be eliminated.

Probing must be done without introducing bias or antagonizing the respondent. Respondents must never be made to feel that you are probing because their answer is incorrect or unacceptable.

(b) Understanding the Intention of the Questions

The kind of probe to use must be adapted to the respondent and the answer given. There are some general types of probes that are frequently useful, but the most important point is to avoid getting into the habit of using the same probe. Instead, you must seek to understand what the intention of each question is, so that you will always know in what way a answer falls short of being satisfactory. The probe, then, should be devised to meeting this gap. This will require ingenuity, tact and persistence.

(c) Neutral Probing Methods

It is always very important to use neutral probes. By 'neutral', we mean that you must not imply to the respondent that you expect a particular answer or that you are dissatisfied with an answer.

The reason for probing is to motivate the respondent to answer fully or precisely without introducing bias. Bias is the distortion of responses caused by the interviewer favoring one answer to another.

EXAMPLE of a biased probe: Question 11 (HEATING AND COOKING Firewood section)

Q11: What is the distance in kilometres from your home stead to the place where you collect / purchase firewood?

ANSWER: 5 or 6 Kilometres.

IMPROPER PROBE: Oh, you mean 6 Kilometres?

(This improper probe is pushing the respondent to say 6 Kilometres when it may be 5 Kilometres!)

PROPER PROBE: Is it 5 or 6 Kilometres?

Some respondents have difficulty putting their thoughts into words. Others may give unclear or incomplete answers; still others may be reluctant to reveal their attitudes. You must deal with such factors and use procedures that encourage and clarify responses. The following kinds of probes might help you obtain more accurate responses.

Repeat the Question

When the respondent does not seem to understand the question, when he/she misinterprets it, when he seems unable to make up his mind, or when he strays from the subject, the most useful technique is to repeat the question just as it was asked the first time.

An Expectant Pause

The simplest way to convey to a respondent that you know he/she has begun to answer the question, but that you feel he/she has more to say, is to be silent. A pause - often accompanied by an expectant look or a nod of the head - gives the respondent time to gather his/her thoughts.

Repeating the Respondent's Reply

Simply repeating what the respondent has said as soon as he/she has stopped is often an excellent probe.

Neutral Questions or Comments

Neutral questions or comments are frequently used to obtain unbiased, clearer and fuller responses. The following are examples of the most commonly used probes:

- Repeat question
- Anything else?
- Any other reason?
- Any other?
- Could you tell me more about your thinking on that?
- Would you tell me what you think?
- What do you mean?
- Why do you feel that way?
- Which would be closer to the way you feel?

These probes indicate that the interviewer is interested and they make a direct request for more information.

(d) Asking for Further Clarification

In probing, it will sometimes be useful to appear slightly puzzled by the respondent's answer and indicate with your probe that it might be you who failed to understand. For example, "I am not quite sure I understand what you mean by that - could you please tell me a little more?" This technique can encourage the respondent to co-operate with someone he/she thinks is trying to do a good job.

It should not be overplayed however; otherwise the respondent will get the feeling that you do not know when a question is properly answered. Occasionally, a respondent will give an 'I don't know' answer. This can mean a number of things. For instance,

- The respondent does not understand the question and answers 'I don't know' to avoid saying he/she does not understand
- The respondent is thinking the question over and says 'I don't know' in order to fill the silence and to give himself time to think
- The respondent may be trying to evade the issue, or he/she may feel that the question is too personal and does not want to hurt the feelings of the interviewer by saying so in a direct manner
- The respondent really may not know, or may not have an opinion or attitude on the subject

Try to decide which of the above is the case. Do not immediately settle for a "don't know" reply. If you sit quietly, but expectantly - the respondent will usually think of something to say. Silence and waiting are frequently your best probes for an 'I don't know' answer. You will also find that other useful probes are, "well, what do you think?" or 'I just want your own ideas on that'. If you feel that the respondent has answered 'I don't know' because he/she was afraid of admitting ignorance, you should say that there are no right or wrong answers to the questions and that you just want the respondent's answer or opinion.

Likewise, if you think the respondent says 'I don't know' because a question is too personal, you should remind the respondent that the survey information is confidential.

Always probe at least once to obtain a response to a "don't know" before accepting it as the final answer, but be careful not to antagonize the respondent or force an answer if he/she says again 'I don't know'.

(e) When to Stop Probing

You should stop probing when you have a clear, relevant answer. However, if at any time the respondent becomes irritated or annoyed, stop probing that question. We do not want the respondent to refuse to complete the rest of the interview.

3.6 Controlling the Interview

While it is important to maintain a pleasant, courteous manner in order to obtain the respondent's co-operation, you must also be able to control the interview so that it may be completed in a timely and orderly fashion. For example, when answering questions, the respondent may offer a lengthy explanation of problems or complaints. In this situation, you must be able to bring the discussion to a close as soon as possible so that the interview may continue. Politely, tell the respondent that you understand what he is saying but that you would like to complete the interview. If necessary, you may try to postpone any outside discussion by saying 'Please, let's finish this interview first and we can talk about that later'.

In some cases, the respondent may start to provide information about some aspect of his farm that is covered at a later time during the interview. Again, you must control the interview by telling the respondent that you must ask other questions first and that he should wait until later to provide information on that particular aspect.

3.7 Recording the Answers (listing books and sketch books)

Asking the questions correctly and obtaining clear answers is only part of your job. Equally important is recording the answers given by the respondents.

(a) Legibility (listing book and sketch book)

It should be obvious to you that all the entries you make in the listing book, questionnaire and sketch book must be legible. If your Supervisor cannot read an entry, the listing book and the sketch book will be returned to you for correction. When this happens, much time will be wasted. Since you must spend a great deal of time to go to a household and obtain the information in the first place, why not take care in recording information so that no one else will have difficulty in reading it later.

All responses that require written words should be clearly printed in block letters rather than script. All numbers should be clearly written so that one number is not confused with another. Remember that the numbers will be used in both hand and computer calculations. If they are not legible, mistakes will be made in hand calculations and in entering the numbers for computer processing.

(b) Recording information in the proper place

There are basically two types of responses required in the questionnaire, listing book and the sketch book i.e., writing words and recording numbers.

Writing words

In some cases, you are required to write in the listing book and the sketch book. To avoid the difficulty of reading script, you should write all words in **block letters**.

3.7.1 Recording in the Tablet

In some cases, you are required to write in the tablet; this may be the name of the head of the household, the village/locality name, or comments concerning the problems encountered. To avoid the difficulty of reading script, you should write all words in **block letters**.

3.8 Recording notes/comments

The program allows notes to be written on each question (answer). If the enumerator wants to write a note, he/she should press and hold below the answer categories, a dialog box opens to allow the enumerator to write a note. The people who work with the data later will use those notes to interpret the information.

3.9 Ending the interview

It is important that you leave the respondent with the idea that you are grateful for his or her co-operation. After all the questions have been asked, thank the respondent and mention that his or her co-operation has been most helpful in providing the information for the survey. Also inform the respondent that you may possibly be returning to collect more information.

Chapter: 4

GENERAL CONCEPTS AND DEFINITIONS

It is important that you acquaint yourself with the general concepts and definitions used for this survey before embarking upon the fieldwork.

Definitions

Enumeration

Area (EA): An enumeration area is a geographical area assigned to an enumerator for the purpose of conducting a census/ survey count. It is apportioned considering the workload that an enumerator is expected to cover. This is given a 1-digit code – 1,2,3 or 4.

Adult member refers to persons who are 12 years or older.

Qualified Respondent is an adult member of the household who is knowledgeable about agricultural and other activities of the household. A child is not a suitable respondent. It is not necessary that all the information be given by one person. A respondent may consult any other member of the household on different items in the questionnaire. Knowledgeable female members are encouraged to also participate as respondents

Household:

A household is defined as "a group of persons who normally live and eat together; these people may or may not be related by blood, but make common provision for food or other essentials for living and they have only one person whom they all regard as head of the household." Such people are called members of the household if they normally live and eat together even if they do not sleep under one roof. There could also be situations where people live under one roof but have separate cooking and eating arrangements. Such persons should be considered as separate households. There can also be a one-member household where a person makes provision for his/her own food or other essentials for living. Such a person is the head of his/her household.

Head of household: This will be the person all members of the household regard as the head. She/he is the one who normally makes day-to-day decisions governing the running of

the household. In cases of the one member households, the member will be the head of the household. REMEMBER A PERSON DOES NOT BECOME THE HEAD OF A HOUSEHOLD SIMPLY BECAUSE HE/SHE IS THE MAIN RESPONDENT

In the case of a polygamous household, the enumerator will first establish whether:

- a. It is one household with one household head i.e. all the wives eat together and consider the man as the head. In this case, it is only one household with one head and several spouses.
- b. It is several households with one head i.e. every wife eats on their own but they all consider the man as the head, the husband will be attached to the first wife. This helps to prevent double counting especially during listing.

Usual household Member:

A usual household member is one who has been living with the household for at least six (6) months or has joined the household and intends to live with the household for six months or longer. He or she may or may not be related to the other household members by blood, marriage, or may be a house-helper or farm-labourer. A usual household member normally lives together with other household members in one house or closely related premises and takes his/her meals from the same kitchen.

The following people regard the housing unit as their home or usual place of residence and should be counted as usual household members:

- a. Persons whose usual place of residence is the place where the household lives and are present at the time of the enumerator's visit.
- b. Persons whose usual place of residence is the place where the household lives, but are absent at the time of the enumerators visit, e.g.:
 - i) Persons temporarily away on vacation, business or pleasure trip or any other purpose within the country who are expected to be back **within six months** or abroad without the rest of the household and expected to come back;
 - ii) Students who usually go to their respective households during weekends and during holidays;

- iii) Persons working elsewhere who usually go home to their respective households at least once a week;
 - iv) Detainees and patients confined in hospitals for any duration.
 - v) Convicts/Prisoners who have been sentenced for less than six months should be captured as usual members.
- c.** Lodgers of the household who are working, looking for work or studying, and who do not go home at least once a week;
 - d.** Employees of household - includes servants who eat and sleep with the household and who do not go home at least once a week;
 - e.** Persons (other than those in a, b or c) whose usual place of residence is elsewhere, but who have been away from their usual residence for more than six months;
 - f.** Persons found in the household who have no usual place of residence elsewhere;
 - g.** Citizens of foreign countries who have resided or expected to reside in the country for more than one year from the date of arrival;
 - h.** Newly born babies and newly wedded persons.

A **non-household** member is:

1. An individual who may have left the household with no intention of re-joining the household;
2. Individuals who are married away.
3. All other persons/individuals who do not meet the criteria for household membership

Chapter: 5

SELECTION OF SAMPLE HOUSEHOLDS

Chapter: 6 DATA COLLECTION PROCEDURES

Approaching a Household

The interviewer is expected on the onset to identify himself/herself by name and explain the purpose of the visit, the confidential nature of the interview, and the expected time the interview will take. The purpose of the interview is to collect data which when processed will provide information, which will assist policy makers plan and make better decisions. The interviewer is not expected to make promises. Just stick to the purpose of the interview. The interviewer can mention that he/she is merely the eyes and ears of Government.

Identification information

Cluster number, province, district, constituency, ward, region, and SEA will be pre-entered in the CAPI system prior to the interview. The Supervisor or/Enumerator should ensure that the identification particulars pre-entered coincide with the work area.

Note: in every EA all questionnaires are serially numbered from 1-20. This should not be mistaken for the household serial number.

9. Village/Locality name

Write the name of the village/locality in which the household is located. This is also indicated on the **LIST OF SELECTED HOUSEHOLDS**.

10. RGC NAME: This will be provided by the Supervisor

11. CHIEF'S/CHIEFTAINESS' AREA: This question is applicable to households in rural areas. You should confirm with the respondent the name of the chief/chieftainess of the area. If you come across an area where there is no chief (Mostly in Urban Area), select "NONE".

12. ENUMERATED HOUSEHOLD

Enter the household serial number as shown on the **LIST OF SELECTED HOUSEHOLDS**, in the space provided.

Lastly, enter Name of Head and Residential Address in the space provided

13. Name of Main Respondent:

Identify the household head but if the head is not there, the interviewer should identify a qualified respondent who is knowledgeable and can answer questions. Type, (STARTING WITH SURNAME), the name of the main respondent. Then enter the serial number from the Household roster in space provided.

Note. The name of the household head entered here should be entered first on the list of usual household members in the demographic section.

14. TOTAL NUMBER OF PERSONS WHO LIVE IN THIS HOUSEHOLD (INCLUDE USUAL MEMBERS ABSENT): Verify the total number reported during listing and enter in the space provided

15. ENUMERATOR'S NAME: Type, (STARTING WITH SURNAME) the name of the Enumerator and then the DATE OF INTERVIEW

16. SUPERVISOR'S NAME: Type, (STARTING WITH SURNAME) the name of the Enumerator and then the DATE OF CHECKING

SECTION 1: HOUSEHOLD ROSTER

For the definition of the household, usual household members and polygamous households please refer to Chapter 3.

Question 1: Serial numbers of usual household members

Each member of the household will be assigned PID number in the first column (serial number of household members).

Question 2: Names of usual household members

List all the **usual** members of the household serially starting with the head. You should list them in this manner; you first ask for the name of the head, then for the spouse, then for their children who live with them, then for other relatives

who live with them, then for non-relatives who live with them, then for other members of the household who are temporarily away Visiting etc., then for members of the household who are at boarding schools, colleges, university, and so on. Ensure that only **usual** members of the household are recorded. Do not record children of the head who are no longer members of the household. In particular, old people have a tendency of regarding grown up children who have their own households as part of their households because they are their children. This is not the type of household membership we are looking for. The information (on usual household members) is very important for estimating the population. Therefore, ensure that it is correctly recorded.

If there is a newly born baby who is not yet named in the household then write 'Baby' and the Surname e.g. Baby Tembo.

Be sure to include all usual members of the household including those who are temporarily away on Visits, funerals, in hospitals, boarding schools and so on. Also, ensure that non-usual members of the household are excluded from the list.

Question 3: Ismale or female?

Find out the sex of NAME and enter the appropriate code. Where it is visible, just observe and enter the appropriate code.

MALE...1

FEMALE...2

Question 4: How old is..... now?

Record the age in completed years, e.g. a person who is 17 years and 11 months old will have 17 entered as his/her age.

For those younger than 5 years ask for the **under-five (5) clinic card** and check for the date of birth of that child, then calculate the age by subtracting the date of birth from the date of enumeration and record the actual age in months. For example a child born on 10th March 2017 will be 4 years 8 months old = 56 months old on 20th November 2021 (e.g. if that is the date you are enumerating a particular household).

To estimate ages in months; first subtract the child's year of birth from 2021 (2021-2017 = 4) in this case, that will be the completed years. Then count the number of months from the child's month of birth to the survey date. In this

example 10th March to 20th November = eight completed months. Therefore, the child's age in completed months is: (4 years x 12 months) = 48 months + 8 months = 56 months. Indicate whether years (1) or months (2) is being recorded in the first of the three boxes provided.

Almost all persons who have been to school know their age, while some especially the illiterate and the very old may not. In such a case, use the calendar of events to estimate the age of the person. For example, how old he/she was when the Chinese built the Lusaka-Mongu road or when the name Feira boma was changed to Luangwa or when Zambia became an independent country etc.

If you have already ascertained the age of some other member of the household, this may be of considerable help in determining the ages of other members of the household. In case you are only given the year of birth and no month, calculate the age by subtracting the year of birth from 2021

Example: You are interviewing the head of household who cannot remember or does not know his/her age. You can estimate his/her age in various ways. For example, find out the age of the eldest child (if he/she knows it), and then ask him/her how old he/she was when the first child was born. Then add that age to the age of the first child - that will be the estimated age.

For those aged more than 90 years round down to 90 and record

in the answer boxes.

Question 5: What is the relationship of ...to the Head of household?

Remember that relationship is **only** to the permanent head of household and not to any other members or the temporary head. This will cover relationship by blood, marriage, etc. For example grandchildren, in-laws, stepchildren, etc. 'Other relatives' will be any other relatives not indicated in the questionnaire. 'Non relative' will mean no relationship with the head either by blood, marriage, adoption, etc. For example house cleaners, garden boys, farm hands, etc., who are not related to the head but are members of the household.

Relationship to the head should be in the nuclear way not the extended family system. This means that the children of the head's brothers and sisters who are members of his/her household should be recorded as nephews and nieces and

not son/daughter as is the case in our African/Zambian culture. Ensure that you record relationship to the head according to the nuclear family system.

Question 6: What is the marital status of ...?

If the answer is single probe further to find out whether the person has actually never married or whether he/she is widowed, separated or divorced. **FOR THOSE AGED 10 YEARS AND ABOVE ONLY**

Monogamously married - any permanent living arrangement between a man and woman to live together as husband and wife. This includes church marriages, other religiously approved unions, civil registration at a Boma or other civil ceremony that has been performed, and the man and woman are living as husband/wife at present. Monogamous marriage is to be married to one spouse.

Polygamously married – a marriage with more than one spouse. A man who marries two or more women is in a polygamous marriage.

Note: a woman married to a polygamous man is also in a polygamous marriage.

Divorced – a man/woman permanently separated from the spouse and has no other spouse now.

Separated - a man or a woman who is temporarily out of a marital union, but not legally (Civil or Customary) divorced from his/her partner, and has no other wife/husband now.

Widowed – a man or woman whose partner died and has no wife/husband at present.

Cohabiting - a man and a woman living together like a married couple without any legal or religious consent of the union. The dissolution of this union, therefore, does not require witnesses from the afore-mentioned authorities. Either family members do not recognise this union as a marriage.

Question 7: What is (name) s Nationality?

Find out the nationality of NAME and pick the appropriate code

Zambian....1>>>9

Non-Zambian...2

Question 8: What is the name of the country where...is a citizen?

Find out from the respondent the name of the country NAME originates from and select the country name from the drop down menu.

The following questions on education will cover school attendance for persons aged 2 years or older.

Education is a powerful tool for economic development of an individual and nation. Zambia's education system is organized into the following progressive stages:

1. Early Childhood Education (ECE) - children aged 2-6 years
2. Primary Education - grades one to seven for children aged 7 to 13 years old
3. Secondary School Education - grades eight to twelve for persons aged 14 to 18 years old, and
4. Higher School Education - for persons aged 19-24 years old.

The term "school" means formal schooling, which includes preschool, primary, secondary, and post-secondary schooling, and any other intermediate levels of schooling in the formal school system. This definition of school does not include daycare, short bible school or Koranic school, work-based education or short courses like typing or sewing. However, it does include technical or vocational training beyond the primary school level, such as long-term courses in mechanics or secretarial work. Short courses and work-based education will only qualify to be school if it is certified by Technical Education, Vocational and Entrepreneurship Training Authority (TEVETA).

Work-based education is educational activities which take place in a work environment. The aim is to achieve specific learning objectives through practical instruction and participation in work activities under the guidance of experienced workers or trainers.

Formal Education refers to education that is institutionalized, intentional and planned through public organizations and recognized private bodies and, in their totality, constitute the formal education system of a country. Formal education programmes are thus recognized as such by the relevant national education authorities or equivalent authorities such as the Ministry of General Education (MoGE), Ministry of Education (MoE), Technical Education, Vocational and Entrepreneurship Training Authority (TEVETA) and Higher Education Authority (HEA). Vocational education, special needs education and some parts of adult education are often recognized as being part of the formal education system.

Question 9: Has..... ever attended school?

Note: School attendance questions are asked to persons aged 2 years or older
In this question, we are interested in persons who have attended school at the following levels:

1. Early Childhood Education (ECE) or pre-school;

2. Primary School from grades 1 to 7;
3. Secondary School from grades 8 to 12;
4. Higher Education. Post-secondary school that leads to the attainment of academic or professional qualifications (e.g. certificates, diploma, Bachelor's Degree, Master's Degree or Doctorate Degree).

Note: Persons that have never attended Early Childhood Education, primary school or secondary school but have attended some vocational school should indicate "YES" in this question. Ask if the person has ever attended school.

Question 10: Can.....read and write in any language?

Note: Literacy questions are asked to persons aged 4 years or older.

Ask if the person can read and write in any language (local languages included). Only select YES if a person can both read and write in any language.

A person who can read and write is one who can read and write in any language, with understanding, a short, simple statement on his or her everyday life. A person capable of reading only figures and his or her own name should be considered as not able to read and write, as should a person who can read and write only a commonly used phrase that has been memorized.

Ask if the person can read and write in any language (local languages included). Only select YES if a person can both read and write in any language.

A person who can read and write is one who can read and write in any language, with understanding, a short, simple statement on his or her everyday life. A person capable of reading only figures and his or her own name should be considered as not able to read and write, as should a person who can read and write only a commonly used phrase that has been memorized.

Question 11: Is... currently attending school?

Ask if the person is currently attending school (whether formal, by correspondence, e-learning, community school etc).

"Attending school" - refers to whether the person generally attends school; it does not measure how often a person actually goes to school but whether the person attends school at all.

If a person goes to school occasionally, or usually goes to school but has been absent from school recently, the person is currently attending school. For persons who are currently attending school, ask the type of school that they are attending.

The following is the description of the type of school:

Government school- a school administered or controlled by the Ministry or established and maintained using public funds, e.g. Chafwa Basic School in Kasama, National Institute of Public Administration (NIPA);

Community school- a school institution established by any person, organization, institution or community to meet community needs and supported by the Ministry responsible for education e.g. Chitumbi Community School in Gwembe district; **Private school-** a school which is not a public or an aided educational institution, run by an individual or company e.g. Rhodes Park School, University of Lusaka (UNILUS);

Mission or faith based school (grant aided)- A school established/ run by a church or any religious organization. The schools receive support from government for funds, human resource or any other form of support e.g. ST Pauls Secondary School in Kapiri Mposhi.

For persons who are attending school outside Zambia, select "Yes". These include those who have to leave the country to attend on-campus lessons and those who do not have to leave the country but attend school through online lessons.

Be cautious when asking this question to persons who seem obviously not to be attending school.

Attending school is taken to mean that the person attends school as a full-time or part-time student i.e. in the formal school system.

For example: -

- Students attending vocational training including teacher training should be considered as attending school.
- Students at colleges and universities.
- Persons attending night school should be taken as attending school.
- Students/pupils at primary and secondary schools.
- People on unpaid or paid study leave to a formal educational institution.

- People engaged in correspondence studies with a correspondence school.

Question 12: What grade/level of education is.... currently attending?

Grades range from nursery to Doctoral studies. Nursery to A level grades are regulated by Ministry of General Education. Schools offering these qualifications include government and private primary and secondary schools. Grades from certificate to doctorate are regulated by Ministry of Higher Education). Schools offering these qualifications include University of Zambia and National Institute of Public Administration.

Select the appropriate current education level. The accounting professional qualification reflected under Masters Degree refer to the highest level of the qualifications (e.g. Strategic professional level)

Example 1: Select “Grade 7 (Standard 6)” as a grade for a person who is in grade 7. **Example 2:** Select “Diploma or advanced diploma” as a grade for a person who is currently studying a diploma course in Human Resource at a Higher Education College.

Example 3: Select “Bachelor’s Degree (BA/BSc)” as a grade for a person who is currently studying for a bachelor’s degree in Accounting.

Example 4: Select “Masters Degree” as a grade for a person who is currently studying for full or highest level of Association of Chartered Certified Accountants (ACCA).

Use the following codes:-

Nursery/ kindergarten	CODE ...00
Grade 1 to 12.....	CODES...01 TO 12
Grade 12 GCE (O-level).....	CODE...12
Grade 12 GCE (A-level).....	CODE.....13
College students.....	CODE.....14
Undergraduate University students.....	CODE.....15
Post-graduate Diploma/Certificate students..	CODE.....16
Masters Degree students.....	CODE.....17
Doctoral level and above students.....	CODE.....18

Question 13: What is the highest grade or level has completed?

The purpose of this question is to measure educational attainment. Educational attainment is defined as the highest level completed by an individual. Information on education attainment will be collected by asking the highest grade that a person was able to complete regardless of duration in school.

Under highest educational level completed, select the highest educational grade completed by each person who has ever attended an educational institution (including correspondence, e-learning, community schools etc.). The grades in brackets represent the grades for the school system from 1946 to 1964. The system of school standards, grades and forms has been changed four times since 1946 (Refer Appendix 8 for information on those changes). Select the highest level completed whether a person is still attending full time or part-time or has attended previously and is not attending now. For children attending Early Childhood Education or nursery school and those currently in Grade 1 who did not attend nursery school, their academic qualification completed is "None". For persons who were educated outside Zambia, indicate the appropriate Zambian equivalent of the level reached.

Example 1: A person who is currently attending grade 6 would have completed GRADE 5 since he/she has not yet completed grade 6. A person with any highest grade from nursery to grade 12, the grade completed in P41 should be less than the grade currently attending in P40.

Example 2: If someone passed Standard 4 anytime between 1946-1964, select Grade 6 (the equivalent grade in the current school system at the time as shown in the screenshot (also see Appendix 1). For someone with a General Certificate of Education '0' level, select "Grade 12 GCE (0)"/GCE (A) (Form 6).

Example 3: Suppose a person completed Form 4 GCE '0' level in 1980. In 1981, he/she went to study at the University of Zambia. After two years he/she was stopped or withdrew before completing the programme. For this person enter 12 for the highest level of education completed. The two years spent at the University are not considered in this case.

Example 4: If a person completed grade 12 and is currently attending a diploma or degree course at college or university, select Grade 12 as the highest grade completed.

Question 12: What is the grade is currently attending?

Ask if the person is currently attending school (whether formal, by correspondence, e-learning, community school etc).

“Attending school” - refers to whether the person generally attends school; it does not measure how often a person actually goes to school but whether the person attends school at all.

If a person goes to school occasionally, or usually goes to school but has been absent from school recently, the person is currently attending school. For persons who are currently attending school, ask the type of school that they are attending as shown in the screenshot.

The following is the description of the type of school:

Government school- a school administered or controlled by the Ministry or established and maintained using public funds,e.g. Chafwa Basic School in Kasama, National Institute of Public Administration (NIPA);

Community school- a school institution established by any person, organization, institution or community to meet community needs and supported by the Ministry responsible for education.e.g. Chitumbi Community School in Gwembe district;

Private school- a school which is not a public or an aided educational institution, run by an individual or company e.g. Rhodes Park School, University of Lusaka (UNILUS);

Mission or faith based school (grant aided)- A school established run by a church or any religious organization. The schools receive support from government for funds, human resource or any other form of support e.g. ST Pauls Secondary School in Kapiri Mposhi.

For persons who are attending school outside Zambia, select “Yes-Attending school outside the country”. These include those who have to leave the country to attend on-campus lessons and those who do not have to leave the country but attend school through online lessons

Use the same codes as in question 2.

Question 13: What was the highest grade.... attained?

The level attained is the qualification (i.e. degree, diploma, certificate, etc.) that an individual has acquired, whether by full-time study, part-time study or private study, whether conferred in the home country or abroad, and whether conferred by educational authorities, special examining bodies or professional bodies.

For cases up to GCE (O) Level, when recording highest level of education, the level completed is what matters. While for cases after GCE (O) level, qualification is what matters.

The system of school standards, grades and forms has been changed about 3 times in the past. Convert all previous standard of education to the current education level using the table below. For persons who were educated outside Zambia give the code of the appropriate Zambian Equivalent of the level reached.

Please note that the answer codes for question 8 are slightly different from answer codes for questions 2, 3, and 7. Make sure you record the right answer codes. As you will not be in a position to always refer to your instruction (enumerators) manual for codes, you can first record the educational attainment in words (in your notebook) and then later at home or at your camp, select the appropriate answer codes from the drop down menu.

Grade/Level (in the current school system)	Education Levels in the school system from 1946-1964	Codes
Nursery/ Kindergarten		0
Grade 1	Sub Standard A/B	1
Grade 2	Standard 1	2
Grade 3	Standard 2	3
Grade 4	Standard 3	4
Grade 5	Standard 4	4
Grade 6	Standard 5	6
Grade 7	Standard 6	7
Grade 8	Form 1	8
Grade 9	Form 2	9
Grade 10	Form 3	10
Grade 11	Form 4	11
Grade 12 GCE(O)/ GCE(A)	Form 4/ Form 6	12
Certificate or Advanced Certificate		13
Diploma or Advanced Diploma(14

Bachelors Degree (e.g. BA, BSc)		14
Post graduate Diploma		16
Masters Degree (MA/MSc/CCA/CIMA)		17
Doctoral Studies (e.g. PhD, DBA, LLD) or Above		18

Example 1:

If someone had passed standard 5 before 1956, enter code 06 in the boxes provided.

Example 2:

Suppose a person completed form 5 GCE (O) Level in 1980. In 1981, he went to study at the University of Zambia. After two years, he/she left before completing the program. For this person enter the code 14 in the appropriate boxes.

Example 3:

If someone completed (not just attended) grade 7 but is now repeating grade 6, then the highest grade attained in this case is grade 7. Someone repeating grade 7 - highest grade attained is grade 7. Someone who is currently attending grade 7 but has never completed grade 7 before, then highest grade attained is grade 6.

Example 4:

If someone has completed Natech, ZDA, AAT and equivalent, record him or her under code 14.

Example 5:

If someone has completed ACCA, CIMA and equivalent but has no higher qualification such as Master's degree, record under code 15.

ACTIVITY LIMITATION

The next questions are meant to identify persons with a disability in a household. This section has six questions that are based on a physical, mental, emotional or other health problem and cover six functional domains or basic actions namely: seeing, hearing, mobility, cognition, self-care, and communication.

The questions are based on activity limitations rather than a person's physical appearance. The purpose of the question is to capture persons experiencing activity limitations at the time of the survey. The questions will be asked for persons aged 5 years or older. Some children under 5 years maybe too young to do certain activities such walking, self-care and communicate.

Activity is the execution of a task or action by an individual. It represents the individual's perspective of functioning. Activity limitations are difficulties an individual may have in executing activities. An activity limitation may range from a slight to a severe deviation in terms of quality or quantity in executing the activity in a manner or to the extent that is expected of people without the health condition.

When asking the questions in this section, you should ask them comfortably as you would other questions in the questionnaire. The questions are asking about difficulties people may have in doing these selected activities for whatever reason. You are not to presume by looking at the person that you know what those difficulties are. For example, a person in a wheelchair might be able to walk. They may just have a lot of difficulty doing so, and therefore use a wheelchair much of the time – or even occasionally when the need arises.

Note: The word “disability” is never mentioned in the questionnaire, as it may lead some households to under-report persons with disabilities. You are instructed never to mention the word “disability” in the interview process.

Each question has four response categories, which are read after each question. The response categories capture the full spectrum of functioning from mild to severe.

1. No, no difficulty
2. Yes, some difficulty
3. Yes, a lot of difficulty
4. Cannot do it at all

If respondents provide responses using the required answer categories, the categories do not need to be repeated after every question. They should be repeated as soon as the respondent does not use the required category (e.g., responds 'yes') or after the second or third question.

Note that the inclusion of assistive devices was considered for two domains only, seeing and hearing, as limitations in these domains can often be easily overcome with the use of glasses or hearing aids and the use of these assistive devices is common in most countries.

Question 14: Does any member of this household have difficulty with the following ?

The purpose of this question is to identify persons who have activity limitations such as;

1. Vision difficulties or problems seeing even when wearing glasses.

Seeing - refers to an individual using his/her eyes and visual capacity in order to notice or observe what is happening around them.

Even when wearing glasses - refers to difficulty seeing with glasses if the respondent has, and uses, them – NOT how vision would be if glasses, or better glasses, were provided to one who needed them.

Assistive devices - equipment or products that will aid a person with an activity limitation to function such as glasses.

Examples

1. Persons who have challenges seeing even if wearing glasses or contact lenses should be considered as having difficulties seeing.

2. Persons who have challenges seeing and have no access to assistive devices should be considered as having difficulties seeing.

2. Have some hearing limitation or problems of any kind with their hearing even when using a hearing aid (if they wear a hearing aid).

Hearing - refers to an individual using his/her ears and auditory (or hearing) capacity in order to know what is being said to them or the sounds of activity, including danger that is happening around them.

Even if using a hearing aid - refers to difficulty hearing with a hearing aid if the respondent has, and uses, that device – NOT how hearing would be if hearing aids, or better hearing aids, were provided to one who needed them. Examples of problems include hearing in a noisy or a quiet environment, distinguishing sounds from different sources, and hearing in one ear or both ears. Any difficulty with hearing that is considered a problem should be captured.

Hearing aids are sound-amplifying devices designed to aid people who have a hearing impairment. Most hearing aids have a microphone that picks up sound, amplifier circuitry that makes the sound louder, a miniature loudspeaker (receiver)

that delivers the amplified sound into the ear canal and batteries that power the electronic parts. Examples of hearing aids include In the Ear (ITE) and Behind the Ear (BTE) devices as illustrated below.



3. Problems of any kind getting around on foot.

Walking - refers to the use of legs in such a way as to move oneself over the ground to get from point A to point B.

The ability to walk should be without assistance of any device (wheelchair, crutches, walker, artificial legs etc.) or human. If such assistance is needed, the person has difficulty walking.

Examples of problems include walking short (about 100 meters) or long distances (about 500 meters), walking any walkable distance without stopping to rest, and walking up or down stairs. Difficulties walking can include those resulting from body impairments or other non-musculoskeletal systems, for example blind people having difficulty walking in an unfamiliar place. Any difficulty with walking (whether it is on flat land or up or down steps) that is considered a problem should be captured.

4. Persons who have some problems with remembering or focusing attention that contribute to difficulty in doing their daily activities.

Remembering - refers to the use of memory to recall incidents or events. It means the individual can bring to mind or think again about something that has taken place in the past (either the recent past or further back).

With younger people, remembering is often associated with storing facts learned in school and being able to retrieve them when needed. Remembering should NOT be equated with memorizing or with good or bad memories.

Concentrating - refers to the use of mental ability to accomplish some task such as reading, calculating numbers and learning something. It is associated with focusing on the task at hand in order to complete the task. Included are problems of finding one's way around, being unable to concentrate on an activity, or forgetting one's whereabouts or the date, and problems remembering what someone just said or becoming confused or frightened about most things. Any difficulty with remembering, concentrating or understanding what is going on around them that they or family members (if the family member is the respondent) consider a problem should be captured.

Note: Difficulties remembering or concentrating because of common everyday situations such as high workload or stress, or as a result of substance abuse are EXCLUDED.

5. Problems with taking care of themselves independently.

Washing all over - refers to the process of cleaning one's entire body (usually with soap and water) in the usual manner for the culture. The washing activity includes cleaning hair and feet, as well as gathering any necessary items for bathing such as soap or shampoo, a wash cloth, or water.

Dressing - refers to all aspects of putting clothing or garments on the upper and lower body including the feet. Also included are the acts of gathering clothing from storage areas (i.e. closet, dressers), buttoning up, tying knots, zipping, etc. Washing and dressing represent tasks that occur on a daily basis and are considered basic, universal activities.

6. problems with talking, listening or understanding speech such that it contributes to difficulty in making themselves understood to others or understanding others.

Communicating - refers to a person exchanging information or ideas with other people through the use of language.

Communication difficulties can originate in numerous places in the exchange process. It may involve mechanical problems such as hearing impairment or speech impairment, or it may be related to the ability of the mind to interpret the sounds that the auditory system is gathering and to recognize the words that are being used or an inability of the mind to compose a sentence or say a word even when the person knows the word and sentence.

The question also includes the use of the voice for the exchange or using signs (including sign language) or writing the information to be conveyed. Examples

of problems include problems making oneself understood, or problems understanding other people when they speak or try to communicate in other ways. Examples of persons who have difficulty communicating may include persons who stammer when speaking.

Note: Difficulty understanding or being understood due to unfamiliar language is NOT included.

ECONOMIC ACTIVITY

For Persons 10 Years and Older ONLY

In this section, we want to find out whether a person is working or not and, if working, what type of work he or she is doing.

An understanding of the concept of **ECONOMIC ACTIVITY** is a fundamental requirement in this survey. It sets the frame for the classification of the economically active persons. It is important that **YOU** convey to the respondent a correct interpretation of the concepts, so that the survey can measure what it is intended to.

The various forms of work are measured with respect to a short reference period. The appropriate reference period for each form is based on the intensity of participation and working time arrangements. Primarily the 7 days reference period is for the first question under the economic activity.

A person is considered to have engaged in a given form of work when performing such form of work for at **least one hour** during the relevant, short reference period. Use of this one-hour criterion ensures coverage of all the activities engaged in, including part-time, temporary, casual or sporadic activities, as well as comprehensive measurement of all inputs of labor into production.

Question 1: In the Last 7 days from (DAY) to (DAY/YESTERDAY), which of the following did mainly do?

Worked Last 7 Days

Response Categories

1 = Work for someone else for pay (as employee, labourer, apprentice)

2 = Work in his/her own business activity (non-farm)

3 = Work in (his/her) own/family farming or fishing

4 = None of the above

Purpose

- To identify persons employed in the reference period.
- To separately identify persons working in own-account farming or fishing who will be asked about the main intended destination of their production.

Main product Produced through farming

Question 2: What is the main farm produce that (NAME) is working on?

Write the description of the main product produced and intended for consumption by the household or family

(WRITE MAIN FARM PRODUCT—e.g. [maize, vegetables, cotton, tobacco, rice, cassava, mangos, cattle, sheep, goat, pigs, chickens, kapenta, bream fish])

Purpose

- To tabulate own-use producers by detailed branch of economic activity in agriculture
- To produce complete statistics of workers in agriculture, by form of work,
- To support disaggregation of subsistence farmers, fishers by detailed occupation group (i.e. subsistence crop farmer, subsistence livestock farmer, subsistence mixed crop and livestock farmer, subsistence fisher)

Question 3: Any Other Activity in the last 7 Days

Response categories

1 = Do any (other) activity to generate an income, even for 1 hour (e.g. [casual work, odd jobs, make things to sell, provide services for pay,...])

2 = Have a paid job or business activity, but (were/was) temporarily absent

3 = Help without pay in a family business

4 = Did not do any income generating activity, not even for one hour.

Purpose

- Part of question to identify persons employed in the reference period
- Recovers persons with small, casual jobs, on temporary absence from a job/business, and persons

helping in family businesses

Question 4: What kind of work did (NAME) do in his/her main job or business?

Determine the type of work done during the reference period by the person employed irrespective of the industry or the status of employment in which the person should be classified.

For each worker, type an appropriate occupation given for the main job in the reference period in the space provided. Ensure you type the full description of the job that should include the task, category/place and beneficiary.

Examples:

- Primary School Teacher;
- Carpenter;
- Accounts Clerk;
- Bus Driver;
- or Bricklayer.

Question 5: What kind of business/ service was mainly carried out by (NAME's) employer/establishment/ business?

For each worker, select the name of the industrial activity mainly carried out by the establishment in which he/she worked during the reference period.

If he/she was employed in more than one industry, then select the industrial activity which relates to the occupation already recorded. If he/she had the same occupation in different industries, then write the main industry in which he/she is working.

A person with a certain skill can work in any industry where the skills are required. In such a situation, industry classification will depend on the industry in which he/she is actually employed.

Some difficulty may be experienced in identifying the industrial activity of an establishment the persons who move frequently from job to job or do odd jobs. Remember that what is wanted is the Industry of the main job, even if that job started only a day or two ago.

Examples:

- Manufacturing of shoes;
- Mining of copper;
- Selling of food in a shop/on the street;
- Teaching Primary School pupils; or
- Selling of clothes in the shop/street.

Specific example:

A Carpenter may work in:	His/her corresponding industry classification is:
(a) A furniture workshop	Furniture Manufacturing
(b) A construction company that builds houses	Construction of buildings
(c) Zambia Railways	Railway Transport

(1) A Doctor employed by the University Teaching Hospital and a Doctor working at a hospital owned by KCM - Both will be classified in Industry 8511 (Hospital Activities).

(2) A Plumber employed by a crop farm owned by KCM will not be classified under mining but under code 0111 (Agriculture).

SECTION 3 ENERGY ACCESS AND UTILISATION

Question 1: Does your household use any of the following sources of energy? [Multiple response]

The purpose of this question is to determine the sources of energy used by the household.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to determine the sources of energy their household uses.
2. Read out the options and their definitions: Present the list of energy sources to the respondent and provide a brief explanation for each option. The options are:
 - Firewood: Wood used as fuel for cooking or heating.
 - Charcoal: Solid fuel made from wood or other organic matter.
 - Kerosene: A flammable hydrocarbon liquid commonly used as a fuel for lamps, stoves, and heaters.
 - LPG (liquefied petroleum gas): A clean-burning fuel commonly used for cooking, heating, and other household purposes.

- Solar: Energy obtained from the sun through solar panels or solar-powered devices.
 - Dry Batteries (e.g., torch batteries): Disposable batteries used to power devices such as flashlights or torches.
 - Externally rechargeable batteries (e.g., car, solar, etc.): Rechargeable batteries that can be externally charged and used in various devices or systems.
 - Candles: Wax-based candles used for lighting.
 - Generator: A machine that produces electricity, often powered by diesel, petrol, or gas, used as a backup source during power outages.
 - National grid: The main electricity distribution network provided by the national utility company.
 - Biogas: A renewable energy source produced from the decomposition of organic matter, used for cooking, heating, or electricity generation.
 - Coal briquette: A compressed block of coal dust or other combustible biomass used as a fuel source.
 - Ethanol: A biofuel produced from crops such as sugarcane or corn, used as a substitute for gasoline or as a cooking fuel.
 - Local mini-grid: A localized electricity distribution system serving a specific area or community.
 - Other (specify): If the respondent uses an energy source not listed, instruct them to specify the source and provide additional details.
3. Ask the respondent to select all the energy sources used by their household. If they mention an option not listed, instruct them to specify it as "Other" and provide the details.
 4. Once the respondent provides their answer, record each selected option accurately in the survey form, including any specified energy sources.
 5. Proceed to the next question or section based on the respondent's selection and explanation.

HEATING AND COOKING

FIREWOOD

Question 2: What is the household's main source of firewood?

The purpose of this question is to determine the primary source of firewood used by the household. Understanding the origin of firewood is essential for assessing energy consumption patterns, evaluating environmental impacts, and identifying potential sources of sustainable fuel.

1. Self-produced/collected: This option refers to firewood that is obtained by the household through their own efforts, such as gathering wood from nearby forests or trees on their property. It includes instances where the household actively collects firewood as part of their routine activities.
2. Purchased: This option indicates that the household acquires firewood by buying it from a supplier or vendor. This could involve purchasing firewood in bulk or on a regular basis from a local market or supplier.
3. Receive it as a gift: This option represents situations where the household receives firewood as a gift or donation from other individuals or organizations. This could include instances where firewood is given as a gesture of support or assistance.
4. Other: This option should be selected if the household's main source of firewood does not fit into any of the above categories. If respondents choose this option, encourage them to provide additional details or explanations regarding their specific source of firewood.

Instructions to the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to determine the main source of firewood their household uses.
2. Read out the options.
3. Ask the respondent to select the appropriate option that represents their household's main source of firewood.
4. Once the respondent provides their answer, record it accurately in the survey form.

Question 3: How much did your household spend on firewood in the last 30 days?

The purpose of this question is to gather information about the expenditure on firewood incurred by the household over the past 30 days. Understanding the

financial aspect of firewood consumption helps in assessing the economic impact and affordability of this energy source for the household.

Instructions for the Enumerator:

1. Approach the question sensitively: Discussing personal finances can be sensitive, so approach this question with empathy and assure the respondent that their information will be kept confidential.
2. Define "firewood": Ensure that the respondent understands that firewood refers to the wood used for heating or cooking purposes.
3. Timeframe: Emphasize that the question specifically pertains to the expenditure on firewood over the past 30 days only. Clarify that it is not an average or cumulative expenditure.
4. Assisting with estimation: If the respondent is unsure of the exact amount, encourage them to estimate to the best of their ability. They can refer to receipts, bills, or any other documentation that might help in recalling the expenditure.
5. Respect privacy: Emphasize that the information provided will be used for statistical purposes only and will be treated confidentially. Assure the respondent that their personal financial details will not be shared or disclosed.

Question 4: What quantity of purchased firewood did your household use in the last 30 days?

The purpose of this question is to determine the quantity or volume of purchased firewood consumed by the household over the past 30 days. Instructions for the Enumerator:

1. Define "purchased firewood": Ensure that the respondent understands that purchased firewood refers to the firewood that was acquired by the household through a transaction or by buying it from a supplier or vendor.
2. Clarify the timeframe: Emphasize that the question specifically relates to the quantity of purchased firewood used in the past 30 days. It is important to distinguish this from any self-produced or collected firewood.
3. Provide options in familiar terms: The options provided are specific measurements for firewood quantities. Explain each option clearly to the respondent using familiar terms for measurement. If necessary, you can provide visual aids or examples to help them understand the quantities:

a. One scotch cart: Explain that a cord is a unit of measurement for firewood volume. In this case, a cord is equivalent to the amount of firewood that can fit into a scotch cart. One scotch cart approximately carries about 300kg of firewood.



b. One woman head lot (9kg bundles): 9kg is approximately the quantity of firewood that a woman can carry on her head.

c. One Man head lot (12 kg bundle): 12kg is approximately the quantity of firewood that a man can carry on his head.

NOTE: If the respondent gives a quantity other than the ones listed above, convert the quantity to fall in any of the above units.

Question 5: During your last purchase, how many units of firewood did your household buy?

The purpose of this question is to determine the quantity or number of units of firewood purchased by the household during their most recent purchase. Instructions for the Enumerator:

1. Clarify the question: Ensure that the respondent understands that this question specifically relates to their most recent purchase of firewood.
2. Define "**units of firewood**": Explain to the respondent that "units" refer to the specific measurement or packaging in which firewood is sold or bought. It could be bundles, bags, crates, or any other standardized form in which firewood is commonly sold.

Question 6: What quantity of collected firewood is used by your household per month?

The purpose of this question is to determine the quantity or volume of firewood collected and used by the household on a monthly basis.

Instructions for the Enumerator:

1. Define "collected firewood": Ensure that the respondent understands that collected firewood refers to the firewood obtained by the household

through their own efforts, such as gathering wood from nearby forests, trees on their property, or other sources.

2. Clarify the timeframe: Emphasize that the question pertains to the quantity of collected firewood used per month. It is important to distinguish this from any purchased or received firewood.
3. a. One scotch cart: Explain that a cord is a unit of measurement for firewood volume. In this case, a cord is equivalent to the amount of firewood that can fit into a scotch cart. One scotch cart approximately carries about 300kg of firewood.



4. b. One woman head lot (9kg bundles): 9kg is approximately the quantity of firewood that a woman can carry on her head.
6. c. One Man head lot (12 kg bundle): 12kg is approximately the quantity of firewood that a man can carry on his head.
7. **NOTE:** If the respondent gives a quantity other than the ones listed above, convert the quantity to fall in any of the above units.

Question 7: Who mainly collects this firewood that is used by your household?

The purpose of this question is to determine the individuals or groups responsible for collecting the firewood used by the household. Understanding the main collectors helps in assessing the division of labor, gender dynamics, and roles within the household related to gathering firewood.

Instructions for the Enumerator:

1. Explain the question: Clarify to the respondent that this question aims to identify the individuals or groups primarily involved in collecting the firewood used by the household.
2. Roster Options: refer to the roster of person (s) within the dwelling (household).
 - a. Household head (usually the main decision-maker in the household)
 - b. Male family members
 - c. Female family members

- d. Children.
- e. Other family members or relatives
- f. Community members or neighbors
- g. Hired laborers
- h.

Not applicable (e.g., firewood is purchased or received as a gift)

3. Specify "Other": If none of the options in the roster accurately represent the main collectors in their household, provide an "Other" category and ask the respondent to specify who else is primarily responsible for collecting the firewood. If they choose the "Other" option, prompt them to provide further details or explanations regarding the specific collector(s) not listed.

Question 8: Did this person experience any injury while collecting or transporting the firewood?

The purpose of this question is to gather information regarding any injuries that may have occurred while collecting or transporting firewood. Understanding the safety risks associated with firewood collection helps in assessing potential hazards, identifying areas for intervention or improvement, and promoting safe practices.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to determine if the person primarily involved in firewood collection or transportation has experienced any injuries during these activities. These injuries include snake bites, accidents (bicycle, ox cart etc) , neck injuries etc.
2. Provide response options: Present two response options to the respondent:
 - a. Yes: Select this option if the person has experienced an injury while collecting or transporting firewood.
 - b. No: Select this option if the person has not experienced any injury while collecting or transporting firewood.

Question 9: How much firewood was collected on the last largest collection/purchase?

The purpose of this question is to determine the quantity or volume of firewood collected during the last collection activity. Instructions for the Enumerator:

1. Define "**last collection**": Ensure that the respondent understands that this question refers to the most recent firewood collection activity undertaken by the household.
 - a. One cord: Explain that a cord is a unit of measurement for firewood volume. It represents a specific amount of stacked firewood.
 - b. One head lot (9kg bundles): Describe a head lot as a bundle of firewood weighing approximately 9 kilograms.
 - c. Man lot (12 kg bundle): Explain that a man lot refers to a bundle of firewood weighing approximately 12 kilograms.

Question 10: How many days did your household use this firewood?

In this question, we want to determine the duration or number of days that the collected firewood lasted for the household.

Instructions for the Enumerator:

1. Clarify the question: Ensure that the respondent understands that this question pertains to the number of days the collected firewood lasted in their household.
2. Emphasize the specific firewood collection referred to: Remind the respondent that this question relates to the firewood collected during the last collection activity mentioned in the previous question.

Encourage accurate recall: Ask the respondent to recall the number of days their household used the collected firewood. Prompt them to think about the duration from the time the firewood was collected until it was completely used.

Question 11: What is the distance from your homestead to the place where you collect /purchase firewood? (within homestead premises put zero)

The purpose of this question is to gather information about the distance between the respondent's homestead and the location where they collect firewood. Understanding the distance helps in assessing the effort and time required for firewood collection, evaluating the accessibility of firewood sources, and identifying potential challenges or opportunities for alternative energy sources.

Instructions for the Enumerator:

1. Explain the question: Clarify to the respondent that this question aims to determine the distance between their homestead and the location where they typically collect firewood.

2. Zero distance for within homestead collection: Emphasize that if the firewood collection takes place within the homestead premises (e.g., from trees within the compound or nearby), the respondent should put zero as the distance.
3. Record the Distance in Kilometres.

NOTE: 12 minutes of normal walking is approximately 1km

Question 12: How much time do you or any member of your household spend to collect firewood? (including both travel to and from an actual collection) (Hours)

The intention of this question is to gather information about the time spent by the household or its members to collect firewood, taking into account both the travel time to and from the collection location, as well as the time spent on actual collection activities.

Instructions for the Enumerator:

1. Explain to the respondent that this question aims to determine the total amount of time spent by them or any member of their household in the process of collecting firewood, including both travel time and actual collection activities.
2. Specify the unit of measurement: Emphasize that the time should be provided in hours.
3. Encourage accurate estimation: Ask the respondent to estimate the total time spent on firewood collection based on their experience. Prompt them to consider the time required for travel to the collection location, the time spent on actual collection activities (e.g., cutting, gathering), and the return journey.

Question 13: Does your house peel off the tree barks to dry the trees for firewood?

This question seeks to determine whether the household peels off tree barks to dry the tree for firewood.

This is a yes or No question, record the appropriate response from the respondent.

Question 14: Does your household cut trees for firewood?

This question seeks to determine whether the household cuts trees for firewood.

This is a yes or No question, record the appropriate response from the respondent.

Question 15: What kind of tree cutting do you mainly practice?

This question seeks to determine the type of tree cutting the household practices.

Selective: this is the type of tree cutting where only certain trees in the forest are cut according to ones criteria

Clear felling: this is the type of tree cutting where all the trees in an area are cut regardless of any selection criteria

CHARCOAL

Question 16: Does your household use charcoal for cooking?

This question seeks to determine whether the household uses charcoal as a cooking fuel.

Instructions for the Enumerator:

1. Explain to the respondent that this question aims to determine whether their household uses charcoal as a cooking fuel.
2. Provide response options: Present the following two response options to the respondent:
 - a) **Yes:** Select this option if the household uses charcoal for cooking.
 - b) **No:** Select this option if the household does not use charcoal for cooking.
3. Clarify the definition of charcoal: If needed, briefly explain that charcoal refers to a solid fuel made from carbonized wood or other organic materials commonly used for cooking purposes, commonly known as Malasha.

Question 17: What is the household's main source of charcoal?

The purpose of this question is to determine the main source of charcoal for the household.

Instructions for the Enumerator:

1. Explain to the respondent that this question aims to determine the main source from which their household obtains charcoal for cooking.
2. Provide the following response options
 - a) **Self-produced:** Select this option if the household produces or makes its own charcoal.
 - b) **Purchased:** Select this option if the household purchases charcoal from a market or store.

- c) **Receive as a gift:** Select this option if the household received charcoal as a gift from someone else.
 - d) **Other:** Select this option if the household obtains charcoal from a source other than those mentioned.
3. Clarify "main source": Emphasize that the respondent should select the option that represents the primary or most frequently used source of charcoal for their household.

Question 18: During the last charcoal production/purchase, how many units did you produce/purchase?

The purpose of this question is to determine the quantity or number of units of charcoal produced/purchased during the respondent's last production/purchase cycle

Instructions for the Enumerator:

1. Explain to the respondent that this question aims to determine the quantity or number of units of charcoal they produced/purchased during their last production/purchased cycle.
2. Remind the respondent that the question refers to their most recent production/purchase activity.
3. Specify the unit of measurement: Ask the respondent to provide the number of units produced/purchased.

Question 19: How much did you spend to produce/purchase this charcoal in ZMW?

The purpose of this question is to gather information about the cost or expenses incurred by the respondent in the production of charcoal.

Instructions for the Enumerator:

1. Explain to the respondent that this question aims to determine the amount of money they spent to produce/purchase the charcoal.
2. Prompt the respondent to consider all relevant expenses, such as raw materials, labour, equipment, transportation, and any other costs associated with production/purchases.

NOTE: If the charcoal is self produced, ask household how much they would paid if they had hired someone to produce this quantity of charcoal.

Question 20: How many days in total did this own-produced/purchased charcoal last?

This question intends to determine the duration or number of days that the own-produced/purchased charcoal lasted for the respondent.

1. Explain to the respondent that this question aims to determine the number of days that their own-produced/purchased charcoal lasted.

Question 21: Of the charcoal produced/purchased, what quantity did you sell?

The purpose of this question is to determine the quantity or amount of charcoal that the respondent sold from their own production. Instructions for the Enumerator:

1. Explain to the respondent that this question aims to determine the quantity or amount of charcoal that they sold from their own production.
2. Specify the unit of measurement: Ask the respondent to provide the quantity of charcoal sold. If there is a specific unit of measurement associated with the sales (e.g., 25 kg bag, 90kg bag, meda,), prompt the respondent to provide the quantity in that unit.
3. Clarify "**own-produced charcoal**": Remind the respondent that the question refers to the charcoal they produced themselves.

Question 22: On the largest transaction (quantity), at what price did you sell each unit of this own-produced/purchased charcoal?

The purpose of this question is to gather information about the selling price per unit of charcoal for the largest transaction from the respondent's own production.

Instructions for the Enumerator:

1. Explain to the respondent that this question aims to determine the selling price per unit of charcoal for the largest transaction from their own production.
2. Clarify "**own-produced charcoal**" and "**largest transaction**": Remind the respondent that the question refers to the charcoal they produced themselves and sold in the largest quantity during a single transaction.
3. Prompt for the selling price: Ask the respondent to provide the price at which they sold each unit of charcoal during the largest transaction. Encourage them to recall the specific price per unit or provide an estimate if needed.

Question 23: During the last 30 days, did this household use charcoal for the following purposes?

The purpose of this question is to determine the different purposes for which the household used charcoal during the last 30 days. Understanding the specific uses of charcoal helps in assessing its role in cooking, water heating, home business activities, and identifying any other purposes that may be relevant to the household.

Instructions for the Enumerator:

1. Explain to the respondent that this question aims to determine the different purposes for which their household used charcoal during the last 30 days.
2. Present each purpose one by one and ask the respondent whether their household used charcoal for that purpose. The purposes are:
 - a) Cooking and boiling water for drinking
 - b) Heating water (e.g., for bathing)
 - c) For home business
 - d) Other purposes.
 - e)

If the respondent mentions any other purposes for which they used charcoal, ask them to specify and provide a brief description.

3. Record the responses accurately: Once the respondent provides their answers (Yes/No) for each purpose, make sure to record them accurately in the survey form. If the respondent specifies any other purposes, record them as well.

Question 24: What is the quantity of charcoal used by your household per month?

The purpose of this question is to determine the quantity or amount of charcoal consumed by the household on a monthly basis.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to determine the quantity or amount of charcoal their household uses on a monthly basis.

2. Specify the unit of measurement: Prompt the respondent to provide the quantity unit for the quantity of charcoal used. e.g., 25kg bag, 90kg bag, bags, liters), the quantity in that unit.
3. Encourage accurate estimation: Ask the respondent to estimate the amount of charcoal their household typically consumes in an average month. Prompt them to consider their monthly cooking and other relevant activities that require charcoal.

LIQUIFIED PETROLEUM GAS (LPG)

Question 25: During the last 30 days, did this household use LPG for the following purposes?

This question seeks to determine the different purposes for which the household used LPG (liquefied petroleum gas) during the last 30 days. Understanding the specific uses of LPG helps in assessing its role in cooking, water heating, home business activities, and refrigeration and identifying any other purposes that may be relevant to the household.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to determine the different purposes for which their household used LPG during the last 30 days.
2. Ask about specific purposes: Present each purpose one by one and ask the respondent whether their household used LPG for that purpose. The purposes are:
 - a) Cooking;
 - b) Heating or boiling water (e.g. for drinking, for bathing);
 - c) For home business;
 - d) Refrigeration;
 - e) Other purposes:

If the respondent mentions any other purposes for which they used LPG, ask them to specify and provide a brief description.

3. Record the responses accurately: Once the respondent provides their answers (Yes/No) for each purpose, make sure to record them accurately in the survey form. If the respondent specifies any other purposes, record them as well.

Question 26: What size of LPG cylinder (in kg) does your household usually use?

The purpose of this question is to determine the size or capacity of the LPG (liquefied petroleum gas) cylinder that the household usually uses.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to determine the size or capacity of the LPG cylinder that their household usually uses.
2. Present the options:
 - a) Read out each option and its corresponding size in kilograms (kg) to the respondent.
 - b) Allow the respondent to choose: Ask the respondent to indicate the number corresponding to the size of the LPG cylinder their household usually uses.
 - c) If the respondent indicates that they use a different cylinder size not listed, ask them to specify the size and record their response.

Question 27: How much did your household spend on LPG during the last purchase?

The purpose of this question is to determine the expenditure or cost incurred by the household on LPG (liquefied petroleum gas) during their last purchase.

Instructions for the Enumerator:

1. Explain to the respondent that this question aims to determine the amount of money their household spent on LPG during their last purchase.
2. Ask for the expenditure amount: Prompt the respondent to provide the total amount, in Kwacha, they spent on LPG during their most recent purchase. Encourage them to recall the specific amount or provide an estimate if necessary.

SOLAR

Question 28: Does your household use a solar lantern?

This question seeks to determine whether the household uses a solar lantern.

Instructions for the Enumerator:

1. Explain to the respondent that this question aims to determine whether their household uses solar lanterns.
2. Provide response options: Present the following two response options to the respondent:
 - a) **Yes:** Select this option if the household uses a solar lantern.
 - b) **No:** Select this option if the household does not use a solar lantern.

Question 29: What is the capacity of your main solar lantern?

Find out from the respondent the capacity of the main solar lantern the household uses, where possible ask the respondent to give you the lantern so that you check and record the capacity as written on the lantern sticker.



Question 30: How long does it last when fully charged?

Find out from the respondent how long the lantern continuously last, after fully charging it.

Question 31: Does your household use a home solar system?

This question seeks to determine whether the household uses a solar system.

Instructions for the Enumerator:

1. Explain to the respondent that this question aims to determine whether their household uses a solar system.
2. Provide response options: Present the following two response options to the respondent:
 - a) **Yes:** Select this option if the household uses a solar system.
 - b) **No:** Select this option if the household does not use a solar system.

Question 32: What is the capacity of your main home solar system?

Find out from the respondent the capacity of the main solar system the household uses, where possible ask the respondent to show you so that you check and record the capacity as written on the system's sticker.

Question 33: How long does it last when fully charged

Find out from the respondent after fully charging it, how long does the solar lantern last when continuously used until it is fully discharged?

BIOGAS

Question 34: During the last 30 days, did this household use Biogas for the following purposes?

The purpose of this question is to determine the different purposes for which the household used Biogas during the last 30 days. Understanding the specific uses of Biogas helps in assessing its role in cooking, water heating, home business activities, refrigeration, and identifying any other purposes that may be relevant to the household.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to determine the different purposes for which their household used Biogas during the last 30 days.
2. Ask about specific purposes: Present each purpose one by one and ask the respondent whether their household used Biogas for that purpose.
3. Other purposes: If the respondent mentions any other purposes for which they used Biogas, ask them to specify and provide a brief description.
4. Record the responses accurately: Once the respondent provides their answers (Yes/No) for each purpose, make sure to record them accurately in the survey form. If the respondent specifies any other purposes, record them as well.

Question 35: What size of Biodigester (in cubic meters) does your household usually use?

The purpose of this question is to determine the size or capacity of the Biodigester that the household usually uses.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to determine the size or capacity of the Biodigester that their household usually uses.
2. Read out each option and its corresponding size in cubic meters to the respondent.
3. Ask the respondent to indicate the number corresponding to the size of the Biodigester their household usually uses.
4. Other: If the respondent indicates that they use a different Biodigester size not listed, ask them to specify the size and record their response.
5. Record the response accurately: Once the respondent provides their choice or specifies the Biodigester size, make sure to record it accurately in the survey.

Question 36: What was the cost of constructing the Biogas digester?

The purpose of this question is to determine the cost incurred by the household for constructing the Biogas digester. Understanding the construction cost helps in assessing the financial investment required for setting up a Biogas digester, evaluating the affordability of the technology, and identifying any variations in costs among different households.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to determine the cost, in Kwacha, incurred by their household for constructing the Biogas digester.
2. Prompt the respondent to provide the total cost they incurred for constructing the Biogas digester. Encourage them to recall the specific amount or provide an estimate if necessary.
3. Record the response accurately: Once the respondent provides the construction cost, make sure to record it accurately in the survey form.

ELECTRICITY

Question 37: Does your household use electricity for Cooking?

The purpose of this question is to determine whether the household uses electricity as a source of energy for cooking.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to determine whether their household uses electricity as a source of energy for cooking.
2. Present the options: Read out the options to the respondent, which are:
 - a) **Yes:** If the household uses electricity for cooking; and
 - b) **No:** If the household does not use electricity for cooking.
3. Ask the respondent to select the appropriate option that represents their household's situation.
4. Once the respondent provides their answer, make sure to record it accurately in the survey form.
5. If the respondent selects "**No**," inform them that they will proceed to the next section of the questionnaire.

Question 38: Does your household use any of the following types of electric cooking appliances?

The purpose of this question is to determine whether the household uses specific types of electric cooking appliances. Understanding the use of these appliances helps in assessing the household's cooking practices, identifying the availability and utilization of different electric cooking appliances, and gathering information on energy consumption patterns for cooking purposes.

Instructions for the Enumerator:

1. Explain to the respondent that this question aims to determine whether their household uses any of the listed types of electric cooking appliances.
2. Read out each option and its corresponding number to the respondent.
3. For each option, ask the respondent to indicate whether their household uses that particular type of electric cooking appliance. They can respond with either "**Yes**" or "**No**" for each option.
4. Once the respondent provides their answers (Yes/No) for each option, make sure to record them accurately in the survey form. If the respondent specifies any other type of electric cooking appliance, record it as well.

Question 39: How many hours in total did your household use these cooking appliances in the last 24-hour period?

The purpose of this question is to determine the total number of hours the household used specific cooking appliances within the past 24 hours. This

information helps in understanding the frequency and duration of appliance usage, assessing energy consumption patterns, and estimating the overall energy demand for cooking purposes.

Instructions for the Enumerator:

1. Explain to the respondent that this question aims to determine the total number of hours their household used specific cooking appliances within the past 24 hours.
2. Read out each cooking appliance option to the respondent.
3. For each cooking appliance, ask the respondent to provide the total number of hours and minutes it was used within the past 24 hours. Ensure the respondent understands that the response should be provided in hours and minutes.
4. Once the respondent provides the number of hours and minutes of usage for each cooking appliance, make sure to record them accurately in the survey form. If the respondent specifies any other type of cooking appliance, record it as well.

KEROSENE

Question 40: Does your household use Kerosene for cooking?

This question seeks to determine whether the household uses kerosene as a source of energy for cooking. Understanding the use of kerosene for cooking helps in assessing the household's cooking practices, identifying the availability and utilization of kerosene stoves or other cooking equipment, and gathering information on the energy mix for cooking purposes.



Instructions for the Enumerator:

1. Explain to the respondent that this question aims to determine whether their household uses kerosene as a source of energy for cooking.
2. Read out the options to the respondent, which are:
 - a) 1 = Yes: If the household uses kerosene for cooking; and
 - b) 2 = No: If the household does not use kerosene for cooking.
4. Ask the respondent to select the appropriate option that represents their household's situation.
5. Once the respondent provides their answer, make sure to record it accurately.
6. If the respondent selects "**No**," inform them that they will proceed to the next section of the questionnaire.

Question 41: How many litres of kerosene does your household use per month?

The purpose of this question is to determine the monthly consumption of kerosene by the household. Understanding the quantity of kerosene used helps in assessing the energy demand for cooking purposes, estimating the household's expenses on this fuel, and gathering information on the overall energy consumption patterns.

Instructions for the Enumerator:

1. Explain to the respondent that this question aims to determine the monthly consumption of kerosene by their household.
2. Inquire about the quantity of kerosene used per month. Specifically, ask the respondent to provide the number of liters of kerosene consumed by their household within a month.
3. Once the respondent provides the quantity of kerosene used per month, make sure to record it accurately.

Question 42: During the last 30 days, did this household use Kerosene for the following purposes?

The purpose of this question is to determine the specific uses of kerosene by the household within the last 30 days.

Instructions for the Enumerator:

1. Explain to the respondent that this question aims to determine whether their household used kerosene for specific purposes within the last 30 days.
2. Read out each purpose and its corresponding response options to the respondent.
3. For each purpose, ask the respondent to indicate whether their household used kerosene for that specific purpose within the last 30 days. They can respond with either "Yes" or "No" for each option.
4. Once the respondent provides their answers (Yes/No) for each purpose, make sure to record them accurately.

Question 43: During your last purchase, how many litres of kerosene did you buy?

The purpose of this question is to determine the quantity of kerosene purchased by the household during their last purchase.

Instructions for the Enumerator:

1. Explain to the respondent that this question aims to determine the quantity of kerosene purchased by their household during their last purchase.
2. Inquire about the quantity of kerosene bought. Specifically, ask the respondent to provide the number of liters of kerosene they purchased during their last purchase.
3. Once the respondent provides the quantity of kerosene bought, make sure to record it accurately in the survey form.

Question 44: How much did you spend during your last purchase?

The purpose of this question is to determine the amount of money spent by the household during their last purchase of kerosene.

Instructions for the Enumerator:

1. Explain to the respondent that this question aims to determine the amount of money spent by their household during their last purchase of kerosene.
2. Inquire about the amount of money spent. Specifically, ask the respondent to provide the total expenditure incurred during their last purchase of kerosene.
3. Once the respondent provides the expenditure amount, make sure to record it accurately.

Question 45: How many days in total did this purchase last?

The purpose of this question is to determine the duration of the most recent purchase of kerosene made by the household. It helps in understanding the consumption pattern in a single purchase.

ETHANOL

Question 46: Does your household use ethanol for cooking?

The purpose of this question is to determine whether the household uses ethanol as a cooking fuel or not.



Instructions for the Enumerator:

1. Explain to the respondent that this question aims to determine whether their household uses ethanol as a cooking fuel.
2. Read out the response options to the respondent.

3. Ask the respondent to indicate whether their household uses ethanol for cooking by selecting the appropriate option.
4. Once the respondent provides their answer (Yes/No), make sure to record it accurately in the survey form.

Question 47: How many litres of ethanol do you use per month?

The purpose of this question is to determine the monthly consumption of ethanol by the household.

Instructions for the Enumerator:

1. Explain to the respondent that this question aims to determine the quantity of ethanol used by their household per month.
2. Inquire about the amount of ethanol used. Specifically, ask the respondent to provide the number of litres of ethanol their household consumes in a month.
3. Once the respondent provides the quantity of ethanol used, make sure to record it accurately in the survey form.

Question 48: During the last 30 days, did this household use ethanol for the following purposes?

The purpose of this question is to determine whether the household used ethanol for specific purposes within the last 30 days. Understanding the usage of ethanol helps in assessing its role in various activities such as cooking, boiling water, heating water for bathing, and home business purposes.

Instructions for the Enumerator:

1. Explain to the respondent that this question aims to determine whether their household used ethanol for specific purposes during the last 30 days.
2. Read out the response options to the respondent.
3. Ask the respondent to indicate whether their household used ethanol for each specified purpose by selecting either **"Yes"** or **"No"** for each option.

Once the respondent provides their answers (Yes/No) for each purpose, make sure to record them accurately in the survey form.

USE OF COOK STOVE

Question 49: What type of stove does your household use for cooking? (Multi-response)

The purpose of this question is to determine the type of stove used by the household for cooking. Understanding the type of stove helps in assessing the efficiency, safety, and environmental impact of the cooking method employed by the household.

Instructions for the Enumerator:

1. Explain to the respondent that this question aims to determine the type of stove their household uses for cooking.
2. Read out the response options to the respondent.
3. Ask the respondent to indicate the type of stove their household uses for cooking by selecting one or multiple options from the provided list. If they select "Other," ask them to specify the type of stove they use.
4. Once the respondent provides their answer(s), make sure to record them accurately in the survey form.

Question 50: What is the main stove that your household uses for cooking?

The purpose of this question is to determine the primary or main stove used by the household for cooking. Understanding the main cooking stove helps in assessing the household's primary cooking method and identifying the stove that is most frequently utilized.

Instructions for the Enumerator:

1. Explain to the respondent that this question aims to determine the main stove used by their household for cooking.
2. Clarify if needed: If the respondent requires further clarification about the options or is unsure about the term "**main stove**," provide a brief explanation that the main stove refers to the stove that is mostly used for cooking in their household.
3. Once the respondent provides their answer, make sure to record it accurately in the survey form.

Question 51: If you do not use an improved cookstove, why not? Only applies to options 1-4 on question 49

The purpose of this question is to gather information about the reasons why the household does not use an improved cookstove if they have selected options 1-4 in question 49. Understanding the barriers or concerns related to improved

cookstove adoption can provide insights into the challenges faced by the household in adopting cleaner and more efficient cooking technologies.

Instructions for the Enumerator:

1. Explain to the respondent that this question applies only if their household does not use an improved cookstove and if they have selected one or all options from 1-4 in question 43. The purpose is to understand the reasons behind their decision not to use an improved cookstove.
2. Read out the response options to the respondent. The options represent common reasons why households may choose not to use an improved cookstove. If the respondent selects "Other," ask them to specify the reason.
3. Allow the respondent to choose: Ask the respondent to select the appropriate reason(s) from the provided list or specify their own reason if applicable.
4. Record the response accurately: Once the respondent provides their answer(s) or specifies their reason, record it accurately in the survey form.

LIGHTING

ELECTRICITY

Question 52: Does your household use electricity for Lighting?

The purpose of this question is to determine whether the household uses electricity for lighting purposes. Understanding the use of electricity for lighting helps in assessing the household's access to electrical lighting and their reliance on electricity as a source of illumination.

Instructions for the Enumerator:

1. Explain to the respondent that this question aims to determine whether their household uses electricity for lighting.
2. Read out the response options to the respondent. The options include "**Yes**" and "**No**."
3. Ask the respondent to indicate whether their household uses electricity for lighting by selecting the appropriate option.
4. If the respondent requires further clarification about the question or is unsure about the term "**electricity for lighting**," provide a brief explanation that it refers to using electrical power to illuminate their home or specific areas for lighting purposes.

5. Once the respondent provides their answer, make sure to record it accurately.

Question 53: Does your household use any of the following types of lighting?

The purpose of this question is to determine the types of lighting sources used by the household. It helps in understanding the lighting technologies and fixtures employed by the household for illumination.

Instructions for the Enumerator:

1. Explain to the respondent that this question aims to determine the types of lighting sources used by their household.
2. Read out the response options to the respondent.
3. Ask the respondent to indicate which types of lighting sources their household uses by selecting the appropriate option(s). They can choose one or multiple options.
4. If the respondent requires further clarification about any of the lighting options, provide a brief explanation. For example, explain that incandescent light bulbs are traditional bulbs, fluorescent tubes are long tubular lights, and energy-saving light bulbs are more efficient alternatives.
5. Once the respondent provides their answer(s), make sure to record it accurately in the survey form, noting the specific type(s) of lighting source(s) used.

Question 54: If yes, how many light bulbs of this type does the household use?

The purpose of this question is to determine the quantity of specific types of light bulbs used by the household. It helps in understanding the lighting infrastructure that is used to illuminate the household.

Instructions for the Enumerator:

1. Explain to the respondent that this question aims to determine the number of specific types of light bulbs used by their household, considering their response to the previous question.
2. Read out the response options to the respondent.
3. Ask the respondent to indicate the number of light bulbs of each type used by their household. Provide separate spaces for each type of bulb to record the corresponding quantities.

4. Once the respondent provides the number of bulbs for each type, make sure to record it accurately in the survey form.

Question 55: How many hours in total did your household use these bulbs in the last 24-hour period?

The purpose of this question is to determine the total duration of bulb usage by the household within a 24-hour period. It helps in understanding the lighting usage patterns and estimating the energy consumption associated with different types of bulbs.

Instructions for the Enumerator:

1. Explain to the respondent that this question aims to determine the maximum number of hours the household used each type of bulb within the last 24 hours.

Note: record the number of hours for the bulb that stayed on the longest. In this question, we are not multiplying the number of bulbs by the hours the bulbs were on. We are simply interested in the number of hours per type of bulbs.

2. Read out the response options to the respondent. The options include "Incandescent light bulbs," "Fluorescent tubes," "Energy-saving light bulbs (CFL)." And LED bulbs and tubes (Energy saving)
3. Ask the respondent to indicate the total number of hours that each type of bulb was used by their household within the last 24 hours.
4. Once the respondent provides the duration for each type of bulb, make sure to record it accurately in the survey form.
5. If the respondent is unsure about the duration or requires further clarification, explain that it refers to the total time the bulbs were switched on and used for lighting purposes within the specified 24-hour period.

CANDLES

Question 56: Does your household use candles for lighting?

The purpose of this question is to gather information about the specific purposes for which the household uses candles.

Instructions for the Enumerator:

Explain to the respondent that this question aims to gather information about the use of candles for lighting.

Question 57: How many candles do you use per month?

The purpose of this question is to determine the average monthly usage of candles by the household. It helps in understanding the frequency and quantity of candle usage within the household.

Instructions for the Enumerator:

1. Explain to the respondent that this question aims to gather information about the approximate number of candles they use in their household per month.
2. Ask the respondent to provide an estimate of the average number of candles they use in their household on a monthly basis.
3. Once the respondent provides the estimated number, make sure to record it accurately in the survey form.
4. If the respondent is unsure about the question or requires further clarification, explain that you are interested in the total number of candles they use within their household during an average month.

Question 58: On the last purchase, how many candles did you buy?

The purpose of this question is to gather information about the number of candles purchased by the household during their most recent purchase.

Instructions for the Enumerator:

1. Explain to the respondent that this question focuses on their most recent purchase of candles and aims to determine the number of candles bought.
2. Ask the respondent to provide the specific number of candles they bought during their last purchase.
3. Once the respondent provides the quantity, make sure to record it accurately in the survey form.
4. If the respondent is unsure about the question or requires further clarification, explain that you are interested in the number of individual candles purchased in their most recent transaction.

Question 59: How much did this purchase cost?

The purpose of this question is to gather information about the cost of the most recent purchase of candles made by the household.

Instructions for the Enumerator:

1. Explain to the respondent that this question focuses on the cost of their most recent purchase of candles.
2. Ask the respondent to provide the specific amount spent on purchasing the candles during their last transaction.
3. Once the respondent provides the cost, make sure to record it accurately in the survey form.
4. If the respondent is unsure about the question or requires further clarification, explain that you are interested in the total amount of money spent on purchasing the candles during their most recent transaction.

Question 60: How many days did this purchase last?

The purpose of this question is to determine the duration of the most recent purchase of candles made by the household. It helps in understanding the usage pattern and lifespan of candles acquired in a single purchase.

Instructions for the Enumerator:

1. Explain to the respondent that this question focuses on the duration of their most recent purchase of candles.
2. Ask the respondent to provide the specific number of days that the purchased candles lasted.
3. Once the respondent provides the duration, make sure to record it accurately in the survey form.
4. If the respondent is unsure about the question or requires further clarification, explain that you are interested in knowing how long the purchased candles lasted before they were completely used.
5. Thank the respondent: Express gratitude to the respondent for their cooperation and participation in the survey.

KEROSENE

Question 61: Does your household use Kerosene for Lighting?

The purpose of this question is to find out whether the household uses Kerosene for lighting.

Instructions for the Enumerator:

1. The response options to the respondent. The options include **"Yes"** and **"No."**
2. Ask the respondent to indicate whether their household uses Kerosene for lighting by selecting the appropriate option.
3. If the respondent requires further clarification about the question or is unsure about the term **"Kerosene for lighting,"** provide a brief explanation that it refers to using Kerosene power to illuminate their home or specific areas for lighting purposes.
4. Express gratitude to the respondent for their cooperation and participation in the survey.

Question 62: How many litres of kerosene does your household use per month?

The purpose of this question is to determine the average monthly consumption of kerosene by the household. It helps in assessing the amount of kerosene used for lighting purposes.

Instructions for the Enumerator:

1. Explain to the respondent that this question focuses on the monthly consumption of kerosene by their household for lighting purposes.
2. Ask the respondent to provide the specific number of litres of kerosene that their household typically uses in a month.

Once the respondent provides the quantity, make sure to record it accurately in the survey form.

Question 63: How much does your household spend on Kerosene per month?

The purpose of this question is to determine how much the households spends on Kerosene per month. It helps in understanding the cost associated with kerosene usage for lighting purposes.

Instructions for the Enumerator:

1. Explain to the respondent that this question focuses on the cost that the household incurred to purchase kerosene.
2. Once the respondent provides the amount spent, make sure to record it accurately.
3. If the respondent is unsure about the question or requires further clarification, explain that you are seeking the amount spent by the household on kerosene per month.

BIOGAS

Question 64: Does your household use Biogas for Lighting?

The purpose of this question is to determine whether the household utilizes biogas as a source of lighting. Biogas is a renewable energy source produced from organic waste, and its use for lighting can have positive environmental and economic benefits.

Instructions for the Enumerator:

1. Explain to the respondent that this question focuses on whether their household uses biogas for lighting purposes.
2. Ask the respondent to indicate whether their household utilizes biogas for lighting by selecting the appropriate response: "**Yes**" or "**No**."
3. Record the response accurately in the survey form.
4. If the respondent is unsure about the question or requires further clarification, explain that biogas is a type of renewable energy produced from organic waste and used for various purposes, including lighting.

SOLAR LANTERN

Question 65: Does your household use Solar Lantern for Lighting?

The purpose of this question is to determine whether the household utilizes solar lanterns as a source of lighting. Solar lanterns are portable lighting devices that harness solar energy to provide illumination.

Instructions for the Enumerator:

1. Explain to the respondent that this question focuses on whether their household uses solar lanterns for lighting purposes.

2. Ask the respondent to indicate whether their household utilizes solar lanterns for lighting by selecting the appropriate response: "**Yes**" or "**No.**"
3. Record the response accurately in the survey form.

Question 66: How many Solar Lanterns does your Household have?

The purpose of this question is to determine the quantity of solar lanterns owned by the household.

Instructions for the Enumerator:

1. Explain to the respondent that this question focuses on the number of solar lanterns their household possesses.
2. Inquire about the number of solar lanterns owned by the household.
3. Once the respondent provides the number of solar lanterns, make sure to record it accurately in the survey form.

Question 67: How much did your household purchase the Solar Lantern?

The purpose of this question is to gather information about the cost or price at which the household purchased the solar lantern(s).

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question pertains to the amount of money they spent on purchasing the solar lantern(s) for their household.
2. Inquire about the purchase cost: Ask the respondent, "How much did your household purchase the solar lantern(s) for?" Ensure that the respondent provides the cost in ZMW (Zambian Kwacha). For those that report to have received it as a gift, they should estimate how much they would have bought it. Ask this question for the most recent purchased solar lantern.
3. Record the response accurately: Once the respondent shares the purchase cost, carefully note down the amount in the survey form, making sure to record it accurately.

Question 68: What is the capacity of your Solar Lantern Wp?

The purpose of this question is to gather information about the capacity or power rating of the solar lantern(s) used by the household. This helps in understanding

the energy output or performance of the solar lantern(s). This question should be asked for the most recent purchased solar lantern.

Instructions for the Enumerator:

1. Explain to the respondent that this question pertains to the capacity or power rating of their solar lantern(s).
2. Ensure that the respondent provides the information in Watts.
3. Record the response accurately: Once the respondent shares the capacity of their solar lantern(s), carefully note down the information in the survey form, making sure to record it accurately.
4. If the respondent is unsure about the question or requires further clarification, explain that the capacity refers to the power rating of the solar lantern(s) in terms of energy output. If possible, request for the lantern and check the nameplate for the power rating.

68.1 When being used continuously, how long does it last when fully charged?

The purpose of this question is to determine the total duration of the Solar Lantern usage by the household. It helps in understanding the usage patterns and estimating the energy consumption associated with the solar lantern.

SOLAR HOME SYSTEM

Question 69: Does your household use Solar Home System for Lighting?

This question seeks to determine whether the household utilizes a Solar Home System (SHS) for lighting purposes. SHSs are standalone solar power systems that provide electricity for lighting and sometimes other small appliances in off-grid or areas with limited access to electricity.

Instructions for the Enumerator:

1. Explain to the respondent that this question relates to their use of a Solar Home System (SHS) for lighting.
2. Inquire about the usage: Present them with the options of "**Yes**" or "**No**" to choose from.
3. Record the response accurately: Based on the respondent's answer, mark the appropriate response in the survey form, noting whether the household uses a Solar Home System for lighting or not.

4. Clarify that a Solar Home System (SHS) is a type of solar power system that is designed to provide electricity in homes. It consists of solar panels, an inverter, a battery, and sometimes other components. The solar panels collect sunlight and convert it into electricity, which electricity can then be used to power lights in the house.

Question 70: What is the capacity of your Solar Home System kWp?

Purpose of the question: The purpose of this question is to gather information about the capacity of the respondent's Solar Home System (SHS) in kilowatts peak (kWp). The capacity of the SHS refers to the maximum power output it can generate under standard test conditions.

Clarifications:

- Solar Home System (SHS): A Solar Home System is a standalone solar power system that provides electricity for residential households. It typically includes solar panels, inverters, batteries, and other components to generate and store electricity.
- kWp: kWp stands for kilowatts peak and is a unit of measurement used to indicate the peak power output of a solar system. It represents the maximum power that the solar system can generate under ideal conditions.

When asking this question, please use the following instructions:

1. Introduce the question, explain that we are interested in knowing the maximum power output that the households Solar Home System can generate.
2. Ensure that the respondent provides the information in the Kilo-watts.
3. Record the response accurately: Once the respondent shares the capacity of their solar lantern(s), carefully note down the information in the survey form, making sure to record it accurately.

DRY BATTERIES

Question 71: Does your household use dry batteries to power a lighting device for household lighting

This question seeks to determine whether the household utilizes a Dry Batteries for lighting purposes.

Instructions for the Enumerator:

1. Explain to the respondent that this question relates to their use of Dry Batteries for lighting.
2. Inquire about the usage: Present them with the options of **"Yes"** or **"No"** to choose from.
3. Record the response accurately: Based on the respondent's answer, mark the appropriate response in the survey form, noting whether the household uses Dry Batteries for lighting or not.

Question 72: What type of lighting device do the batteries power?

Find out from the respondent the type of lighting devices the household powers using dry batteries.

Question 73: How long do the dry batteries last?

The purpose of this question is to determine the total duration of the dry batteries usage by the household. It helps in understanding the usage patterns and estimating the energy consumption associated with different types of lighting devices.

Question 74: How much did your household spend on dry batteries during the last purchase?

The purpose of this question is to gather information about the cost or price at which the household purchased the Dry Batteries.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question pertains to the amount of money they spent on purchasing the Dry Batteries for their household.
2. Inquire about the purchase cost: Ask the respondent, "How much did your household purchase the Dry Batteries for?" Ensure that the respondent provides the cost in ZMW (Zambian Kwacha).
3. Record the response accurately: Once the respondent shares the purchase cost, carefully note down the amount in the survey form, making sure to record it accurately.

EXTERNALLY RECHARGEABLE BATTERIES

Question 75: Does your household use externally rechargeable batteries for Lighting?

This question aims to determine whether the household uses externally rechargeable batteries for lighting purposes. Externally rechargeable batteries offer a portable and convenient solution for powering lights, particularly in situations where a traditional electrical power source is not readily available.

Instructions for the Enumerator:

1. Explain to the respondent that this question relates to their use of externally rechargeable batteries for lighting.
2. Inquire about the usage: Present them with the options of **"Yes"** or **"No"** to choose from.
3. Record the response accurately: Based on the respondent's answer, mark the appropriate response in the survey form, noting whether the household uses externally rechargeable batteries for lighting or not.
4. Clarify that externally rechargeable batteries are batteries that can be charged externally and then used to power lights. They provide a portable solution for lighting, especially in situations where a traditional electrical power source is not readily available.

Question 76: Does your household use externally rechargeable batteries to power any of the following?

This question aims to determine whether the household uses externally rechargeable batteries for lighting purposes.

Instructions for the Enumerator:

1. Explain to the respondent that this question relates to their use of externally rechargeable batteries for lighting.
2. Inquire about the usage: Present them with the options of **"Yes"** or **"No"** to choose from.
3. Record the response accurately: Based on the respondent's answer, mark the appropriate response in the survey form, noting whether the household uses externally rechargeable batteries for lighting or not.

4. Clarify that externally rechargeable batteries are batteries that can be charged externally and then used to power lights. They provide a portable lighting solution.

Question 77: How many light bulbs of this type does your household use?

This question seeks to determine the number of light bulbs of each type (incandescent light bulbs, fluorescent tubes, and energy-saving light bulbs) that the household uses.

Instructions for the Enumerator:

1. Explain to the respondent that this question relates to the number of light bulbs of each type used in their household.
2. Present the options for the type of bulb one by one and ask for the corresponding number of bulbs.
3. Record the response accurately: For each type of bulb, note the number of bulbs indicated by the respondent in the survey form.
4. Provide a brief description of each type of bulb for clarity.
 - Incandescent light bulbs: These are traditional light bulbs that produce light by heating a filament inside the bulb until it glows.
 - Fluorescent tubes: These are long, tubular light bulbs commonly found in offices and larger spaces. They produce light by exciting mercury vapor inside the tube using electricity.
 - Energy-saving light bulbs: These are compact fluorescent lamps (CFLs) or light-emitting diodes (LEDs) designed to consume less energy while providing efficient lighting.

Question 78: How many hours did your household use these bulbs in the last 24 hour period?

Note: Record the number of hours for the bulb that stayed on the longest?

This question aims to determine the total duration of bulb usage for each type (incandescent light bulbs, fluorescent tubes, and energy-saving light bulbs) in the household over the past 24 hours.

Instructions for the Enumerator:

1. Explain to the respondent that this question relates to the total number of hours (and minutes, if applicable) that each type of bulb was used within the past 24 hours.
2. Present the type of bulb options one by one and ask for the corresponding number of hours and minutes.
3. Record the response accurately: For each type of bulb, note the total number of hours and minutes indicated by the respondent in the survey form.
4. If the respondent is not sure about the question, provide a brief description of each type of bulb for clarity.
 - Incandescent light bulbs: These are traditional light bulbs that produce light by heating a filament inside the bulb until it glows.
 - Fluorescent tubes: These are long, tubular light bulbs commonly found in offices and larger spaces. They produce light by exciting mercury vapor inside the tube using electricity.
 - Energy-saving light bulbs: These are compact fluorescent lamps (CFLs) or light-emitting diodes (LEDs) designed to consume less energy while providing efficient lighting.



DEMAND AND SUPPLY OF ELECTRICITY

Question 79: Does your household have an electricity connection from any source?

The intention of this question is to determine whether the household has an electricity connection from any source.

Instructions for the Enumerator:

1. Explain to the respondent that this question is about whether their household has an electricity connection.
2. Present the options: "**Yes**" or "**No**".

Record the response accurately: Based on the respondent's answer, mark the appropriate response in the survey form, noting whether the household has an electricity connection or not

Question 80: What is the main source of electricity used by your household?

This question aims to determine the primary source of electricity used by the household.

Instructions for the Enumerator:

1. Introduce the question and present the options for the main source of electricity and instruct the respondent to choose the most applicable option.
2. Record the response accurately: Based on the respondent's answer, mark the appropriate response in the survey form, noting the main source of electricity used by the household.

Clarification

National grid (ZESCO): This refers to electricity provided through the national power grid operated by the electricity utility company, ZESCO Limited.

Local mini-grid: This refers to a localized electricity distribution system that serves a small community or area, often using renewable energy sources such as solar or mini-hydro.

Diesel/Petrol Genset: This refers to using a generator that runs on diesel or petrol fuel to generate electricity for the household.

Solar home system: This refers to a complete solar power system installed in the household, including solar panels, batteries, and other components, to provide electricity for various household needs.

Other (Specify): If none of the above options apply, ask the respondent to specify their household's main source of electricity.

Question 81: Does your household use electricity for the following purposes?

In this question, we intend to determine whether the household uses electricity for specific purposes. The respondent should indicate whether each purpose, listed, applies to their household.

Instructions for the Enumerator:

1. Present the “purpose” options one by one and ask the respondent to indicate whether their household uses electricity for each purpose.
2. For each purpose, record the response accurately by marking either **"Yes"** or **"No"** in the survey form, based on the respondent's answer.
3. If the respondent selects **"Other,"** ask them to specify the additional purpose and record their response accordingly.

Question 82: Would your household be willing to be connected to electricity if made available?

This question aims to determine the household's willingness to be connected to electricity if it becomes available to them.

Instructions for the Enumerator:

1. Explain to the respondent that this question relates to their willingness to be connected to electricity if it becomes available to their household.
2. Present the options: **"Yes"** or **"No"**.
3. Record the response accurately: Based on the respondent's answer, mark the appropriate response in the survey form, noting whether the household would be willing to be connected to electricity if it becomes available.
4. If the respondent answers "No," kindly inform them that you will be skipping the proceeding questions and jumping to question 78.

Question 83: What type of electricity source would your household like to be connected to?

This question aims to determine the type of electricity source the household would like to be connected to?

Instructions for the Enumerator:

1. Introduce the question and present the options for the main source of electricity and instruct the respondent to choose the most applicable option.
2. Record the response accurately: Based on the respondent's answer, mark the appropriate response in the survey form, noting the main source of electricity used by the household.

Clarification

National grid (ZESCO): This refers to electricity provided through the national power grid operated by the electricity utility company, ZESCO Limited.

Local mini-grid: This refers to a localized electricity distribution system that serves a small community or area, often using renewable energy sources such as solar or mini-hydro.

Solar lantern and lighting: This refers to using individual solar-powered lanterns or lighting fixtures to provide electricity for lighting needs in the household.

Rechargeable battery: This refers to using rechargeable batteries that are charged externally and then used to power electrical devices and lighting in the household.

Diesel/Petrol Genset: This refers to using a generator that runs on diesel or petrol fuel to generate electricity for the household.

Pico hydro:

Solar home system: This refers to a complete solar power system installed in the household, including solar panels, batteries, and other components, to provide electricity for various household needs.

Other (Specify): If none of the above options apply, ask the respondent to specify their household's main source of electricity.

Question 84: Would your household be willing to pay an electricity connection fee?

Find out from the respondent whether the household would be willing to pay an electricity connection fee. Determine whether they are aware that to be connected, there is a standard fee that is supposed to be paid for the connection to the grid.

Question 85: How much would your household be willing to pay per month?

This question aims to determine the amount that the household would be willing to pay per month for electricity if it were made available to them.

Instructions for the Enumerator:

1. Explain to the respondent that this question relates to the amount they would be willing to pay per month for electricity if it becomes available to their household.
2. Ask the respondent to provide a specific amount or a range they would be willing to pay.

3. Record the response accurately.

Question 86: What method of payment would your household prefer?

This question aims to determine the preferred method of payment for electricity services by the household. The respondents is expected to choose the option that best represents their household's preference.

Instructions for the Enumerator:

1. Present the options for the method of payment and ask the respondent to indicate their preferred choice.
2. Record the response accurately: Based on the respondent's answer, mark the appropriate response in the survey form, noting their preferred method of payment for electricity services.

Clarifications:

1. **Outright cash payment:** The household prefers to make a one-time cash payment for electricity services.
2. **Independent cash instalments:** The household prefers to make periodic cash payments in instalments for electricity services.
3. **Through the electricity bill as part payment:** The household prefers to include the electricity payment as part of their regular monthly bill, such as a combined electricity utility bill.
4. **In-kind payment (e.g., farm produce, assets, labor, etc.):** The household prefers to make payment for electricity services through non-cash means, such as offering farm produce, assets, labor, or other goods/services in exchange.
5. **Direct deduction from your monthly salary:** The household prefers to have the electricity payment automatically deducted from their monthly salary, if applicable.

Question 87: What is the main reason for your household requiring to get connected to electricity?

This question aims to determine the importance of the given reasons for the household's decision to connect to the national grid. For each reason provided, the respondent is expected to indicate whether it is a major reason, a minor reason, or not a reason at all for your household's decision to connect.

Instructions for the Enumerator:

1. Explain to the respondent that this question focuses on understanding the reasons behind their household's decision to connect to the national grid.
2. Record the response accurately: Mark the appropriate code for each reason in the survey form based on the respondent's answer. If the respondent selects "**Other**" for reason 8, ask them to specify the additional reason and record their response accordingly.

Question 88: Why would you not want your household to be connected to electricity?

This question aims to understand the reasons why the household may not want to be connected to electricity. The respondent is expected to choose the option that best represents their household's reason.

Instructions for the Enumerator:

1. Present the options for the reasons and ask the respondent to indicate their specific reason for not wanting their household to be connected to electricity.
2. Record the response accurately: Based on the respondent's answer, mark the appropriate response in the survey form, noting their specific reason.

Additional Information:

1. **Cannot afford connection fee:** The household cannot afford the initial fee required to connect to electricity.
2. **Cannot afford units/monthly payment:** The household cannot afford the cost of purchasing electricity units or making monthly payments.
3. **Cannot afford the cost of wiring:** The household cannot afford the expenses associated with installing electrical wiring.
4. **Cannot afford to buy electrical appliances:** The household cannot afford the cost of purchasing electrical appliances to utilize electricity.
5. **We do not see any use of electricity:** The household does not perceive any significant need or use for electricity.
6. **Other (Specify):** If the respondent selects this option, ask them to provide further details about their specific reason.

NATIONAL GRID ELECTRICITY

Question 89: What is the main reason your household is not connected to electricity?

This question aims to identify the primary reason why the household is currently not connected to electricity. The respondent is expected to select the option that best represents the main reason.

Instructions for the Enumerator:

1. Present the options for the reasons and ask the respondent to indicate the main reason why their household is not connected to electricity.
2. Record the response accurately: Based on the respondent's answer, mark the appropriate response in the survey form, noting the main reason.

Clarifications:

1. **Electricity is not available in my area:** The household does not have access to electricity due to its unavailability in their area.
2. **Can't pay the connection fee:** The household is unable to afford the fee required to connect to the electricity supply.
3. **Can't pay the cost of house wiring:** The household cannot afford the expenses associated with wiring their house for electricity.
4. **Can't afford the monthly payment:** The household is unable to afford the regular monthly payment for electricity services.
5. **Cannot afford to buy electrical appliances:** The household cannot afford the cost of purchasing electrical appliances required to utilize electricity.
6. **We are satisfied with the present energy source:** The household is content with its current energy source and does not feel the need to be connected to electricity.
7. **We do not see any use of electricity:** The household does not perceive any significant need or use for electricity.
8. **Other reason (Specify):** If the respondent selects this option, ask them to provide further details about their specific reason.

Question 90: Do you expect to get connected to electricity?

This question aims to understand the household's expectation regarding future connection to electricity.

Instructions for the Enumerator:

1. Introduce the question and present the options for the expectations and ask the respondent to indicate their expectation regarding future connection to electricity.
2. Record the response accurately: Based on the respondent's answer, mark the appropriate response in the survey form, noting their expectation.

Options:

1. **Yes:** The household expects to be connected to electricity in the future.
2. **No:** The household does not expect to be connected to electricity in the future.

3. **Don't know:** The household is unsure or has no definite expectation regarding future connection to electricity.

Question 91: When do you expect to get a national grid connection?

The purpose of this question is to gather information about the household's expected timeline for receiving a national grid connection.

Instructions for the Enumerator:

1. Read the question and present the options for the expected timeline and ask the respondent to indicate their expected timeframe for receiving a national grid connection.

Record the response accurately indicating the corresponding cord (1,2,3, or 4): Based on the respondent's answer, mark the appropriate response in the survey form, noting their expected timeline

Question 92: Once the connection fee is paid, how long does it take to be connected to the national grid?

This question aims to gather information about the expected timeframe for the household to be connected to the national grid after paying the connection fee.

Instructions for the Enumerator:

1. Read the question and present the options for the expected timeframe.
2. Ask the respondent to indicate their expected timeline for being connected to the national grid after paying the connection fee.
3. Record the response code (1, 2, 3, 4 or 5) accurately based on the respondent's answer, in the survey form.

Codes:

1. Within 14 working days: The household expects to be connected to the national grid within a period of 14 working days after paying the connection fee.
2. 15 to 30 working days: The household expects to be connected to the national grid within a period of 15 to 30 working days after paying the connection fee.
3. 3 to 5 months: The household expects to be connected to the national grid within a period of 3 to 5 months after paying the connection fee.
4. 6 months: The household expects to be connected to the national grid within a period of 6 months after paying the connection fee.

5. Above 6 months: The household expects to be connected to the national grid after a period of more than 6 months after paying the connection fee.

Question 93: How many years has your household had this national grid connection?

This question aims to determine the duration for which the household has had the national grid connection. The respondent is expected to provide the number of years.

Instructions for the Enumerator:

1. Read the question and ask the respondent to provide the number of years they have had the national grid connection.
2. Record the response accurately: Write down the number of years mentioned by the respondent in the survey form.

Question 94: How much did your household pay for the national grid connection?

The purpose of this question is to gather information about the amount of money the household paid for the national grid connection.

Instructions for the Enumerator:

1. Introduce the question and ask the respondent to indicate the amount of money their household paid for the national grid connection.
2. Write down the specific amount mentioned by the respondent in the survey form.

Note: If the respondent is unsure about the exact amount, encourage them to provide an approximate figure to the best of their knowledge. If possible ask for a receipt or ZESCO quotation.

Question 95: How many days after you applied for the national grid connection did your housing unit get connected?

This question aims to gather information about the duration between the application for national grid connection and the actual connection of the household unit.

Instructions for the Enumerator:

1. Introduce/read the question and present the options for the timeframe.
2. Ask the respondent to indicate the duration between their application for national grid connection and the actual connection of their housing unit.

3. Record the response accurately based on the respondent's answer and mark the corresponding code (1,2,3,4 or 5) in the survey form.

Code (s):

1. Within 14 working days: The household unit was connected to the national grid within 14 working days after applying for the connection.
2. 15 to 30 working days: The household unit was connected to the national grid within 15 to 30 working days after applying for the connection.
3. 3 to 5 months: The household unit was connected to the national grid within 3 to 5 months after applying for the connection.
4. 6 months: The household unit was connected to the national grid within 6 months after applying for the connection.
5. Above 6 months: The household unit was connected to the national grid after a period of more than 6 months after applying for the connection.

Question 96: How many hours of electricity are available each day from the national grid?

The intention of this question is to determine the number of hours of electricity available each day from the national grid.

Instructions for the Enumerator:

1. Read the question and ask the respondent to estimate the average number of hours of electricity available each day from the national grid.
2. Record the response accurately.

Note: If the respondent is unsure about the exact number of hours, encourage them to provide an estimate or their best approximation.

Question 97: In the last 7 days, how many hours of electricity were available each evening on average, from 18:00 to 22:00 hours from the national grid? (Maximum 4 hours)

The purpose of this question is to determine the average number of hours of electricity available each evening during a specific time frame (18:00 to 22:00 hours) from the national grid in the past 7 days.

Instructions for the Enumerator:

1. Introduce the question and ask the respondent to estimate the average number of hours of electricity available each evening from 18:00 to 22:00 hours in the past 7 days.
2. Record the response accurately: Write down the specific number of hours mentioned by the respondent in the survey form.

Note: If the respondent is unsure about the exact number of hours, encourage them to provide an estimate or their best approximation. If they are uncertain or do not know, mark the response as "Don't know/unsure"

Question 98: In the last 7 days, how many times were there unscheduled outages or blackouts from electricity from the national grid?

This question aims to determine the number of unscheduled outages or blackouts experienced from electricity supplied by the national grid in the past 7 days.

Instructions for the Enumerator:

1. Read the question and prompt the respondent to recall and indicate the number of unscheduled outages or blackouts they experienced from the national grid in the past 7 days.
2. Record the response accurately: Write down the specific number mentioned by the respondent in the survey form.

Note: If the respondent is unsure about the exact number of outages or blackouts, encourage them to provide an estimate or their best approximation. If they are uncertain or do not know, mark the response as "Don't know/unsure".

Question 99: What is the total duration of all the unscheduled outages or blackouts in the last 7 days?

This question aims to determine the total duration of all the unscheduled outages or blackouts experienced from the national grid in the past 7 days.

Instructions for the Enumerator:

1. Introduce the question and let the respondent to estimate the total duration of all the unscheduled outages or blackouts they experienced from the national grid in the past 7 days.
2. Record the response accurately: Write down the specific duration mentioned by the respondent in terms of hours and/or minutes in the survey form.

Note: If the respondent is unsure about the exact duration, encourage them to provide an estimate or their best approximation. If they are uncertain or do not know, mark the response as "Don't know/unsure".

Question 100: In the last 12 months, did any of this household's appliances get damaged due to fluctuations in voltage from electricity from the national grid?

This question aims to determine whether any of the household's appliances were damaged due to voltage fluctuations from the national grid within the past 12 months.

Instructions for the Enumerator:

1. Present the options "**Yes**" and "**No**" to the respondent and ask them if any of their household appliances were damaged due to voltage fluctuations from the national grid in the last 12 months.
2. Record the response accurately: Mark the appropriate response in the survey form based on the respondent's answer.

Question 101: In the last 12 months, did anyone in this household experience the followingfrom using electricity from the national grid?

This question aims to determine if anyone in the household has experienced any adverse events or incidents related to using electricity from the national grid within the past 12 months.

Instructions for the Enumerator:

1. Introduce the question and present the options "Yes" or "No" for each category mentioned: Death, Permanent limb damage, and Body injury.
2. If the respondent selects "Yes" for any category, mark the corresponding code number (1, 2, or 3) in the survey form.
3. If the respondent selects "Other specify," allow them to provide further details and record their response accurately in the provided space.

Question 102: How do you mainly contact your electricity service provider to request for a service or file a complaint?

This question aims to determine the methods or channels through which the respondent contacts their electricity service provider to request services or file complaints.

Instructions for the Enumerator:

1. Read the question and present the options to the respondent:
2. If the respondent selects any of the given options, mark the corresponding code number (1 to 7) in the survey form.
3. If the respondent selects "Other specify," allow them to provide further details and record their response accurately in the provided space.

Question 103: The last time you reported a fault, how long did it take for it to be rectified?

This question aims to determine the duration it took for the electricity service provider to rectify a fault or issue after it was reported by the respondent.

Instructions for the Enumerator:

1. Introduce the question and present the options to the respondent.
2. If the respondent selects any of the given options, mark the corresponding code number (1 to 5) in the survey form.
3. If the respondent selects "Other specify," allow them to provide further details and record their response accurately in the provided space.

Question 104: The last time you requested for an undertaking (meter separation, inspection, energy audit etc) from your electricity service provider, how long did it take to get feedback?

This question aims to determine the duration it took for the electricity service provider to provide feedback on a requested service, such as meter separation, inspection, energy audit, or others.

Instructions for the Enumerator:

1. Introduce the question and present the options to the respondent.
2. If the respondent selects any of the given options, mark the corresponding code number (1 to 5) in the survey form.
3. If the respondent selects "Other specify," allow them to provide further details and record their response accurately in the provided space.

Question 105: Does your household have an electric meter?

This question seeks to determine whether the household has a device called an electric meter.

An electric meter is a device used to measure the amount of electricity consumed by a household. It helps in keeping track of the electricity usage and is typically installed by the electricity service provider.

Instructions for the Enumerator:

1. Read the question and present the options to the respondent.
2. If the respondent selects any of the given options, mark the corresponding code number (1 to 3) in the survey form.

Question 106: What type of a meter does your household use?

This question aims to determine the type of meter used by the household to measure electricity consumption.

Instructions for the Enumerator:

1. Read the question and present the options to the respondent:
2. If the respondent selects Prepaid, mark the number 1 in the survey form.
3. If the respondent selects Postpaid, mark the number 2 in the survey form.

In the event that the respondent is not sure, explain to the respondent that:

- A Prepaid meter is a type of meter where electricity is paid for in advance. Users purchase electricity credits or tokens and load them onto the meter, and the electricity supply is deducted based on usage until the credits are exhausted.
- A Postpaid meter is a type of meter where electricity is billed after consumption. Users receive a monthly bill from the electricity service provider based on the amount of electricity used during that period.

Question 107: How many housing units are sharing this meter?

This question is applicable only if the respondent selected "Yes shared" in question 95, indicating that the electric meter is shared among multiple housing units. In this question, the respondent is expected to provide the number of housing units that share the same meter.

Instructions for the Enumerator:

1. Read the question and let the respondent indicate the number of units sharing the same meter.
2. Record the response accurately in the survey form.

Question 108: In your opinion, your household electricity supply during the dry season is:

This question seeks to gather the respondent's opinion on the reliability and consistency of their electricity supply specifically during the dry season.

Instructions for the Enumerator:

1. Read the question and present the options to the respondent.
2. *Irregular refers to the situation where the availability and reliability of electricity are inconsistent and do not meet the expected or desired standards. It implies that the electricity supply experiences frequent disruptions and fluctuations or periods of unavailability leading to unreliable and unpredictable flow of electric power.*
3. *Regular refers to the situation where the availability and reliability of electricity are consistent and meets the expected or desired standards.*

Question 109: During the dry season, could you please estimate the number of hours (in total) electricity service has not been available to your housing unit due to electricity cuts or blackouts?

This question aims to gather your estimation of the total hours of electricity unavailability specifically during the dry season.

Instructions for the Enumerator:

1. Explain to the respondent that this question seeks their estimation of the total number of hours they experienced electricity cuts or blackouts during the dry season.
2. Present the options to the respondent:
 - If they can provide an estimation of the number of hours, they should select "Number of hours" (option 1) and enter the corresponding number in the survey form.
 - If they have not experienced any electricity cuts or blackouts during the dry season, they should select "Never" (option 2) and mark it in the survey form.
 - If they are unsure about the number of hours or unable to provide an estimation, they should select "Do not know" (option 3) and enter "999" in the survey form.

3. If the respondent selects "Number of hours" (option 1), kindly request them to provide the estimated number of hours and record it accurately in the survey form.
4. If the respondent selects "Do not know" (option 3), ensure to enter "999" as the response in the survey form.

Question 110: In your opinion, your household electricity supply during the rainy season is:

This question aims to gather the respondent's opinion on the reliability of electricity supply specifically during the rainy season.

Instructions for the Enumerator:

1. Explain to the respondent that this question seeks their opinion on the reliability of electricity supply during the rainy season.
2. Present the options to the respondent:
 - If they believe the electricity supply is normal during the rainy season, they should select "Normal" (option 1) and mark it in the survey form.
 - If they perceive the electricity supply to be regular and consistent during the rainy season, they should select "Regular" (option 2) and mark it in the survey form.
 - If they are unsure about the reliability of the electricity supply during the rainy season, they should select "Do not know" (option 3) and mark it in the survey form.

Question 111: During the rainy season, could you please estimate the number of hours (in total) electricity service has not been available to your housing unit due to electricity cuts or blackouts?

This question aims to gather your estimation of the duration of electricity service interruptions specifically during the rainy season

Instructions for the Enumerator:

1. Explain to the respondent that this question seeks their estimation of the total number of hours when electricity service was unavailable due to cuts or blackouts during the rainy season.
2. Present the options to the respondent:

- If they can estimate the number of hours, they should provide the specific number in the designated space on the survey form.
- If they have never experienced any electricity cuts or blackouts during the rainy season, they should select "Never" and mark it in the survey form.
- If they are unsure or do not have an estimate, they should enter "999" in the space provided on the survey form.

Question 112: In case of power failure from the National grid, what is the main backup source used by the household, if any?

This question aims to determine the primary backup sources used by the household in case of power failure from the National grid. For each category (lighting, cooking and heating, electrical appliances), please select the applicable backup source(s) used by the household.

Instructions for the Enumerator:

1. Explain to the respondent that this question relates to the backup sources they use in case of a power failure from the National grid for lighting, cooking and heating, and electrical appliances.
2. Present the options for each category and ask the respondent to select the appropriate backup source(s).
3. Record the response accurately by marking the corresponding option(s) in the survey form for each category.
4. If the respondent selects "Other," kindly ask them to specify the backup source they use.

MINI-GRID ELECTRICITY

Question 113: What is the name of the local mini-grid?

This question specifically applies to households that selected option 2 (Local mini-grid) in Question 1.

Instructions for the Enumerator:

1. Ask them to provide the name of the local mini-grid.
2. Record the name of the local mini-grid accurately in the survey form.

If the respondent is unsure or does not know the name of the local mini-grid, refer to the list of Local mini grids provided in this manual.

Question 114: Is there a limit to the load and/or appliances you are allowed to power from this mini-grid connection?

This question aims to determine if there are any restrictions or limitations on the load and/or appliances that households connected to the mini-grid are allowed to power.

Instructions for the Enumerator:

1. Read the question and ask the respondent if there are any restrictions or limitations on the load and/or appliances they are allowed to power from their mini-grid connection.
2. Record the response accurately in the survey form.

Note: Some mini-grid systems may impose restrictions on the load and appliances to manage the available power supply effectively.

Question 115: How many years has your household had this mini-grid connection?

This question seeks to determine the duration of time the household has been connected to the local mini-grid.

Instructions for the Enumerator:

1. Ask the respondent how many years they have had the mini-grid connection,
2. Record the response accurately in the survey form. **Enter 0 if less than one year**
3. If the respondent is unsure or doesn't know the exact number of years, record "I don't know"

Question 116: How much did your household pay for the mini-grid connection?

This question aims to gather information about the cost incurred by the household for connecting to the local mini-grid.

The mini-grid is a localized electricity distribution system that generates and distributes power to a small community or cluster of households.

Instructions for the Enumerator:

1. Explain to the respondent that you would like to know the amount of money their household paid for the mini-grid connection.
2. Inquire about the specific cost they incurred for the connection.
3. Record the response accurately in the survey form.

Question 117: How long after you applied for the mini-grid connection did your household get connected?

This question aims to gather information about the time it took for the household to get connected to the local mini-grid after applying for the connection.

Instructions for the Enumerator:

1. Explain to the respondent that you would like to know the duration between their application for the mini-grid connection and the actual connection.
2. Record the response accurately in the survey form.

Question 118: Who received the payment for your mini grid connection?

This question aims to determine the entity or individual who received the payment for your mini grid connection. Please select the most appropriate option below:

1. **Energy Company:** The payment was made directly to the energy company or utility provider that supplied electricity to your area.
2. **Pre-paid meter card seller or Energy company agent:** The payment was made to a pre-paid meter card seller or *Energy company agent*.
3. **Community/village representative:** The payment was made to a representative or designated person within your community or village who collected and managed the electricity connection payments on behalf of the utility company.
4. **Other (please specify):** If none of the above options apply, please provide additional details regarding who received the payment for your electricity connection.

Instructions for the Enumerator:

1. Explain to the respondent that you would like to know to whom the household made the electricity connection payment.
2. If the respondent selects "Other (please specify)," request them to provide additional details.
3. Record the response accurately in the survey form.

Question 119: How many hours of electricity are available to your household each day from the mini-grid?

This question aims to determine the average number of hours per day that electricity is available to the household from the mini-grid. The respondent is expected to provide the estimated time in number of hours.

Instructions for the Enumerator:

1. Explain to the respondent that you are interested in knowing the average number of hours per day that electricity is available the household from the mini-grid.
2. Record the response accurately in the survey form.

Question 120: How many outages/blackouts occur in a week?

This question aims to determine the frequency of outages or blackouts experienced by the mini-grid in a typical week. If the respondent is not sure encourage them to provide the estimated number using the options below:

1. Daily
2. Several times per week
3. Once per week
4. Occasionally (less than once per week)
5. Never
6. Don't know / unsure

Instructions for the Enumerator:

1. Explain to the respondent that you are interested in knowing how often they experience outages or blackouts from the mini-grid in a week.
2. Record the response accurately in the survey form.

Question 121: What is the total duration of all the outages/blackouts in a week?

This question aims to determine the cumulative duration of outages or blackouts experienced from the mini-grid in a typical week.

Instructions for the Enumerator:

1. Explain to the respondent that you are interested in knowing the total duration of outages or blackouts they experience from the mini-grid in a week.

2. Record the response accurately in the survey form.

Question 122: How do you mainly contact your electricity service provider to request for a service or file a complaint?

This question aims to understand the methods available for contacting the electricity service provider regarding service requests or complaints. Request the respondent to select the most appropriate option from the list provided.

Instructions for the Enumerator:

1. Explain to the respondent that you are interested in knowing how they can contact their electricity service provider for service requests or complaints.
2. If the respondent selects option 8, "Other," ask them to specify the alternative method they use.
3. Record the response accurately in the survey form.

Question 123: The last time you reported a fault, how long did it take to be rectified?

The question seeks to gather information on the number of hours that it took for the fault to be rectified after reporting it. The respondent is expected to choose from the options provided.

Instructions for the Enumerator:

1. Explain to the respondent that you are interested in knowing the time it took for their reported fault to be rectified by the electricity service provider.
2. If the respondent selects option 5, "Never reported a fault," proceed to the next question.
3. Record the response accurately in the survey form.

Question 124: The last time you requested for an undertaking (meter separation, inspection, energy audit, faults etc) from your electricity service provider, how long did it take to get feedback?

This question aims to gather information about the timeframe it took for the electricity service provider to respond to a service request. Ask the respondent to select the most appropriate option given.

Instructions for the Enumerator:

1. Explain to the respondent that you are interested in knowing the time it took for them to receive feedback from the electricity service provider after requesting for a service.
2. Record the response accurately in the survey form.

Question 125: What challenges does your household experience with the mini-grid? (MULTI-RESPONSE)

The purpose of this question is to identify the challenges that households may experience with the mini-grid. It helps gather information about the specific issues faced by households in relation to the reliability, voltage, interruptions, billing, trust, appliance compatibility, maintenance, and other aspects of the mini-grid system.

Instructions to the Enumerator:

1. Read out the options to the respondent clearly and ensure they understand each option.
2. Explain that the respondent should select all the challenges their household experiences with the mini-grid.
3. If the respondent is unfamiliar with any technical jargon, provide simple explanations to ensure their understanding.
4. If the respondent chooses option 13, "**Other**," politely ask them to specify the challenge they face and record their response.

Additional Information:

1. **Supply shortage/not enough hours of electricity:** This refers to situations where there is an insufficient supply of electricity from the mini-grid, leading to a limited number of hours of electricity available to the household.
2. **Low voltage:** This means the voltage level provided by the mini-grid is lower than the standard level required for the proper functioning of electrical appliances and equipment.
3. **High voltage:** This refers to situations where the voltage level provided by the mini-grid is higher than the standard level, which can potentially damage electrical appliances and pose safety risks.
4. **Voltage fluctuations:** This refers to frequent and unpredictable changes in the voltage level supplied by the mini-grid, which can cause damage to electrical appliances and disrupt their normal operation.

5. **Unpredictable interruptions:** This includes unexpected and irregular interruptions or blackouts in the supply of electricity from the mini-grid, resulting in periods without power.
6. **Unexpected high bills:** This refers to instances where the household perceives that the received electricity bills from the mini-grid are higher than anticipated or not in line with their electricity usage.
7. **Too expensive:** This option signifies that the household finds the cost of the electricity provided by the mini-grid to be unaffordable or excessively high.
8. **Do not trust the supplier:** This indicates a lack of trust or confidence in the mini-grid service provider, possibly due to previous negative experiences or concerns about service quality.
9. **Cannot power large appliances:** This refers to the inability of the mini-grid to support the power requirements of larger electrical appliances, such as air conditioners, refrigerators, or water heaters.
10. **Maintenance/service problems:** This option encompasses challenges related to the maintenance and servicing of the mini-grid, including delays in repairs, difficulties in accessing technical support, or inadequate maintenance practices.
11. **No problems:** This option indicates that the household does not currently face any challenges with the mini-grid system.
12. **Other:** If the respondent selects this option, politely ask them to specify the particular challenge they face with the mini-grid and record their response accurately.

Question 126: In your opinion, your household electricity supply during the dry season is:

This question aims to gather the respondent's perception of the electricity supply in their household during the dry season. It helps to assess their satisfaction or dissatisfaction with the reliability and consistency of the electricity service during this specific period.

Instructions to the enumerator:

1. Read out the question clearly and ensure that the respondent understands the meaning of "**dry season.**"
2. Explain that the question seeks their opinion regarding the electricity supply during the dry season.

3. Instruct the respondent to choose one of the following options:
4. **Irregular** refers to the situation where the availability and reliability of electricity are inconsistent and do not meet the expected or desired standards. It implies that the electricity supply experiences frequent disruptions and fluctuations or periods of unavailability leading to unreliable and unpredictable flow of electric power.
5. **Regular** refers to the situation where the availability and reliability of electricity are consistent and meets the expected or desired standards.
6. Record the response provided by the respondent accordingly.

Note: Emphasize that their response should reflect their perception and experience with the electricity supply during the dry season.

Question 127: During the dry season, could you please estimate the number of hours (in total) electricity service has not been available to your housing unit due to electricity cuts or blackouts?

This question aims to gather an estimation from the respondent regarding the total number of hours during the dry season when electricity service was unavailable in their housing unit due to electricity cuts or blackouts. It helps to assess the frequency and duration of power outages during this specific period.

Instructions to the enumerator:

1. Read out the question clearly and explain that it pertains to the dry season specifically.
2. Instruct the respondent to estimate and provide the number of hours (in total) during the dry season when electricity service was not available in their housing unit due to electricity cuts or blackouts.
3. Present the following response options:
 - Option 1: **"Number of hours"** (Choose this option if the respondent can estimate the total number of hours without electricity during the dry season. Record the specific number provided by the respondent.)
 - Option 2: **"Never"** (Choose this option if the respondent did not experience any power outages during the dry season.)

- Option 3: "**Do not know (enter 999)**" (Choose this option if the respondent is unsure or does not have the necessary information to provide an estimation.)

4. Record the response provided by the respondent accordingly.

Question 128: In your opinion, your household electricity supply during the rainy season is:

This question aims to assess the respondent's perception of their household's electricity supply during the rainy season. It helps to gather information about the consistency and reliability of electricity service during this specific period.

Instructions to the enumerator:

1. Clearly read out the question and specify that it refers to the rainy season.
2. Explain to the respondent that you would like to know their opinion regarding the electricity supply in their household during the rainy season.
3. Present the following response options:
4. **Irregular** refers to the situation where the availability and reliability of electricity are inconsistent and do not meet the expected or desired standards. It implies that the electricity supply experiences frequent disruptions and fluctuations or periods of unavailability leading to unreliable and unpredictable flow of electric power.
5. **Regular** refers to the situation where the availability and reliability of electricity are consistent and meets the expected or desired standards. Instruct the respondent to choose the most appropriate response that aligns with their perception of the electricity supply during the rainy season.
6. Record the response provided by the respondent accordingly.

Note: Emphasize that their response should reflect their perception and experience with the electricity supply during the rainy season.

Question 129: During the rainy season, could you please estimate the number of hours (in total) electricity service has not been available to your housing unit due to electricity cuts or blackouts?

This question aims to gather information about the extent of electricity service interruptions or blackouts experienced by the respondent's household during the rainy season. It helps in assessing the reliability and availability of electricity during this specific period.

Instructions to the enumerator:

1. Clearly read out the question and specify that it pertains to the rainy season.
2. Explain to the respondent that you would like them to estimate the total number of hours when their housing unit did not have electricity service due to cuts or blackouts during the rainy season.
3. Present the following response options:
 - Option 1: **"Number of hours"** (Choose this option if the respondent can provide an estimate of the total hours without electricity during the rainy season.)
 - Option 2: **"Never"** (Choose this option if the respondent did not experience any electricity cuts or blackouts during the rainy season.)
 - Option 3: **"Do not know (enter 999)"** (Choose this option if the respondent is unsure or does not have the necessary information to provide an estimate.)
4. Instruct the respondent to choose the most appropriate response based on their experience during the rainy season.
5. If the respondent selects option 1, ask them to provide the estimated number of hours without electricity.
6. Record the response provided by the respondent accordingly.

Note: Ensure that the respondent understands that they need to estimate the total hours without electricity specifically during the rainy season. Emphasize that their response should reflect the actual interruptions or blackouts experienced during that period.

Question 130: In case of power failure from the Mini-grid, what is the main backup source used by the household, if any?

This question aims to gather information about the backup sources used by households in case of power failures from the mini-grid.

Instructions to the enumerator:

1. Clearly read out the question to the respondent, specifying that it pertains to power failures from the mini-grid.

2. Explain that you would like to know the main backup source used by the household in different areas (lighting, cooking and heating, and electrical appliances) when there is a power failure from the mini-grid.
3. For each area (lighting, cooking and heating, and electrical appliances), refer to the questionnaire for the options.
4. Instruct the respondent to choose the option that best represents their household's main backup source in each area during power failures from the mini-grid.
5. Record the response provided by the respondent accordingly.
6. If the respondent selects "other specify" in any area, politely ask them to describe the specific backup source they use. Ensure to note the backup source accurately and allow the respondent to provide their explanation and record it accurately.

Note: Emphasize that the question focuses on the backup sources used specifically during power failures from the mini-grid. Ensure that the respondent understands the options provided and can choose the most appropriate one or provide their own explanation if necessary.

SOLAR HOME SYSTEM

Question 131: How many months has it been since your household had the solar home system installed?

This question aims to gather information about the duration since the household had a solar home system installed.

Instructions to the enumerator:

1. Clearly read out the question to the respondent, explaining that you would like to know how many months it has been since their household had a solar home system installed.
2. Ask the respondent to provide the number of months or years since the installation of the solar home system.
3. Record the response provided by the respondent.
4. If the respondent is unsure or does not know the exact number of months, politely ask them to estimate or provide an approximate duration.

Question 132: How much did your household purchase the Solar home system?

This question aims to gather information about the cost incurred by the household for purchasing the Solar home system.

Instructions for the Enumerator:

1. Explain to the respondent that you would like to know the amount of money their household paid for the home solar system. For households that purchased components separately to make their own home solar system, aggregate the costs including labour.
2. Inquire about the specific cost they incurred for the purchase.
3. Record the response accurately in the survey form.

Question 133: What challenges does your household experience with the solar home system? (MULTI-RESPONSE)

This question aims to identify the challenges or difficulties that households may face in using a solar home system as their electricity source.

Instructions to the enumerator:

1. Read out the question to the respondent, explaining that you would like to know the challenges they experience with their solar home system.
2. Read out each response option and select all the options that apply to their situation.
3. If the respondent selects "Other specify," type the challenge faced in the space provided.
4. Record all the selected options or the respondent's specific challenge in the appropriate response spaces.
5. If the respondent indicates that they do not experience any challenges with their solar home system, select the option "No challenge."
6. Ensure that the respondent understands the question and selects the most relevant options based on their experience with the solar home system.

Note: Encourage the respondent to provide detailed and accurate information regarding the challenges they face, as this will contribute to a better understanding of the limitations and areas of improvement for solar home systems.

Question 134: In the last 12 months, how many times did your solar home system break down? If didn't break down enter 0

This question aims to assess the reliability and maintenance requirements of the solar home system by asking the frequency of breakdowns within the past 12 months. It provides insights into the performance and durability of the system.

Instructions to the enumerator:

1. Explain to the respondent that you would like to know how many times their solar home system has experienced breakdowns or failures in the last 12 months.
2. If the respondent indicates that their solar home system did not break down at all during this period, enter 0 as the response and skip to question 137.
3. If the respondent mentions any instances of breakdowns, ask them to provide the number of times it occurred and record the response accordingly.
4. Ensure that the respondent understands the question and provides accurate information based on their recollection of the breakdown incidents.
5. Encourage the respondent to provide an honest and accurate response to capture the reliability of their solar home system.

Note: It is important to differentiate between breakdowns and scheduled maintenance or repairs. Focus specifically on unexpected failures or malfunctions of the solar home system.

Question 135: When the Solar home system had broken down, which of the following parts broke down?

This question aims to identify the specific components of the solar home system that have experienced breakdowns or failures.

Instructions to the enumerator:

1. Explain to the respondent that you would like to know which part or component of their solar home system broke down when it experienced failures or breakdowns.
2. Read out the options clearly and ask the respondent to select the relevant part(s) that were affected during the breakdowns.

3. If multiple parts were affected, allow the respondent to select all applicable options.
4. If the respondent mentions a part that is not listed as an option, ask them to specify the part in the "Other" option.
5. Record the responses accurately based on the respondent's selection.

NOTE: This question refers to the last break down

Question 136: If your solar home system breaks down, how do you have it repaired?

This question aims to gather information about the repair process followed by households when their solar home system breaks down. Understanding the repair methods helps in assessing the accessibility and availability of repair services for solar home systems.

Instructions to the enumerator:

1. Ask the respondent about the repair process they follow when their solar home system breaks down.
2. Read out the options clearly and select the appropriate response.
3. If the respondent mentions a repair method that is not listed as an option, ask them to specify the method in the "Other" option.
4. Record the responses accurately based on the respondent's response.
5. Ensure that the respondent understands the question and provides the most relevant and specific information about their repair process.
6. Encourage the respondent to provide an honest and accurate response to capture the common repair methods used for solar home systems in their area.

Question 137: In the last 12 months, how much did your household spend on repairing the solar home system?

This question aims to gather information about the repair expenses incurred by households for their solar home systems. Understanding the repair costs helps in assessing the financial implications and affordability of maintaining and repairing solar home systems.

Instructions to the enumerator:

1. Ask the respondent about the amount of money their household spent on repairing the solar home system components the last time it broke down in the last 12 months.
2. Read out the options clearly and indicate the amount for each component repaired.
3. If the respondent mentions repair expenses for a component not listed as an option, ask them to specify the component and the amount spent in the "Other" option.
4. Record the responses accurately based on the respondent's response and the record the amount spent in ZMW (Zambian Kwacha).
5. If the respondent indicates that they did not repair any component, record the response as "Did not repair."
6. Ensure that the respondent understands the question and provides the most accurate information about the repair expenses for their solar home system.
7. Encourage the respondent to provide an honest and accurate response to capture the actual repair costs incurred by their household.

Question 138: During which months in the last 12 months was the electricity supply from your solar home system irregular (not able to power the usual appliances it is designed for)?

This question aims to gather information about the reliability and consistency of electricity supply during the last 12 months.

Instructions to the enumerator:

1. Explain to the respondent that this question is about their opinion regarding the electricity supply during the last 12 months.
2. Ask the respondent which months had irregular electricity supply and enter yes in the affected months.

Question 139: In case of power failure from the solar Home System, what is the main backup source used by the household, if any?

This question aims to gather information about the backup sources used by households in case of power failure from their solar home system. It helps in understanding the alternative options available to the household for lighting, cooking, heating and powering electrical appliances during such situations.

Instructions to the enumerator:

1. Explain to the respondent that this question is about identifying the main backup source used by their household in case of a power failure from the solar home system.
2. Read out the backup source options for each category (lighting, cooking, heating and other electrical appliances).
3. Select the appropriate backup source for each category based on their household's backup arrangements.
4. If the respondent selects "Other (Specify)" for any category, ask them to provide details about the specific backup source they use.

BATTERIES (EXTERNALLY RECHARGEABLE BATTERIES)

Question 140: How many of each of the following batteries do you use? Read out to the battery types to the respondent

This question aims to gather information about the type and number of batteries mainly used by households. It helps in understanding the prevalent battery technology used for energy storage in the surveyed area.

Instructions to the enumerator:

1. Explain to the respondent that this question is about identifying the type of battery mainly used by their household.
2. Show the provided pictures or visual representations of different battery types: Lithium Ion, Lead acid, Nickel, Sodium based.
3. Read out the options and provide a brief explanation for each option:
 - **"Lithium Ion"**: Lithium-ion batteries are commonly used in various applications due to their high energy density and long cycle life.



- **"Lead acid"**: Lead-acid batteries are known for their reliability and cost-effectiveness and are commonly used for energy storage.

- **"Nickel"**: Nickel-based batteries, such as Nickel-cadmium (Ni-Cd) or Nickel-metal hydride (Ni-MH).



- **"Sodium based"**: Sodium-based batteries, such as Sodium-ion or Sodium-sulphur batteries, are emerging as alternative energy storage solutions.



- **"Other (Specify)"**: If the respondent mentions a battery type not listed, ask them to specify.
4. Ask the respondent to select the appropriate battery type mainly used by their household.
 5. If the respondent selects "Other (Specify)", ask them to provide details about the specific battery type they use.



Question 141: Do you use that battery for the following? (linked to response in preceding question)

This question aims to understand the specific applications or devices for which the battery mentioned in the preceding question is primarily used.

Instructions to the enumerator:

1. Explain to the respondent that this question is about the usage of the battery mentioned in the preceding question for different devices or applications.
2. Read out each item (a to d) and ask the respondent to indicate whether they use the mentioned battery for that particular device or application.
3. Record the respondent's response as **"Yes"** or **"No"** for each item.
4. If the respondent selects **"Yes"** for any item, it implies that they use the battery for that device or application. If they select **"No,"** it indicates that they do not use the battery for that particular purpose.
5. If the respondent mentions other devices or applications not listed in the options, ask them to specify the additional usage in the **"Other, specify"** field.

Question 142: How much did it cost to buy such a battery?

This question aims to gather information about the cost of purchasing the battery mentioned in the preceding questions. It helps in understanding the financial aspect of acquiring the battery and assessing its affordability for the household.

Instructions to the enumerator:

1. Explain to the respondent that this question is about the cost of purchasing the battery mentioned earlier.
2. Ask the respondent to provide the amount they spent to buy the battery, in Kwacha terms.
3. Record the response.
4. If the respondent is unsure or does not remember the exact amount, encourage them to provide an estimate.

Question 143: How often do you charge your battery per month?

This question aims to gather information about the frequency of charging the battery mentioned earlier.

Instructions to the enumerator:

1. Explain to the respondent that this question is about how often they charge the battery per month.

2. Ask the respondent to provide the approximate number of times they charge the battery in a typical month.
3. Emphasize that you are interested in the frequency of charging rather than the specific dates or durations.
4. Record the response in terms of the number of times per month.
5. If the respondent is unsure or their charging pattern varies, ask them to provide an estimate or an average.

Question 147: What is the primary charging source?

This question aims to identify the main source of energy used for charging the battery mentioned earlier.

Instructions to the enumerator:

1. Explain to the respondent that this question is about the main source they use to charge the battery.
2. Read out the options and provide a brief description of each option to ensure clarity.
 - **Option 1: National grid (ZESCO)** - Refers to charging the battery using electricity from the national grid provided by ZESCO.
 - **Option 2: Local mini grid** - Refers to charging the battery using electricity from a local mini-grid.
 - **Option 3: Solar** - Refers to charging the battery using solar energy, typically through solar panels.
 - **Option 4: Diesel/Petrol Genset** - Refers to charging the battery using a diesel or petrol-powered generator.
 - **Option 5: Pico hydro** - Refers to charging the battery using energy generated from a small-scale hydroelectric system.
 - **Option 6: Other Specify** - If the respondent uses a different charging source not mentioned in the above options, ask them to provide a brief description or details.
3. Ask the respondent to choose the appropriate number that corresponds to their primary charging source.
4. Record the response based on the selected number or the specified alternative charging source.

Question 145: When fully charged, how long does your battery/s last?

The purpose of this question is to determine the duration for which the respondent's battery remains operational after being fully charged.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to determine how long their battery can last after being fully charged.
2. Ask the respondent to estimate the number of days a fully charged battery typically lasts before it requires another charge.
3. Provide a clear understanding: Emphasize that the respondent should consider their typical usage and provide their best estimate based on their experience.
4. Record the number of days: Once the respondent provides their answer, record the number of days indicated.
5. Assist uncertain respondents: If the respondent is unsure or the duration varies, encourage them to provide their best approximation.

Question 146: Does your household have an inverter that allows you to use appliances such as TV, Fan, or Fridge?

The purpose of this question is to determine whether the respondent's household has an inverter installed that enables them to use appliances like a TV, fan, and fridge.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to determine whether their household has an inverter that allows them to use appliances such as a TV, fan, and fridge.
2. Present the options: Read out the options to the respondent, which are:
 - a) Yes: If the household has an inverter for using appliances; and
 - b) No: If the household does not have an inverter for powering appliances.
3. Ask the respondent to select the appropriate option that represents their household's situation.
4. Once the respondent provides their answer, make sure to record it accurately in the survey form.

5. If the respondent selects "**No**," proceed to the next section of the questionnaire.

Question 1: What is the capacity of the inverter Kilowatts?

The purpose of this question is to determine the capacity of the inverter installed in the respondent's household, measured in kilowatts (kW). An inverter is a device that converts direct current (DC) electricity from sources such as batteries or solar panels into alternating current (AC) electricity used to power household appliances.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to determine the capacity of the inverter they have in their household, which is measured in kilowatts.
2. Ask the respondent about the capacity: Inquire about the capacity of the inverter by asking the respondent how many kilowatts (kW) it can handle.
3. Record the response: Once the respondent provides the information, accurately record the capacity of the inverter in kilowatts (kW) in the survey form.
4. If the respondent is unsure or does not know the capacity, instruct them to provide an estimate or specify that they are unsure. Alternatively, request them to furnish you with a copy of or show you the inverter nameplate, which typically contains information about its capacity.

Question 148: What is the Capacity of the battery in Amperage Hour (Ah)?

The purpose of this question is to determine the capacity of the battery installed in the respondent's household, measured in ampere-hours (Ah). The battery capacity represents the amount of electric charge the battery can deliver over time.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to determine the capacity of the battery they have in their household, which is measured in ampere-hours (Ah).
2. Ask for the capacity: Inquire about the capacity of the battery by asking the respondent to provide the ampere-hour (Ah) rating.

3. Provide clarification if needed: If the respondent is unsure about the ampere-hour (Ah) rating, instruct them to provide an estimate or specify that they are unsure.
4. Record the response: Once the respondent provides the information, accurately record the capacity of the battery in ampere-hours (Ah) in the survey form.
5. Thank the respondent for their cooperation and continue with the survey.



Question 149: What is the voltage of the rechargeable batteries?

The purpose of this question is to determine the voltage of the rechargeable batteries used in the respondent's household. Voltage is a measure of electric potential difference and is typically indicated on the batteries.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to determine the voltage of the rechargeable batteries they use in their household.
2. Ask for the voltage: Inquire about the voltage of the rechargeable batteries by asking the respondent to provide the voltage rating.
3. Provide clarification if needed: If the respondent is unsure about the voltage rating, instruct them to check the batteries for the voltage information or provide an estimate if they remember.
4. Record the response: Once the respondent provides the voltage information, accurately record it in the survey form.

Question 150: How much did your household pay to recharge the batteries?

The purpose of this question is to determine the cost incurred by the household to recharge their batteries. This includes any expenses associated with recharging or replenishing the battery power.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to determine the amount of money their household paid to recharge the batteries.
2. Ask for the payment amount: Inquire about the cost of recharging the batteries by asking the respondent to provide the amount they paid.
3. Record the response: Once the respondent provides the payment amount, accurately record it in the survey form.

Question 151: Is battery recharging limited by the availability of electricity supply?

The purpose of this question is to determine if the rechargeability of the battery is limited by the availability of electricity supply.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to understand if the availability of electricity supply affects the ability to recharge the battery.
2. Present the options: Read out the options to the respondent, which are:
 - a) **Yes:** If the battery recharging is limited by the availability of electricity supply.
 - b) **No:** If the battery recharging is not affected by the availability of electricity supply.
3. Ask the respondent to select the appropriate option that represents their household's situation.

Once the respondent provides their answer, make sure to record it accurately in the survey form

Question 152: What challenges, if any, does your household experience with the rechargeable batteries? (MULTI-RESPONSE)

The purpose of this question is to identify any challenges or issues that the household may encounter regarding the use of rechargeable batteries for electricity supply.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to understand any challenges they face with rechargeable batteries.
2. Read out the options to the respondent and ensure they understand each option clearly. The options are:
 - a) **Limited power supply:** The rechargeable batteries do not provide sufficient power or energy for the required duration.
 - b) **Too expensive to use:** The cost of recharging the batteries is high or unaffordable for the household.
 - c) **Hard to maintain/service:** The batteries require frequent maintenance or service, which may be challenging for the household.
 - d) **Not durable:** The batteries have a short lifespan or do not last as long as expected.
 - e) **No problems:** The household does not face any challenges with the rechargeable batteries.
 - f) **Other (Specify):** In case there are challenges not mentioned in the provided options, ask the respondent to specify the specific challenge they encounter.
3. Ask the respondent to select all the options that apply to their situation or provide their own specific challenge under “Other Specify” if it is not listed.
4. Record the responses accurately in the survey form.

Question 153: In case of power failure from the battery, what is the main backup source used by the household, if any?

The purpose of this question is to determine the main backup source/alternative source used by the household in case of power failure from the battery.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to determine the main backup source used by their household in case of power failure from the battery.
2. Read out the options for each category (Lighting, Cooking and Heating, Electrical Appliances) and ask the respondent to select the appropriate backup source for each category.
3. Record "**No backup source**" in the event that the household does not have an alternative source of lighting, cooking & heating and/or powering electrical power appliances if there is no alternative source to the battery.

4. If the respondent selects "**Other Specify**" for any category, ask them to provide additional details about the backup source.

GENERATOR

Question 154: What does your household use the generator for? (MULTI-RESPONSE)

The purpose of this question is to determine the specific purposes for which the household uses the generator.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to determine the different purposes for which their household uses the generator.
2. Read out the options to the respondent (Lighting, Television, Radio, Water Pumping, Home-based income activity, Cooking) and ask them to select all the purposes that apply.
3. If the respondent selects "**Other, specify,**" ask them to provide additional details about the other purposes.

Question 155: Does your household own this generator?

The purpose of this question is to determine whether the household owns the generator mentioned.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to determine whether their household owns the generator.
2. Present the options: Read out the options to the respondent, which are:
 - a) **Yes:** If the household owns the generator.
 - b) **No:** If the household does not own the generator.
3. Ask the respondent to select the appropriate option that represents their household's situation.
4. Once the respondent provides their answer, make sure to record it accurately in the survey form.
5. If the respondent selects "Yes," proceed to question 157. If they select "No," continue with the survey.

Question 156: Who owns this generator?

The purpose of this question is to determine the ownership of the generator mentioned.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to determine who owns the generator.
2. Present the options: Read out the options to the respondent, which are:
 - a) Another household: If the generator is owned by another household.
 - b) Rental company: If the generator is owned by a rental company.
 - c) NGO, Community: If the generator is owned by an NGO or the community.
 - d) Other: If the ownership falls under a category not mentioned, ask the respondent to specify.
3. Ask the respondent to select the appropriate option that represents the ownership of the generator.
4. If the respondent selects "**Other**," provide a space for them to specify the ownership.
5. Once the respondent provides their answer, make sure to record it accurately in the survey form.

Question 157: Does your household rent this generator?

The purpose of this question is to determine if the household rents the generator mentioned.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to determine if they rent the generator.
2. Present the options: Read out the options to the respondent, which are:
 - a) **Yes**: If the household rents the generator.
 - b) **No**: If the household does not rent the generator.
3. Ask the respondent to select the appropriate option that represents their situation.
4. If the respondent selects "**No**," proceed to the next question.
5. If the respondent selects "**Yes**," continue to question 157.
6. Once the respondent provides their answer, make sure to record it accurately in the survey form.

Question 158: What mode of payment does your household use to pay for this rented generator?

The purpose of this question is to determine the mode of payment used by the household to pay for the rented generator.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to determine the mode of payment used to pay for the rented generator.
2. Present the options and ask the respondent to select the appropriate option that represents their household's mode of payment.
3. If the respondent selects "**Other**," ask them to provide more details and record their response.
4. Once the respondent provides their answer, make sure to record it accurately in the survey form.

Question 159: How much did your household pay to purchase the generator?

The purpose of this question is to determine the amount paid by the household to purchase the generator.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to determine the amount they paid to purchase the generator.
2. Ask the respondent to provide the total amount paid by their household to purchase the generator.
3. Once the respondent provides the information, record it accurately in the survey form.

Question 160: In the last 12 months, how much did your household pay for repairs/ parts/ maintenance of the generator?

The purpose of this question is to determine the amount paid by the household for repairs, parts, and maintenance of the generator in the last 12 months.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to determine the amount they paid for repairs, parts, and maintenance of the generator in the last 12 months.

2. Ask the respondent to provide the total amount paid by their household for repairs, parts, and maintenance of the generator in the last 12 months.
3. Once the respondent provides the information, record it accurately in the survey form.

Question 161: What is the power rating of the generator?

The purpose of this question is to determine the power rating of the generator.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to determine the power rating of their generator.
2. Present the options with definitions:
 - a) **Kilowatt (kW):** Kilowatt is a unit of power that measures the rate at which the generator can supply electricity. It represents the actual power output of the generator.
 - b) **Kilovolt-ampere (kVA):** Kilovolt-ampere is a unit of apparent power that measures the total power capacity of the generator, including both real power (kW) and reactive power. It represents the maximum load the generator can handle.
 - c) **Horsepower (HP):** Horsepower is a unit of power commonly used for generators. It represents the power output in terms of the work done by the generator.
3. Ask the respondent to select the appropriate unit that represents the power rating of their generator.
4. Once the respondent provides their answer, make sure to record it accurately in the survey form.

Note: if the respondent is not sure, request to see a copy of the generator nameplate if possible.

Question 162: How long has your household been using this generator?

The purpose of this question is to determine the duration for which the household has been using the generator.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to determine how long their household has been using the generator.

2. Ask the respondent to provide the duration in years or months. For example, if they have been using the generator for 2 years and 6 months, they can provide the response as "2 years" or "2.5 years" or "30 months".
3. Once the respondent provides their answer, make sure to record it accurately in the survey form.

Question 163: What type of fuel does your household use in this generator?

The purpose of this question is to determine the type of fuel used in the generator by the household.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to determine the type of fuel used in their generator.
2. Present the options: Read out the options to the respondent, which are:
 - a) Diesel
 - b) Petrol
3. Ask the respondent to select the appropriate option that represents the type of fuel used in their generator.
4. Once the respondent provides their answer, make sure to record it accurately in the survey form.

Question 164: In the last 30 days, how much did your household spend on fuel for this generator?

The purpose of this question is to determine the amount of money spent by the household on fuel for the generator in the last 30 days.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to determine the amount of money spent on fuel for the generator in the last 30 days.
2. Ask the respondent to provide the total amount of money spent on fuel during that period.
3. If the respondent is unable to provide an exact amount, ask them to provide an estimate or provide an approximate range if possible.
4. Once the respondent provides their answer, make sure to record it accurately in the survey form.

Question 165: Does your household share this generator with other households?

The purpose of this question is to determine whether the household shares the generator with other households.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to determine whether their household shares the generator with other households.
2. Present the options: Read out the options to the respondent, which are:
 - a) **Yes:** If the household shares the generator with other households.
 - b) **No:** If the household does not share the generator with other households.
3. Ask the respondent to select the appropriate option that represents their household's situation.
4. Once the respondent provides their answer, make sure to record it accurately in the survey form.
5. If the respondent selects "**No**," proceed to question 165, otherwise proceed to the next question.

Question 166: How many households are sharing electricity from this generator?

The purpose of this question is to determine the number of households that are sharing electricity from the generator.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to determine the number of households that are sharing electricity from the generator.
2. Ask the respondent to provide the number of households that are sharing electricity from the generator.
3. Once the respondent provides the number, record it accurately in the survey form.

Question 167: What is the size of the fuel tank of this generator?

The purpose of this question is to determine the size of the fuel tank of the generator.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to determine the size of the fuel tank of the generator.
2. Ask the respondent to provide the size of the fuel tank of the generator.
3. Once the respondent provides the size, record it accurately in the survey form.
4. If the respondent is unsure about the size or does not know, instruct them to provide an estimate or specify that they are unsure.

Question 168: How many hours could your household use this generator each day and night if you wanted to?

The purpose of this question is to determine the number of hours the household would use the generator each day and night continuously.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to determine the number of hours their household would use the generator each day and night continuously.
2. Ask the respondent to provide the approximate number of hours.
3. Once the respondent provides the information, record it accurately in the survey form.
4. If the respondent is unsure or does not know the exact number, instruct them to provide their best estimate or specify that they are unsure.

Question 169: How many hours does your household use this generator each day?

The purpose of this question is to determine the number of hours your household actually uses the generator each day.

Instructions for the Enumerator:

5. Introduce the question: Explain to the respondent that this question aims to determine the number of hours their household actually uses the generator each day.
6. Ask the respondent to provide the approximate number of hours.
7. Once the respondent provides the information, record it accurately in the survey form.

8. If the respondent is unsure or does not know the exact number, instruct them to provide their best estimate or specify that they are unsure.

Question 170: What challenges does your household experience with this generator, if any? (MULTI-RESPONSE)

The purpose of this question is to determine the challenges your household experiences with the generator.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to determine the challenges their household faces with the generator.
2. Present the options: Read out the options to the respondent, which are:
 - a) **Limited power supply:** This refers to situations where the generator does not provide sufficient power for all the required appliances or activities.
 - b) **Cannot power large appliances:** This refers to the generator's inability to supply electricity to larger appliances, such as air conditioners, cookers, refrigerators, or heavy machinery.
 - c) **Too expensive to use:** This refers to the high cost associated with running and maintaining the generator, including fuel expenses and maintenance costs.
 - d) **Non-availability of fuel:** This refers to difficulties in accessing or obtaining fuel for the generator, which leads to interruptions in its operation.
 - e) **Hard to maintain/service:** This refers to challenges in maintaining and servicing the generator, such as finding skilled technicians, acquiring spare parts, or performing regular maintenance tasks.
 - f) **Loud/Noisy:** This refers to the generator producing excessive noise during operation, which can be disruptive or bothersome.
 - g) **Unpredictable interruptions:** This refers to the generator frequently experiencing unexpected shutdowns or interruptions in its operation, affecting the availability of electricity.
 - h) **Other (specify):** In case the respondent mentions additional challenges that are not listed, instruct them to specify and record their response.
 - i) **No challenges:** If the respondent indicates that their household does not experience any challenges with the generator, record "No challenges" in the survey form.
6. Ask the respondent to select all the options that apply to their household.

7. Once the respondent provides their answer, record each selected option accurately in the survey form, including any specified challenges.

Question 171: In case of power failure from the generator, what is the main backup source used by the household, if any?

The purpose of this question is to determine the backup sources used by the household in case of power failure from the generator.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to determine the backup sources their household relies on in case of power failure from the generator.
2. Present the options as provided in the survey questionnaire.
3. Ask the respondent to select the appropriate backup source(s) for each category that applies to their household.

Once the respondent provides their answer, record each selected option accurately in the survey form, including any specified backup sources.

HOUSEHOLD AMENITIES AND HOUSING CONDITION

A house is a building/physical structure that functions as a home, ranging from simple dwellings (places where people live) such as huts, makeshifts, to complex, fixed structures of wood, brick, concrete or other materials containing plumbing (pipes, cylinders, fixtures and fittings i.e light fittings, sinks, bathtubs, toilet and cisterns, and other apparatus required for the water supply, heating, and sanitation), ventilation and electrical systems. Housing provides shelter to people, protecting them against nature such as wind/storms, rain/water, fire and any possible danger. Houses use a range of different roofing systems to keep precipitation such as rain from getting into the living spaces. The extent of access of households to various amenities (essentials) such as housing, water, sanitation, health, education and other social and economic infrastructure is an important measure of the population wellbeing. It is therefore important that detailed attention is given when getting this information from the respondents

Note that Housing is not just limited to a shelter but it encompasses all support services and community facilities which are necessary to human well-being. These include land, roads, electricity, running water and other infrastructure such as communication (Post Office, ICT and Telecommunication Facilities).

In this section, we shall get information on housing and household characteristics.

Read the introductory sentence of this section to the respondent as shown in the screenshot.

Type of Housing Unit

Question 1A: What kind of dwelling does your household live in?

In this question, we are interested in knowing the different types of housing units as shown in the screenshot; observe and select the appropriate type.

Hut – It is a building of a lower quality (mud bricks, mud floor, grass, palm leaf) materials that is used temporary or as seasonal shelter. In undeveloped places or primitive communities, it is used as a permanent dwelling or residence. It is usually made of locally available, unmodified earth materials, in their natural state such as mud bricks, mud floor, mud material around the walls and grass/palm leaf roof. It is mostly common in rural parts of Zambia, built using techniques passed down through generations. Huts have a hat shaped roof but can take many shapes.

Note: Even if it is located in urban areas it must be recorded as a hut.



Detached House – This is a durable, well built dwelling which is an independent or free standing residential building/housing unit (two or single storey) that does not share walls with another house.

Single storey (ground **storey** only)



Double storey



Semi-Detached House: A semi-detached house, (double or single storey) is one that is joined to another house by a common dividing wall that they share which extends from the ground to the roof. Semi-detached houses are often mirror images of each other. There are two units in one building and shares one common wall with the next/neighbouring house.



Terraced House: One of a row of similar houses joined together by their side walls. It is a house in a row of houses that shares a wall with houses next to it. They are three or more in a row.



Flat/Apartment/Multi unit: A set of rooms forming an individual residence/housing unit, typically on one or more floors and within a larger singular building containing a **number of such residences/housing units**. It usually has one common stair way. Flat and apartment are generally used interchangeably.



Mobile Housing Unit -any type of living quarter that has been produced to be transported or a moving unit such as a caravan, trailers, boats, tents etc. occupied as living quarters at the time of the census.



Makeshift Housing Unit -an independent, makeshift-shelter or structure built of mostly waste or salvaged materials and without a predetermined design or plan for the purpose of habitation by one household, which is being used as living quarters though it may not comply with generally accepted standards for habitation. Such a unit will be generally found in unplanned settlements or shanty areas. Not all structures in shanty areas may be considered as improvised as many

of these may have been built in a planned manner from regular building materials.



Collective Living Quarters -include structurally separate and independent places of abode intended for habitation by large groups of individuals or several households with no common bond, public objective or interest. Such quarters usually contain common facilities such as kitchen, bathrooms, lounge or dormitories, which are shared by occupants. Examples are hotels, motels, inns, lodges, boarding houses etc., which provide lodging on a fee basis.

Institutional Quarters /Hostels- sets of premises in a permanent structure or structures designed to house groups of persons (usually large) who are bound by either a common public objective or a common personal interest. In this type of living quarters persons of the same sex frequently share dormitories. Examples are Hospitals, military barracks, boarding schools, convents, seminaries, prisons, etc.

Unintended Living Quarters/Unconventional - structurally separate and independent places of abode not constructed, converted or arranged for human habitation. They may be used for habitation at the time of the census. For example; bridges, storage warehouses, market stalls, shop corridors, garages, containers, classroom, office space etc.

Incomplete building

A structure that has not been yet completed but which provides a living space for the household



Other, Specify -a residual category of living quarters or housing units not stated above.

Question 1B: How many rooms are occupied by this household excluding bathrooms and toilets?

Find out from the respondent how many rooms the housing unit has, excluding passage ways, verandahs, lobbies, bathrooms and toilet rooms. Note: In case a household occupying more than one housing unit all the rooms in the housing units should be counted

A room is defined as a space in a housing unit enclosed by walls reaching from the floor to the ceiling or roof, of a size large enough to fit a bed for an adult. A hut meeting these two qualifications will also be treated as a room. Normally, bedrooms and living rooms will be included in this definition. Passage ways, verandahs, lobbies, bathrooms and toilet rooms are not counted as rooms even if they meet the criteria. A garage and a storeroom meeting these requirements should be treated as rooms only if these are actually being used for living purposes at the time of enumeration.

Question 2: On what basis does your household occupy the dwelling you live in? Is it....

Find out whether the household lives in housing they own (owner-occupied), or rented, or is free housing. If rented or free housing-record from whom.

Building materials

Question 3: What kind of building materials is/are the [...] of this dwelling mainly made of?

This question is important in assessing the quality of the dwelling the household lives in. There are various types of materials used for roofing, walls and floor. In

some cases, you may need to ask the respondent what material their wall, roof or floor are made of if you are not able to see them. Be observant.

In the cases of the floor, household with wall-to-wall carpets or other coverings, which are stuck to that floor, should be regarded as covered concrete, cover. Make sure you probe to find out what is beneath the carpet, to ensure that it is concrete.

[IF A MULTI-STOREY/UNIT BUILDING RECORD BUILDING MATERIALS OF THE OUTER ROOF (ROOF TOP) AND OUTER WALL].

Main Roof Material

In this question, we would like to ascertain the main type of material used for the roof. Do not ask the respondents this question, just observe and record the answer. In case it is not very obvious such as a hidden roof or if in doubt, ask the respondent. Select the appropriate response.

Grass Thatch/Palm Leaf: This is a roofing type with traditional roofing materials of either grass thatch or palm leaf. The thatch thickness increases with an increase in angle with traditional roofing materials of either grass thatch or palm leaf



Rustic Mat: This is a roof type that uses rustic grass commonly found in western



Zambia

Palm/Bamboo: Bamboo is a plant which is a type of grass with a hard, woody, hollow stem.



Wood Planks: Timber that is flat, elongated and rectangular with parallel faces that are higher and longer than wide. It is cut from logs into variety of sizes and used for building materials.



Cardboard: Are prefabricated boxes primary used for packaging goods and materials. Cardboard roofs are sometimes used without being cut into smaller pieces



Metal/Iron Sheets: These are usually galvanized or corrugated roofing sheets.



Wood: Processed plank - material from tree trunks used in construction as timber.



Asbestos: Is a material fibre that is used as roof covering?



Ceramic Tiles: Roof Tiles; these are small rectangular roofing materials made from fine concrete quarry and slates.



Cement Tiles: Cement is a fine soft, powdery type substance made from a mixture of elements that are found in natural materials such as limestone, clay sand and/ shale.



Roofing Shingles: Are a roof covering consisting of individual overlapping element that are typically flat rectangular shapes laid in rows from the bottom edge of the roof up, with each successive higher row overlapping the joints in the row below.



Mud/Clay Tiles: These are produced by baking molded **clay**. Clay tiles are usually rougher than cement tiles.



Other, Specify: Whatever is not mentioned above.

Main Wall Material

Do not ask the respondents this question, just observe and record the answer. Generally, if you are not able to tell what the material is, ask the respondent.

Pole and Dagga/mud: These are walls made of gum poles with mud infill.



Pole and Grass: These are walls built of gum poles and grass infill

Burnt Bricks: Brick molded from seasoned/hardened clay and burnt at a certain temperature.



Mud Bricks: Brick made of mud and sun dried.



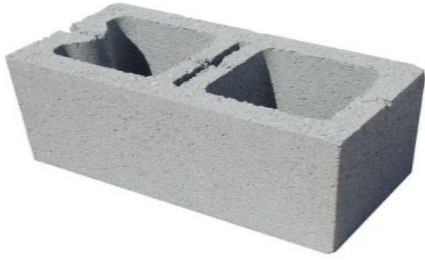
Compressed Mud Brick: This is an appropriate mix of dirt, clay and aggregate into a compressed block. These are also called soil stabilized bricks, which can also be self-locking.



Compressed Cement Bricks: A type of brick made from a mixture of cement and sand, molded under pressure.



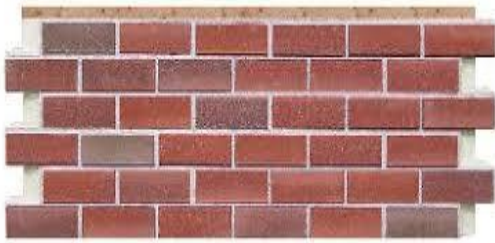
Concrete Blocks: It is made from a mixture of cement with coarse/rough materials such as sand, gravel and crushed stones.



Cement Blocks: They are made by mixing cement, and sand together and forming the mixture into blocks of varying size.



Pan-Brick: Is an insulated thin brick panel which is made of a combination of clay or shale (fine-grained sedimentary rock that forms from the compaction of silt and clay-size mineral particles), dried and fired in kilns.



Pre-Cast Concrete Slab: Precast concrete is a construction product produced by casting concrete in a reusable mold or "form" which is then cured in a controlled environment, transported to the construction site and lifted into place ("tilt up").



Prefabricated Wall Panels: Prefabrication is the practice of assembling components of a structure in a factory or other manufacturing site, and transporting complete assemblies or sub-assemblies to the construction site where the structure is to be located.



Stone with Building Lime: This is a stone with high mass of lime which is carved into various shapes.



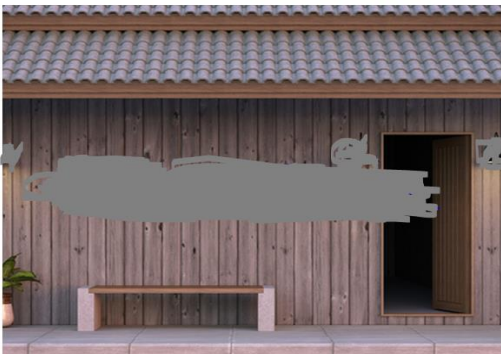
Iron Sheets: Is a building material composed of sheets of hot dip galvanized mild steel to produce a linear pattern in them. Iron sheets are predominantly used as roofing materials, however, they are in some cases used as walling materials



Asbestos: Is a silicate, fibrous material that is used as roof covering.



Hardboard/Wood: Heavy thin boards usually 4 millimetres to 8 millimetres in width.



Other, Specify: Whatever is not mentioned above.

Main Floor Material

In this question, we would like to establish the type of material used for the floor finishing. Do not ask the respondents this question, just observe and record the answer. Just like in H03 above, the respondent may be of assistance in this question. However, if it is quite obvious to you as an enumerator to see the floor finishing, select the appropriate response.

Concrete floor: Is a durable coarse or rough floor made from crushed stones, river sand and cement, with the right amount of water.



Cement Screed: Is a thin layer of cement paste and sand/fine aggregates laid on to a concrete floor base to act as a smooth flat levelling surface for taking on the final floor finish



Brick: This is molded from seasoned clay and burnt at a certain temperature



Polyvinyl Chloride (PVC) Tiles: This is a synthetic plastic polymer which is rigid used in construction for tiles and pipes. They are plasticized tiles.



Ceramic Tiles: This is made from red or white clay and other materials (sand, stone, silica, water) molded to form square or rectangular tiles baked in kiln/oven



Mud: This is usually from treated or seasoned clay mixed with cow dung. It makes a hard shiny floor. It is mostly found in traditional houses.



Wood (Not Wooden Tiles): Usually floor fitted on top of the primary floor material.



Marble: Marble are cut from stone (marble stone) in flat sheet and polished to give a shiny finish. It can be in the form of tiles or slabs. It makes a high durable shine.



Terrazzo: Terrazzo tile is made by mixing marble, granite, quartz, or glass chips into a cement binder, terrazzo is attractive and one of the toughest products available when it comes to tiling materials. The top is grinded flat with a machine and then polished. The floor finish is usually black or white.



Parquet: flooring composed of wooden blocks arranged in a geometric pattern

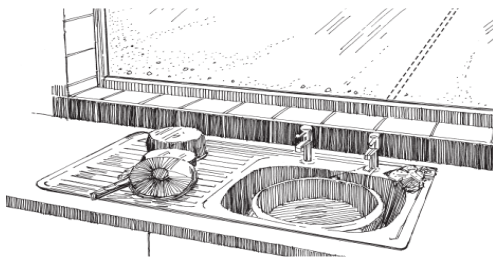


Other, Specify: Whatever is not mentioned above.

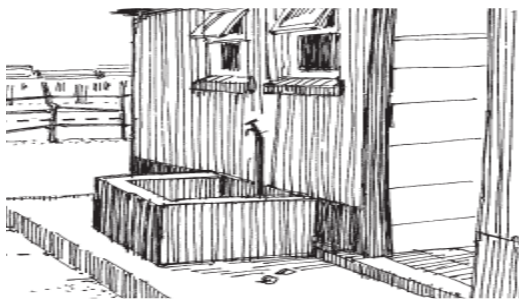
Question 4: Main Source of Water for Other Purposes, such as cooking and hand washing

Find out from the respondent the main source of water supply for drinking for the household.

Piped water inside the housing unit: This is water that is usually supplied to households through pipes. The pipes are connected from the source to inside the housing unit.



Piped water outside the housing unit within stand/plot: This is water that is usually supplied to households through pipes. The pipes are connected from the source to the individual's stand or plot.



Piped to neighbor (Neighbor's piped water): Pipe connected to neighbor's dwelling, yard or plot

Communal Tap: Is usually supplied through pipes. The pipes are connected from the source to a public place for a group of people.



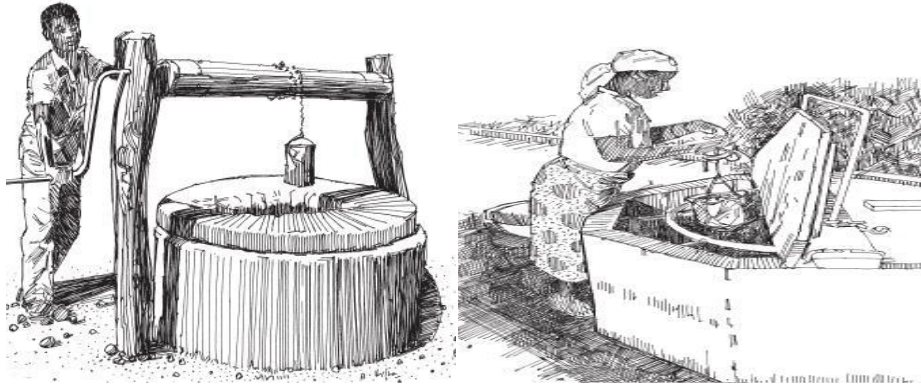
Protected Boreholes: These are boreholes drilled to a depth not less than 30 metres. The sides are cased by iron casing pipes while the last bottom pipe is perforated. The top is concreted together with the suction pipe.



Unprotected Boreholes: They are similar in design to protected boreholes except that the top as well as the suction pipe are left uncovered and large enough to let a jar or small bucket go through.



Protected Well: The wall of this well is usually lined with a brick wall or concrete block wall up to the ground level. The finish on top is of a reinforced concrete slab with an opening large enough to let a bucket go through. The opening is always covered.



Unprotected Well: The well is not lined with a brick wall or concrete wall. The top has no concrete slab though it has a sizeable opening to let a bucket go through. The opening is usually uncovered.



Protected spring: A spring protected from runoff, birds and animals droppings by a “spring box”. A spring box is typically constructed of brick 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.



Unprotected spring: A spring that is subject to runoff and/or bird and animal droppings. Unprotected springs typically do not have a “spring box”

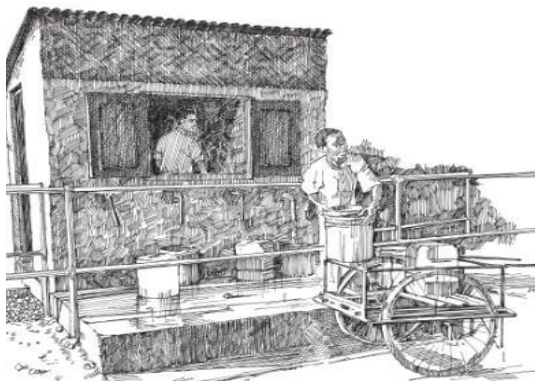
Surface water (River/dam/stream/lake/pond/canal): This is where a household draws water directly from a river/dam/stream for home use.



Rain Water: This is water harvested by a household e.g from the roofs for various uses. It is always advisable to have it covered after the collection.

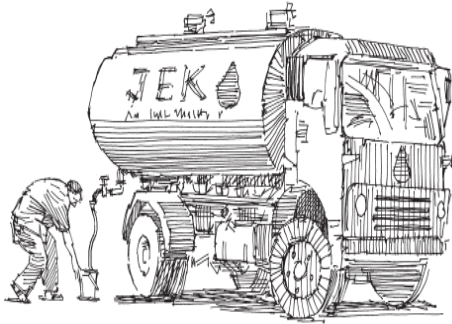


Water Kiosk: This is a public water tap run by a water utility company. The public can go to this tap in order to buy water.



Water Vendor: This includes water that is bought from individuals or companies and sold to households who do not have water. In some cases wheelbarrows and or tankers are used as the mode of transport to sell to households.

Tanker truck: Water is obtained from a provider who uses a truck to transport water into the community. Typically the provider sells the water to the household



Other, Tap: Any other tap not mentioned above.

Other specify: Any other source not mentioned above

SECTION 5: INCOME

This section is intended to find out information on income earned from various sources. Ask only to household members that are 5 years and above.

Income earned in the last 30 days

Question 1: Did earn any income in the last 30 days

This question is intended to find out whether each member of the household aged 5 years or older earned any income in the last 30 days.

Income from main economic activity

Question 2: How much income in total doesearn from his/her main economic activity in the last 30 days (excluding income from farming activities)?

This question is intended to find out how much income in total did each member of the household aged 5 years or older earned from his/her main economic activity in the last 30 days. This should exclude the income earned from farming activities.

Remittances

Question 3: Did.....receive any remittance in the last 12 months

Remittances are transfers in cash or in-kind from one household to another. In this section, the value given in Kwacha both for the remittances paid in cash or in-kind are asked for. Thus you should give the value of remittances paid in-kind based upon the price of such an item within that particular locality.

Note that remittances do not include transfers to household members even if they are temporarily away.

Question 4: How much in total did receive in the last 12 months? (In Zambian Kwacha) Use prevailing rate at the time of receipt

Record any income in cash and kind received by a person in the household during the last 12 months. Remittances may be in the form of money, food items, school uniforms, clothes, etc. sent to an individual by relatives or friends. For remittances in kind convert, them to cash using the prices they would have been bought at the time of being sent/given. The income from remittances should be accrued to the person who actually received the remittances, regardless of whether it is for personal use or for the benefit of the whole household.

Question 5: Didreceive income from any other sources in the last 30 days? (Excluding remittances)?

This question is intended to find out whether each member of the household aged 5 years or older earned any income in the last 30 days from any other source excluding remittances.

Question 6: How much in total did receive from any other sources in the last 30 days?

This question is intended to find out how much income in total each member of the household aged 5 years or older earned from his/her main economic activity in the last 30 days. This should exclude the income earned from farming activities.

Question 7: Did.....earn any income from his /her household farming activities in the last 12 months?

This question is intended to find out whether each member of the household aged 5 years or older earned any income in the last 12 months from farming activities. The income asked for is from production of hybrid maize, local maize, cassava, groundnuts, rice, millet, sorghum, beans, Soya beans, sweet potatoes, Irish potatoes, vegetables, cotton, tobacco, sunflower, paprika, cattle, goats, sheep, pigs, livestock products, chickens, ducks, other poultry and finally eggs.

Question 8: How much income in total did.....earn from his/her household farming activities in the last 12 months?

This question is intended to find out how much income in total each member of the household aged 5 years or older earned from farming activities in the last 12 months.

SECTION 6: HOUSEHOLD EXPENDITURE AND CONSUMPTION

This section is intended to find out information on the expenditure and consumption of various food and non-food items out of purchases, own production and gifts over different reference periods.

Make sure that the respondent excludes expenditure on production or gifts for hosting or attending large events like weddings or funerals for example. For food items, the reference period is 7 days, while for non-food items, the reference period is 30 days.

Question 1: Did your household spend on the following?

This question is intended to find out information on household expenditure and consumption. This should include estimates on direct purchases, consumption from bulk purchases, consumption from own produce and gifts/in-kind over different reference periods.

Question 2: How much did your household spend on the following in the last 30 days?

This question is intended to find out how much the household spent on consumption of non-food items that are not frequently purchased.

Question 3: How much did your household spend on.....in the last 7 days?

This question is intended to find out how much the household spent on consumption of food items that are frequently purchased.

Question 4: In how many weeks in the last 30 days did you buy? “maximum 4”

This question is intended to find out the household frequency on purchases of certain items every week in the last 30 days.

If you can't give a breakdown, please provide the total amount spent on food and beverages

If the household is unable to give a breakdown by item, ask them to provide the total amount spent on food and non-food items.

Food items include:

Cooking Oil, Mealie Meal, Cassava consumption, Chicken, Fish, Beef and Pork (including other meat types), Sugar, Bread, Salt, Spices (e.g. Curry Powder, chilli), Vegetables (e.g tomatoes, onion, cabbage, etc), Soft Drinks (including juices), Alcoholic beverages.

[If you can't give a breakdown, please provide the total amount spent on food and beverages]

Non-food items:

Cosmetics (top society, fair & lovely), Soap and Detergent (boom, lifebuoy), Hair Dressing/Barber, Electricity, Water, Kerosene/Paraffin, Airtime, Transport(Fuel, bus fair), Charcoal, Fire Wood, Cooking Gas, Salaries including Salaries/Wages for Domestic Workers, Remittances (in cash and kind), Sanitary Towels, Diapers.

Question 5: Did your household spend on the following in the last 30 days

This question is intended to find out information on household expenditure and consumption. This should include estimates on direct purchases, consumption from bulk purchases, consumption from own produce and gifts/in-kind over different reference periods of non food items.

Question 6: How much did your household spend on the following in the last 30 days?

This question is intended to find out how much the household spent on consumption of food items that are not frequently purchased in the last 30 days.

SECTION 7: HOUSEHOLD ASSETS

The answers to these questions on ownership of certain items will be used as a rough measure of the socio-economic status of the household.

NOTE: In this section, the assets being referred to are those that are owned by households in good working condition or temporarily out of order but are usable.

Read out each item and select the answer given whether it is a “Yes” or “No”. Make sure you do not leave any item(s) blank. If the respondent reports that a household item such as a radio is broken, try to find out how long it has been broken and whether it will be fixed. If the item appears to be out of use only temporarily, select ‘1’ for YES. Otherwise, select ‘2’ for NO.

Question 1: Does this household own (ITEM)

If a household is keeping an asset for somebody else and using it, do not include it among the assets owned no matter how long they have had it. Assets that are inherited should be included among assets owned so long they are in working condition.

Question 2: How many (ITEM) s does your household own?

Record the total number of a specific asset owned by the household.

THE END

KEROSENE

Question 61: Does your household use Kerosene for Lighting?

The purpose of this question is to determine the duration of the most recent purchase of candles made by the household. It helps in understanding the usage pattern and lifespan of candles acquired in a single purchase.

Instructions for the Enumerator:

5. Explain to the respondent that this question focuses on the duration of their most recent purchase of candles.
6. Ask the respondent to provide the specific number of days that the purchased candles lasted.
7. Once the respondent provides the duration, make sure to record it accurately in the survey form.
8. Express gratitude to the respondent for their cooperation and participation in the survey.

Question 62: How many litres of kerosene does your household use per month?

The purpose of this question is to determine the average monthly consumption of kerosene by the household. It helps in assessing the amount of kerosene used for lighting purposes.

Instructions for the Enumerator:

3. Explain to the respondent that this question focuses on the monthly consumption of kerosene by their household for lighting purposes.
4. Ask the respondent to provide the specific number of litres of kerosene that their household typically uses in a month.

Once the respondent provides the quantity, make sure to record it accurately in the survey form.

Question 63: What is the price of each litre of kerosene?

The purpose of this question is to obtain the current price per litre of kerosene. It helps in understanding the cost associated with kerosene usage for lighting purposes.

Instructions for the Enumerator:

4. Explain to the respondent that this question focuses on the price of each litre of kerosene.
5. Ask the respondent to provide the current price per litre of kerosene in their locality. It is important to emphasize that you are interested in the price per litre specifically.
6. Once the respondent provides the price, make sure to record it accurately in the survey form.
7. If the respondent is unsure about the question or requires further clarification, explain that you are seeking the cost of one litre of kerosene at the present time.

BIOGAS

Question 64: Does your household use Biogas for Lighting?

The purpose of this question is to determine whether the household utilizes biogas as a source of lighting. Biogas is a renewable energy source produced from organic waste, and its use for lighting can have positive environmental and economic benefits.

Instructions for the Enumerator:

5. Explain to the respondent that this question focuses on whether their household uses biogas for lighting purposes.
6. Ask the respondent to indicate whether their household utilizes biogas for lighting by selecting the appropriate response: "**Yes**" or "**No**."
7. Record the response accurately in the survey form.
8. If the respondent is unsure about the question or requires further clarification, explain that biogas is a type of renewable energy produced from organic waste and used for various purposes, including lighting.

SOLAR LANTERN

Question 65: Does your household use Solar Lantern for Lighting?

The purpose of this question is to determine whether the household utilizes solar lanterns as a source of lighting. Solar lanterns are portable lighting devices that harness solar energy to provide illumination.

Instructions for the Enumerator:

4. Explain to the respondent that this question focuses on whether their household uses solar lanterns for lighting purposes.
5. Ask the respondent to indicate whether their household utilizes solar lanterns for lighting by selecting the appropriate response: **"Yes"** or **"No."**
6. Record the response accurately in the survey form.

Question 66: How many Solar Lanterns does your Household have?

The purpose of this question is to determine the quantity of solar lanterns owned by the household.

Instructions for the Enumerator:

4. Explain to the respondent that this question focuses on the number of solar lanterns their household possesses.
5. Inquire about the number of solar lanterns owned by the household.
6. Once the respondent provides the number of solar lanterns, make sure to record it accurately in the survey form.

Question 67: How much did your household purchase the Solar Lantern?

The purpose of this question is to gather information about the cost or price at which the household purchased the solar lantern(s).

Instructions for the Enumerator:

4. Introduce the question: Explain to the respondent that this question pertains to the amount of money they spent on purchasing the solar lantern(s) for their household.
5. Inquire about the purchase cost: Ask the respondent, "How much did your household purchase the solar lantern(s) for?" Ensure that the respondent provides the cost in ZMW (Zambian Kwacha).
6. Record the response accurately: Once the respondent shares the purchase cost, carefully note down the amount in the survey form, making sure to record it accurately.

Question 68: What is the capacity of your Solar Lantern Wp?

The purpose of this question is to gather information about the capacity or power rating of the solar lantern(s) used by the household. This helps in understanding the energy output or performance of the solar lantern(s).

Instructions for the Enumerator:

5. Explain to the respondent that this question pertains to the capacity or power rating of their solar lantern(s).
6. Ensure that the respondent provides the information in Watts.
7. Record the response accurately: Once the respondent shares the capacity of their solar lantern(s), carefully note down the information in the survey form, making sure to record it accurately.
8. If the respondent is unsure about the question or requires further clarification, explain that the capacity refers to the power rating of the solar lantern(s) in terms of energy output. If possible, request for the lantern and check the nameplate for the power rating.

SOLAR HOME SYSTEM

Question 69: Does your household use Solar Home System for Lighting?

This question seeks to determine whether the household utilizes a Solar Home System (SHS) for lighting purposes. SHSs are standalone solar power systems that provide electricity for lighting and sometimes other small appliances in off-grid or areas with limited access to electricity.

Instructions for the Enumerator:

5. Explain to the respondent that this question relates to their use of a Solar Home System (SHS) for lighting.
6. Inquire about the usage: Present them with the options of **"Yes"** or **"No"** to choose from.
7. Record the response accurately: Based on the respondent's answer, mark the appropriate response in the survey form, noting whether the household uses a Solar Home System for lighting or not.
8. Clarify that a Solar Home System (SHS) is a type of solar power system that is designed to provide electricity in homes. It consists of solar panels, an inverter, a battery, and sometimes other components. The solar panels collect sunlight and convert it into electricity, which electricity can then be used to power lights in the house.

Question 70: What is the capacity of your Solar Home System kWp?

Purpose of the question: The purpose of this question is to gather information about the capacity of the respondent's Solar Home System (SHS) in kilowatts peak (kWp). The capacity of the SHS refers to the maximum power output it can generate under standard test conditions.

Clarifications:

- Solar Home System (SHS): A Solar Home System is a standalone solar power system that provides electricity for residential households. It typically includes solar panels, inverters, batteries, and other components to generate and store electricity.
- kWp: kWp stands for kilowatts peak and is a unit of measurement used to indicate the peak power output of a solar system. It represents the maximum power that the solar system can generate under ideal conditions.

When asking this question, please use the following instructions:

4. Introduce the question, explain that we are interested in knowing the maximum power output that the households Solar Home System can generate.
5. Ensure that the respondent provides the information in the Kilo-watts.
6. Record the response accurately: Once the respondent shares the capacity of their solar lantern(s), carefully note down the information in the survey form, making sure to record it accurately.

DRY BATTERIES

Question 71: Does your household use dry batteries to power a lighting device for household lighting

This question seeks to determine whether the household utilizes a Dry Batteries for lighting purposes.

Instructions for the Enumerator:

4. Explain to the respondent that this question relates to their use of Dry Batteries for lighting.
5. Inquire about the usage: Present them with the options of "**Yes**" or "**No**" to choose from.
6. Record the response accurately: Based on the respondent's answer, mark the appropriate response in the survey form, noting whether the household uses Dry Batteries for lighting or not.

Question 72: What type of lighting device do the batteries power?

Find out from the respondent the type of lighting devices the household powers using dry batteries.

Question 73: How long do the dry batteries last?

The purpose of this question is to determine the total duration of the dry batteries usage by the household. It helps in understanding the usage patterns and estimating the energy consumption associated with different types of lighting devices.

Question 74: How much did your household spend on dry batteries during the last purchase?

The purpose of this question is to gather information about the cost or price at which the household purchased the Dry Batteries.

Instructions for the Enumerator:

4. Introduce the question: Explain to the respondent that this question pertains to the amount of money they spent on purchasing the Dry Batteries for their household.
5. Inquire about the purchase cost: Ask the respondent, "How much did your household purchase the Dry Batteries for?" Ensure that the respondent provides the cost in ZMW (Zambian Kwacha).
6. Record the response accurately: Once the respondent shares the purchase cost, carefully note down the amount in the survey form, making sure to record it accurately.

EXTERNALLY RECHARGEABLE BATTERIES

Question 75: Does your household use externally rechargeable batteries for Lighting?

This question aims to determine whether the household uses externally rechargeable batteries for lighting purposes. Externally rechargeable batteries offer a portable and convenient solution for powering lights, particularly in situations where a traditional electrical power source is not readily available.

Instructions for the Enumerator:

5. Explain to the respondent that this question relates to their use of externally rechargeable batteries for lighting.
6. Inquire about the usage: Present them with the options of "**Yes**" or "**No**" to choose from.

7. Record the response accurately: Based on the respondent's answer, mark the appropriate response in the survey form, noting whether the household uses externally rechargeable batteries for lighting or not.
8. Clarify that externally rechargeable batteries are batteries that can be charged externally and then used to power lights. They provide a portable solution for lighting, especially in situations where a traditional electrical power source is not readily available.

Question 76: Does your household use any of the following types of bulbs using the externally rechargeable batteries for Lighting?

This question aims to determine whether the household uses externally rechargeable batteries for lighting purposes.

Instructions for the Enumerator:

5. Explain to the respondent that this question relates to their use of externally rechargeable batteries for lighting.
6. Inquire about the usage: Present them with the options of "**Yes**" or "**No**" to choose from.
7. Record the response accurately: Based on the respondent's answer, mark the appropriate response in the survey form, noting whether the household uses externally rechargeable batteries for lighting or not.
8. Clarify that externally rechargeable batteries are batteries that can be charged externally and then used to power lights. They provide a portable lighting solution.

Question 77: How many light bulbs of this type does your household use?

This question seeks to determine the number of light bulbs of each type (incandescent light bulbs, fluorescent tubes, and energy-saving light bulbs) that the household uses.

Instructions for the Enumerator:

5. Explain to the respondent that this question relates to the number of light bulbs of each type used in their household.
6. Present the options for the type of bulb one by one and ask for the corresponding number of bulbs.
7. Record the response accurately: For each type of bulb, note the number of bulbs indicated by the respondent in the survey form.

8. Provide a brief description of each type of bulb for clarity.

- Incandescent light bulbs: These are traditional light bulbs that produce light by heating a filament inside the bulb until it glows.
- Fluorescent tubes: These are long, tubular light bulbs commonly found in offices and larger spaces. They produce light by exciting mercury vapor inside the tube using electricity.
- Energy-saving light bulbs: These are compact fluorescent lamps (CFLs) or light-emitting diodes (LEDs) designed to consume less energy while providing efficient lighting.

Question 78: How many hours in total did your household use each type of bulb in the last 24-hour period?

This question aims to determine the total duration of bulb usage for each type (incandescent light bulbs, fluorescent tubes, and energy-saving light bulbs) in the household over the past 24 hours.

Instructions for the Enumerator:

5. Explain to the respondent that this question relates to the total number of hours (and minutes, if applicable) that each type of bulb was used within the past 24 hours.
6. Present the type of bulb options one by one and ask for the corresponding number of hours and minutes.
7. Record the response accurately: For each type of bulb, note the total number of hours and minutes indicated by the respondent in the survey form.
8. If the respondent is not sure about the question, provide a brief description of each type of bulb for clarity.
 - Incandescent light bulbs: These are traditional light bulbs that produce light by heating a filament inside the bulb until it glows.
 - Fluorescent tubes: These are long, tubular light bulbs commonly found in offices and larger spaces. They produce light by exciting mercury vapor inside the tube using electricity.

- Energy-saving light bulbs: These are compact fluorescent lamps (CFLs) or light-emitting diodes (LEDs) designed to consume less energy while providing efficient lighting.

DEMAND AND SUPPLY OF ELECTRICITY

Question 79: Does your household have an electricity connection from any source?

The intention of this question is to determine whether the household has an electricity connection from any source.

Instructions for the Enumerator:

3. Explain to the respondent that this question is about whether their household has an electricity connection.
4. Present the options: "**Yes**" or "**No**".

Record the response accurately: Based on the respondent's answer, mark the appropriate response in the survey form, noting whether the household has an electricity connection or not

Question 80: What is the main source of electricity used by your household?

This question aims to determine the primary source of electricity used by the household.

Instructions for the Enumerator:

3. Introduce the question and present the options for the main source of electricity and instruct the respondent to choose the most applicable option.
4. Record the response accurately: Based on the respondent's answer, mark the appropriate response in the survey form, noting the main source of electricity used by the household.

Clarification

National grid (ZESCO): This refers to electricity provided through the national power grid operated by the electricity utility company, ZESCO Limited.

Local mini-grid: This refers to a localized electricity distribution system that serves a small community or area, often using renewable energy sources such as solar or mini-hydro.

Diesel/Petrol Genset: This refers to using a generator that runs on diesel or petrol fuel to generate electricity for the household.

Solar home system: This refers to a complete solar power system installed in the household, including solar panels, batteries, and other components, to provide electricity for various household needs.

Other (Specify): If none of the above options apply, ask the respondent to specify their household's main source of electricity.

Question 81: Does your household use electricity for the following purposes?

In this question, we intend to determine whether the household uses electricity for specific purposes. The respondent should indicate whether each purpose, listed, applies to their household.

Instructions for the Enumerator:

4. Present the "purpose" options one by one and ask the respondent to indicate whether their household uses electricity for each purpose.
5. For each purpose, record the response accurately by marking either **"Yes"** or **"No"** in the survey form, based on the respondent's answer.
6. If the respondent selects **"Other,"** ask them to specify the additional purpose and record their response accordingly.

Question 82: Would your household be willing to be connected to electricity if made available?

This question aims to determine the household's willingness to be connected to electricity if it becomes available to them.

Instructions for the Enumerator:

5. Explain to the respondent that this question relates to their willingness to be connected to electricity if it becomes available to their household.
6. Present the options: **"Yes"** or **"No"**.
7. Record the response accurately: Based on the respondent's answer, mark the appropriate response in the survey form, noting whether the household would be willing to be connected to electricity if it becomes available.
8. If the respondent answers "No," kindly inform them that you will be skipping the proceeding questions and jumping to question 78.

Question 83: What type of electricity source would your household like to be connected to?

This question aims to determine the type of electricity source the household would like to be connected to?

Instructions for the Enumerator:

3. Introduce the question and present the options for the main source of electricity and instruct the respondent to choose the most applicable option.
4. Record the response accurately: Based on the respondent's answer, mark the appropriate response in the survey form, noting the main source of electricity used by the household.

Clarification

National grid (ZESCO): This refers to electricity provided through the national power grid operated by the electricity utility company, ZESCO Limited.

Local mini-grid: This refers to a localized electricity distribution system that serves a small community or area, often using renewable energy sources such as solar or mini-hydro.

Solar lantern and lighting: This refers to using individual solar-powered lanterns or lighting fixtures to provide electricity for lighting needs in the household.

Rechargeable battery: This refers to using rechargeable batteries that are charged externally and then used to power electrical devices and lighting in the household.

Diesel/Petrol Genset: This refers to using a generator that runs on diesel or petrol fuel to generate electricity for the household.

Pico hydro:

Solar home system: This refers to a complete solar power system installed in the household, including solar panels, batteries, and other components, to provide electricity for various household needs.

Other (Specify): If none of the above options apply, ask the respondent to specify their household's main source of electricity.

Question 84: Would your household be willing to pay an electricity connection fee?

Find out from the respondent whether the household would be willing to pay an electricity connection fee. Determine whether they are aware that to be connected, there is a standard fee that is supposed to be paid for the connection to the grid.

Question 85: How much would your household be willing to pay per month?

This question aims to determine the amount that the household would be willing to pay per month for electricity if it were made available to them.

Instructions for the Enumerator:

4. Explain to the respondent that this question relates to the amount they would be willing to pay per month for electricity if it becomes available to their household.
5. Ask the respondent to provide a specific amount or a range they would be willing to pay.
6. Record the response accurately.

Question 86: What method of payment would your household prefer?

This question aims to determine the preferred method of payment for electricity services by the household. The respondents is expected to choose the option that best represents their household's preference.

Instructions for the Enumerator:

3. Present the options for the method of payment and ask the respondent to indicate their preferred choice.
4. Record the response accurately: Based on the respondent's answer, mark the appropriate response in the survey form, noting their preferred method of payment for electricity services.

Clarifications:

6. **Outright cash payment:** The household prefers to make a one-time cash payment for electricity services.
7. **Independent cash instalments:** The household prefers to make periodic cash payments in instalments for electricity services.
8. **Through the electricity bill as part payment:** The household prefers to include the electricity payment as part of their regular monthly bill, such as a combined electricity utility bill.

9. **In-kind payment (e.g., farm produce, assets, labor, etc.):** The household prefers to make payment for electricity services through non-cash means, such as offering farm produce, assets, labor, or other goods/services in exchange.
10. **Direct deduction from your monthly salary:** The household prefers to have the electricity payment automatically deducted from their monthly salary, if applicable.

Question 87: What is the main reason for your household requiring to get connected to electricity?

This question aims to determine the importance of the given reasons for the household's decision to connect to the national grid. For each reason provided, the respondent is expected to indicate whether it is a major reason, a minor reason, or not a reason at all for your household's decision to connect.

Instructions for the Enumerator:

3. Explain to the respondent that this question focuses on understanding the reasons behind their household's decision to connect to the national grid.
4. Record the response accurately: Mark the appropriate code for each reason in the survey form based on the respondent's answer. If the respondent selects "**Other**" for reason 8, ask them to specify the additional reason and record their response accordingly.

Question 88: Why would you not want your household to be connected to electricity?

This question aims to understand the reasons why the household may not want to be connected to electricity. The respondent is expected to choose the option that best represents their household's reason.

Instructions for the Enumerator:

3. Present the options for the reasons and ask the respondent to indicate their specific reason for not wanting their household to be connected to electricity.
4. Record the response accurately: Based on the respondent's answer, mark the appropriate response in the survey form, noting their specific reason.

Additional Information:

7. **Cannot afford connection fee:** The household cannot afford the initial fee required to connect to electricity.

8. **Cannot afford units/monthly payment:** The household cannot afford the cost of purchasing electricity units or making monthly payments.
9. **Cannot afford the cost of wiring:** The household cannot afford the expenses associated with installing electrical wiring.
10. **Cannot afford to buy electrical appliances:** The household cannot afford the cost of purchasing electrical appliances to utilize electricity.
11. **We do not see any use of electricity:** The household does not perceive any significant need or use for electricity.
12. **Other (Specify):** If the respondent selects this option, ask them to provide further details about their specific reason.

NATIONAL GRID ELECTRICITY

Question 89: What is the main reason your household is not connected to electricity?

This question aims to identify the primary reason why the household is currently not connected to electricity. The respondent is expected to select the option that best represents the main reason.

Instructions for the Enumerator:

3. Present the options for the reasons and ask the respondent to indicate the main reason why their household is not connected to electricity.
4. Record the response accurately: Based on the respondent's answer, mark the appropriate response in the survey form, noting the main reason.

Clarifications:

9. **Electricity is not available in my area:** The household does not have access to electricity due to its unavailability in their area.
10. **Can't pay the connection fee:** The household is unable to afford the fee required to connect to the electricity supply.
11. **Can't pay the cost of house wiring:** The household cannot afford the expenses associated with wiring their house for electricity.
12. **Can't afford the monthly payment:** The household is unable to afford the regular monthly payment for electricity services.
13. **Cannot afford to buy electrical appliances:** The household cannot afford the cost of purchasing electrical appliances required to utilize electricity.
14. **We are satisfied with the present energy source:** The household is content with its current energy source and does not feel the need to be connected to electricity.
15. **We do not see any use of electricity:** The household does not perceive any significant need or use for electricity.
16. **Other reason (Specify):** If the respondent selects this option, ask them to provide further details about their specific reason.

Question 90: Do you expect to get connected to electricity?

This question aims to understand the household's expectation regarding future connection to electricity.

Instructions for the Enumerator:

3. Introduce the question and present the options for the expectations and ask the respondent to indicate their expectation regarding future connection to electricity.
4. Record the response accurately: Based on the respondent's answer, mark the appropriate response in the survey form, noting their expectation.

Options:

4. **Yes:** The household expects to be connected to electricity in the future.
5. **No:** The household does not expect to be connected to electricity in the future.

6. **Don't know:** The household is unsure or has no definite expectation regarding future connection to electricity.

Question 91: When do you expect to get a national grid connection?

The purpose of this question is to gather information about the household's expected timeline for receiving a national grid connection.

Instructions for the Enumerator:

2. Read the question and present the options for the expected timeline and ask the respondent to indicate their expected timeframe for receiving a national grid connection.

Record the response accurately indicating the corresponding cord (1,2,3, or 4): Based on the respondent's answer, mark the appropriate response in the survey form, noting their expected timeline

Question 92: Once the connection fee is paid, how long does it take to be connected to the national grid?

This question aims to gather information about the expected timeframe for the household to be connected to the national grid after paying the connection fee.

Instructions for the Enumerator:

4. Read the question and present the options for the expected timeframe.
5. Ask the respondent to indicate their expected timeline for being connected to the national grid after paying the connection fee.
6. Record the response code (1, 2, 3, 4 or 5) accurately based on the respondent's answer, in the survey form.

Codes:

6. Within 14 working days: The household expects to be connected to the national grid within a period of 14 working days after paying the connection fee.
7. 15 to 30 working days: The household expects to be connected to the national grid within a period of 15 to 30 working days after paying the connection fee.
8. 3 to 5 months: The household expects to be connected to the national grid within a period of 3 to 5 months after paying the connection fee.
9. 6 months: The household expects to be connected to the national grid within a period of 6 months after paying the connection fee.

10. Above 6 months: The household expects to be connected to the national grid after a period of more than 6 months after paying the connection fee.

Question 93: How many years have you had this national grid connection?

This question aims to determine the duration for which the household has had the national grid connection. The respondent is expected to provide the number of years.

Instructions for the Enumerator:

3. Read the question and ask the respondent to provide the number of years they have had the national grid connection.
4. Record the response accurately: Write down the number of years mentioned by the respondent in the survey form.

Question 94: How much did your household pay for the national grid connection?

The purpose of this question is to gather information about the amount of money the household paid for the national grid connection.

Instructions for the Enumerator:

3. Introduce the question and ask the respondent to indicate the amount of money their household paid for the national grid connection.
4. Write down the specific amount mentioned by the respondent in the survey form.

Note: If the respondent is unsure about the exact amount, encourage them to provide an approximate figure to the best of their knowledge. If possible ask for a receipt or ZESCO quotation.

Question 95: How many days after you applied for the national grid connection did your housing unit get connected?

This question aims to gather information about the duration between the application for national grid connection and the actual connection of the household unit.

Instructions for the Enumerator:

4. Introduce/read the question and present the options for the timeframe.
5. Ask the respondent to indicate the duration between their application for national grid connection and the actual connection of their housing unit.

6. Record the response accurately based on the respondent's answer and mark the corresponding code (1,2,3,4 or g) in the survey form.

Code (s):

6. Within 14 working days: The household unit was connected to the national grid within 14 working days after applying for the connection.
7. 15 to 30 working days: The household unit was connected to the national grid within 15 to 30 working days after applying for the connection.
8. 3 to 5 months: The household unit was connected to the national grid within 3 to 5 months after applying for the connection.
9. 6 months: The household unit was connected to the national grid within 6 months after applying for the connection.
10. Above 6 months: The household unit was connected to the national grid after a period of more than 6 months after applying for the connection.

Question 96: How many hours of electricity are available each day from the national grid?

The intention of this question is to determine the number of hours of electricity available each day from the national grid.

Instructions for the Enumerator:

3. Read the question and ask the respondent to estimate the average number of hours of electricity available each day from the national grid.
4. Record the response accurately.

Note: If the respondent is unsure about the exact number of hours, encourage them to provide an estimate or their best approximation.

Question 97: In the last 7 days, how many hours of electricity were available each evening on average, from 18:00 to 22:00 hours from the national grid? (Maximum 4 hours)

The purpose of this question is to determine the average number of hours of electricity available each evening during a specific time frame (18:00 to 22:00 hours) from the national grid in the past 7 days.

Instructions for the Enumerator:

3. Introduce the question and ask the respondent to estimate the average number of hours of electricity available each evening from 18:00 to 22:00 hours in the past 7 days.
4. Record the response accurately: Write down the specific number of hours mentioned by the respondent in the survey form.

Note: If the respondent is unsure about the exact number of hours, encourage them to provide an estimate or their best approximation. If they are uncertain or do not know, mark the response as "Don't know/unsure"

Question 98: In the last 7 days, how many times were there unscheduled outages or blackouts from electricity from the national grid?

This question aims to determine the number of unscheduled outages or blackouts experienced from electricity supplied by the national grid in the past 7 days.

Instructions for the Enumerator:

3. Read the question and prompt the respondent to recall and indicate the number of unscheduled outages or blackouts they experienced from the national grid in the past 7 days.
4. Record the response accurately: Write down the specific number mentioned by the respondent in the survey form.

Note: If the respondent is unsure about the exact number of outages or blackouts, encourage them to provide an estimate or their best approximation. If they are uncertain or do not know, mark the response as "Don't know/unsure".

Question 99: What is the total duration of all the unscheduled outages or blackouts in the last 7 days?

This question aims to determine the total duration of all the unscheduled outages or blackouts experienced from the national grid in the past 7 days.

Instructions for the Enumerator:

3. Introduce the question and let the respondent to estimate the total duration of all the unscheduled outages or blackouts they experienced from the national grid in the past 7 days.
4. Record the response accurately: Write down the specific duration mentioned by the respondent in terms of hours and/or minutes in the survey form.

Note: If the respondent is unsure about the exact duration, encourage them to provide an estimate or their best approximation. If they are uncertain or do not know, mark the response as "Don't know/unsure".

Question 100: In the last 12 months, did any of this household's appliances get damaged due to fluctuations in voltage from electricity from the national grid?

This question aims to determine whether any of the household's appliances were damaged due to voltage fluctuations from the national grid within the past 12 months.

Instructions for the Enumerator:

3. Present the options "**Yes**" and "**No**" to the respondent and ask them if any of their household appliances were damaged due to voltage fluctuations from the national grid in the last 12 months.
4. Record the response accurately: Mark the appropriate response in the survey form based on the respondent's answer.

Question 101: In the last 12 months, did anyone in this household experience the followingfrom using electricity from the national grid?

This question aims to determine if anyone in the household has experienced any adverse events or incidents related to using electricity from the national grid within the past 12 months.

Instructions for the Enumerator:

1. Introduce the question and present the options "Yes" or "No" for each category mentioned: Death, Permanent limb damage, and Body injury.
2. If the respondent selects "Yes" for any category, mark the corresponding code number (1, 2, or 3) in the survey form.
3. If the respondent selects "Other specify," allow them to provide further details and record their response accurately in the provided space.

Question 102: How do you contact your electricity service provider to request for a service or file a complaint?

This question aims to determine the methods or channels through which the respondent contacts their electricity service provider to request services or file complaints.

Instructions for the Enumerator:

4. Read the question and present the options to the respondent:
5. If the respondent selects any of the given options, mark the corresponding code number (1 to 7) in the survey form.
6. If the respondent selects "Other specify," allow them to provide further details and record their response accurately in the provided space.

Question 103: The last time you reported a fault, how long did it take for it to be rectified?

This question aims to determine the duration it took for the electricity service provider to rectify a fault or issue after it was reported by the respondent.

Instructions for the Enumerator:

4. Introduce the question and present the options to the respondent.
5. If the respondent selects any of the given options, mark the corresponding code number (1 to 5) in the survey form.
6. If the respondent selects "Other specify," allow them to provide further details and record their response accurately in the provided space.

Question 104: The last time you requested for an undertaking (meter separation, inspection, energy audit etc) from your electricity service provider, how long did it take to get feedback?

This question aims to determine the duration it took for the electricity service provider to provide feedback on a requested service, such as meter separation, inspection, energy audit, or others.

Instructions for the Enumerator:

4. Introduce the question and present the options to the respondent.
5. If the respondent selects any of the given options, mark the corresponding code number (1 to 5) in the survey form.
6. If the respondent selects "Other specify," allow them to provide further details and record their response accurately in the provided space.

Question 105: Does your household have an electric meter?

This question seeks to determine whether the household has a device called an electric meter.

An electric meter is a device used to measure the amount of electricity consumed by a household. It helps in keeping track of the electricity usage and is typically installed by the electricity service provider.

Instructions for the Enumerator:

3. Read the question and present the options to the respondent.
4. If the respondent selects any of the given options, mark the corresponding code number (1 to 3) in the survey form.

Question 106: What type of a meter does your household use?

This question aims to determine the type of meter used by the household to measure electricity consumption.

Instructions for the Enumerator:

4. Read the question and present the options to the respondent:
5. If the respondent selects Prepaid, mark the number 1 in the survey form.
6. If the respondent selects Postpaid, mark the number 2 in the survey form.

In the event that the respondent is not sure, explain to the respondent that:

- A Prepaid meter is a type of meter where electricity is paid for in advance. Users purchase electricity credits or tokens and load them onto the meter, and the electricity supply is deducted based on usage until the credits are exhausted.
- A Postpaid meter is a type of meter where electricity is billed after consumption. Users receive a monthly bill from the electricity service provider based on the amount of electricity used during that period.

Question 107: How many housing units are sharing this meter?

This question is applicable only if the respondent selected "Yes shared" in question 95, indicating that the electric meter is shared among multiple housing units. In this question, the respondent is expedited to provide the number of housing units that share the same meter.

Instructions for the Enumerator:

3. Read the question and let the respondent indicate the number of units sharing the same meter.
4. Record the response accurately in the survey form.

Question 108: In your opinion, your household electricity supply during the dry season is:

This question seeks to gather the respondent's opinion on the reliability and consistency of their electricity supply specifically during the dry season.

Instructions for the Enumerator:

4. Read the question and present the options to the respondent.
5. If the respondent selects **Normal**, mark the number 1 in the survey form.
6. If the respondent selects **Regular**, mark the number 2 in the survey form.
7. If the respondent is unsure and selects **Do not know**, mark the number 3 in the survey form.

Please note that "**reliability**" refers to the ability of the electricity supply to function consistently without interruptions or disruptions, while "**consistency**" refers to the steady and predictable availability of electricity without frequent fluctuations or outages.

Question 109: During the dry season, could you please estimate the number of hours (in total) electricity service has not been available to your housing unit due to electricity cuts or blackouts?

This question aims to gather your estimation of the total hours of electricity unavailability specifically during the dry season.

Instructions for the Enumerator:

5. Explain to the respondent that this question seeks their estimation of the total number of hours they experienced electricity cuts or blackouts during the dry season.
6. Present the options to the respondent:
 - If they can provide an estimation of the number of hours, they should select "Number of hours" (option 1) and enter the corresponding number in the survey form.
 - If they have not experienced any electricity cuts or blackouts during the dry season, they should select "Never" (option 2) and mark it in the survey form.

- If they are unsure about the number of hours or unable to provide an estimation, they should select "Do not know" (option 3) and enter "999" in the survey form.
7. If the respondent selects "Number of hours" (option 1), kindly request them to provide the estimated number of hours and record it accurately in the survey form.
 8. If the respondent selects "Do not know" (option 3), ensure to enter "999" as the response in the survey form.

Question 110: In your opinion, your household electricity supply during the rainy season is:

This question aims to gather the respondent's opinion on the reliability of electricity supply specifically during the rainy season.

Instructions for the Enumerator:

3. Explain to the respondent that this question seeks their opinion on the reliability of electricity supply during the rainy season.
4. Present the options to the respondent:
 - If they believe the electricity supply is normal during the rainy season, they should select "Normal" (option 1) and mark it in the survey form.
 - If they perceive the electricity supply to be regular and consistent during the rainy season, they should select "Regular" (option 2) and mark it in the survey form.
 - If they are unsure about the reliability of the electricity supply during the rainy season, they should select "Do not know" (option 3) and mark it in the survey form.

Question 111: During the rainy season, could you please estimate the number of hours (in total) electricity service has not been available to your housing unit due to electricity cuts or blackouts?

This question aims to gather your estimation of the duration of electricity service interruptions specifically during the rainy season

Instructions for the Enumerator:

3. Explain to the respondent that this question seeks their estimation of the total number of hours when electricity service was unavailable due to cuts or blackouts during the rainy season.
4. Present the options to the respondent:
 - If they can estimate the number of hours, they should provide the specific number in the designated space on the survey form.
 - If they have never experienced any electricity cuts or blackouts during the rainy season, they should select "Never" and mark it in the survey form.
 - If they are unsure or do not have an estimate, they should enter "999" in the space provided on the survey form.

Question 112: In case of power failure from the National grid, what is the main backup source used by the household, if any?

This question aims to determine the primary backup sources used by the household in case of power failure from the National grid. For each category (lighting, cooking and heating, electrical appliances), please select the applicable backup source(s) used by the household.

Instructions for the Enumerator:

5. Explain to the respondent that this question relates to the backup sources they use in case of a power failure from the National grid for lighting, cooking and heating, and electrical appliances.
6. Present the options for each category and ask the respondent to select the appropriate backup source(s).
7. Record the response accurately by marking the corresponding option(s) in the survey form for each category.
8. If the respondent selects "Other," kindly ask them to specify the backup source they use.
9. Thank the respondent for their cooperation.

MINI-GRID ELECTRICITY

Question 113: What is the name of the local mini-grid?

This question specifically applies to households that selected option 2 (Local mini-grid) in Question 1. If your household is not connected to a local mini-grid, inform the respondent that you will skip this question.

Instructions for the Enumerator:

3. Read the question and ask the respondent if their household is connected to a local mini-grid.
4. If the respondent confirms that they are connected to a local mini-grid, ask them to provide the name of the local mini-grid.
5. Record the name of the local mini-grid accurately in the survey form.

If the respondent is unsure or does not know the name of the local mini-grid, mark the response as "Unknown" or "Not provided."

Question 114: Is there a limit to the load and/or appliances you are allowed to power from this mini-grid connection?

This question aims to determine if there are any restrictions or limitations on the load and/or appliances that households connected to the mini-grid are allowed to power.

Instructions for the Enumerator:

3. Read the question and ask the respondent if there are any restrictions or limitations on the load and/or appliances they are allowed to power from their mini-grid connection.
4. Present the options:
 - If there are limitations, mark the response as "Yes."
 - If there are no limitations, mark the response as "No."
 - If the respondent is unsure or doesn't know, mark the response as "Don't know."
5. Record the response accurately in the survey form.

Note: Some mini-grid systems may impose restrictions on the load and appliances to manage the available power supply effectively.

Question 115: How many years have you had this mini-grid connection?

This question seeks to determine the duration of time the household has been connected to the local mini-grid.

Instructions for the Enumerator:

4. Ask the respondent how many years they have had the mini-grid connection.
5. Record the response accurately in the survey form.
6. If the respondent is unsure or doesn't know the exact number of years, ask them to provide an estimate.
7. If the household is not connected to a mini-grid, skip this question.

Question 116: How much did your household pay for the mini-grid connection?

This question aims to gather information about the cost incurred by the household for connecting to the local mini-grid.

The mini-grid is a localized electricity distribution system that generates and distributes power to a small community or cluster of households.

Instructions for the Enumerator:

4. Explain to the respondent that you would like to know the amount of money their household paid for the mini-grid connection.
5. Inquire about the specific cost they incurred for the connection.
6. Record the response accurately in the survey form.

Question 117: How long after you applied for the mini-grid connection did your household get connected?

This question aims to gather information about the time it took for the household to get connected to the local mini-grid after applying for the connection.

Instructions for the Enumerator:

3. Explain to the respondent that you would like to know the duration between their application for the mini-grid connection and the actual connection.
4. Present the response options and ask the respondent to choose the appropriate one.
5. Record the response accurately in the survey form.

Question 118: Who receives the payment for your electricity service?

This question aims to determine the entity or individual that receives the payment for the household's electricity service. Please select the most appropriate option below:

5. **Energy Company:** The payment is made directly to the energy company or utility provider that supplies electricity to your area.
6. **Pre-paid meter card seller:** The payment is made to a seller or distributor of pre-paid meter cards, which are used to purchase electricity units for your pre-paid meter.
7. **Community/village representative:** The payment is made to a representative or designated person within your community or village who collects and manages the electricity service payments on behalf of the residents.
8. **Other (please specify):** If none of the above options apply, please provide additional details regarding who receives the payment for your electricity service.

Instructions for the Enumerator:

4. Explain to the respondent that you would like to know to who they make their electricity service payments.
5. Read out the options and ask the respondent to choose the most accurate one.
6. If the respondent selects "Other (please specify)," request them to provide additional details.
7. Record the response accurately in the survey form.

Question 119: How many hours of electricity are available each day from the mini-grid?

This question aims to determine the average number of hours per day that electricity is available from the mini-grid. The respondent is expected to provide the estimated time in number of hours.

Instructions for the Enumerator:

3. Explain to the respondent that you are interested in knowing the average number of hours per day that electricity is available from the mini-grid.
4. Read out the options and ask the respondent to give the number of hours.

5. Record the response accurately in the survey form.

Question 120: How many outages/blackouts occur in a week?

This question aims to determine the frequency of outages or blackouts experienced by the mini-grid in a typical week. If the respondent is not sure encourage them to provide the estimated number using the options below:

7. Daily
8. Several times per week
9. Once per week
10. Occasionally (less than once per week)
11. Never
12. Don't know / unsure

Instructions for the Enumerator:

3. Explain to the respondent that you are interested in knowing how often they experience outages or blackouts from the mini-grid in a week.
4. Record the response accurately in the survey form.

Question 121: What is the total duration of all the outages/blackouts in a week?

This question aims to determine the cumulative duration of outages or blackouts experienced from the mini-grid in a typical week.

Instructions for the Enumerator:

3. Explain to the respondent that you are interested in knowing the total duration of outages or blackouts they experience from the mini-grid in a week.
4. Record the response accurately in the survey form.
5. Thank the respondent for their participation.

Question 122: How do you contact your electricity service provider to request for a service or file a complaint?

This question aims to understand the methods available for contacting the electricity service provider regarding service requests or complaints. Request the respondent to select the most appropriate option from the list provided.

Instructions for the Enumerator:

4. Explain to the respondent that you are interested in knowing how they can contact their electricity service provider for service requests or complaints.
5. Read out the options and ask the respondent to choose the method they prefer or commonly use.
6. If the respondent selects option 7, "Other," ask them to specify the alternative method they use.
7. Record the response accurately in the survey form.

Question 123: The last time you reported a fault, how long did it take to be rectified?

The question seeks to gather information on the number of hours that it took for the fault to be rectified after reporting it. The respondent is expected to choose from the options provided.

Instructions for the Enumerator:

4. Explain to the respondent that you are interested in knowing the time it took for their reported fault to be rectified by the electricity service provider.
5. Read out the options and ask the respondent to choose the timeframe that best matches their experience.
6. If the respondent selects option 5, "Never reported a fault," proceed to the next question.
7. Record the response accurately in the survey form.

Question 124: The last time you requested for an undertaking (meter separation, inspection, energy audit etc) from your electricity service provider, how long did it take to get feedback?

This question aims to gather information about the timeframe it took for the electricity service provider to respond to a service request. Ask the respondent to select the most appropriate option given list.

Instructions for the Enumerator:

3. Explain to the respondent that you are interested in knowing the time it took for them to receive feedback from the electricity service provider after requesting a service.
4. Read out the options and ask the respondent to choose the timeframe that best matches their experience.

5. If the respondent selects option 5, "Never requested for a service," proceed to the next question.
6. Record the response accurately in the survey form.

Question 125: What challenges does your household experience with the mini-grid? (MULTI-RESPONSE)

The purpose of this question is to identify the challenges that households may experience with the mini-grid. It helps gather information about the specific issues faced by households in relation to the reliability, voltage, interruptions, billing, trust, appliance compatibility, maintenance, and other aspects of the mini-grid system.

Instructions to the Enumerator:

5. Read out the options to the respondent clearly and ensure they understand each option.
6. Explain that the respondent should select all the challenges their household experiences with the mini-grid.
7. If the respondent is unfamiliar with any technical jargon, provide simple explanations to ensure their understanding.
8. If the respondent chooses option 13, "**Other**," politely ask them to specify the challenge they face and record their response.

Additional Information:

13. **Supply shortage/not enough hours of electricity:** This refers to situations where there is an insufficient supply of electricity from the mini-grid, leading to a limited number of hours of electricity available to the household.
14. **Low voltage:** This means the voltage level provided by the mini-grid is lower than the standard level required for the proper functioning of electrical appliances and equipment.
15. **High voltage:** This refers to situations where the voltage level provided by the mini-grid is higher than the standard level, which can potentially damage electrical appliances and pose safety risks.
16. **Voltage fluctuations:** This refers to frequent and unpredictable changes in the voltage level supplied by the mini-grid, which can cause damage to electrical appliances and disrupt their normal operation.

17. **Unpredictable interruptions:** This includes unexpected and irregular interruptions or blackouts in the supply of electricity from the mini-grid, resulting in periods without power.
18. **Unexpected high bills:** This refers to instances where the household receives electricity bills from the mini-grid that are higher than anticipated or not in line with their electricity usage.
19. **Too expensive:** This option signifies that the household finds the cost of the electricity provided by the mini-grid to be unaffordable or excessively high.
20. **Do not trust the supplier:** This indicates a lack of trust or confidence in the mini-grid service provider, possibly due to previous negative experiences or concerns about service quality.
21. **Cannot power large appliances:** This refers to the inability of the mini-grid to support the power requirements of larger electrical appliances, such as air conditioners, refrigerators, or water heaters.
22. **Maintenance/service problems:** This option encompasses challenges related to the maintenance and servicing of the mini-grid, including delays in repairs, difficulties in accessing technical support, or inadequate maintenance practices.
23. **Unpredictable bills:** This signifies instances where the household receives electricity bills from the mini-grid that vary significantly from month to month without a clear understanding of the factors contributing to the fluctuations.
24. **No problems:** This option indicates that the household does not currently face any challenges with the mini-grid system.
25. **Other:** If the respondent selects this option, politely ask them to specify the particular challenge they face with the mini-grid and record their response accurately.

Question 126: In your opinion, your household electricity supply during the dry season is:

This question aims to gather the respondent's perception of the electricity supply in their household during the dry season. It helps to assess their satisfaction or dissatisfaction with the reliability and consistency of the electricity service during this specific period.

Instructions to the enumerator:

7. Read out the question clearly and ensure that the respondent understands the meaning of **"dry season."** (Clarify that the dry season is a period characterized by low rainfall and typically experiences dry weather conditions.)
8. Explain that the question seeks their opinion regarding the electricity supply during the dry season.
9. Instruct the respondent to choose one of the following options:
 - Option 1: **"Normal"** (Select this option if the electricity supply during the dry season is consistent and meets their expectations.)
 - Option 2: **"Regular"** (Select this option if the electricity supply during the dry season is reliable and consistent without frequent disruptions or outages.)
 - Option 3: **"Do not know"** (Select this option if the respondent is unsure or lacks sufficient information to form an opinion on the electricity supply during the dry season.)
10. Record the response provided by the respondent accordingly.

Note: Emphasize that their response should reflect their perception and experience with the electricity supply during the dry season.

Question 127: During the dry season, could you please estimate the number of hours (in total) electricity service has not been available to your housing unit due to electricity cuts or blackouts?

This question aims to gather an estimation from the respondent regarding the total number of hours during the dry season when electricity service was unavailable in their housing unit due to electricity cuts or blackouts. It helps to assess the frequency and duration of power outages during this specific period.

Instructions to the enumerator:

5. Read out the question clearly and explain that it pertains to the dry season specifically.
6. Instruct the respondent to estimate and provide the number of hours (in total) during the dry season when electricity service was not available in their housing unit due to electricity cuts or blackouts.
7. Present the following response options:

- Option 1: **"Number of hours"** (Choose this option if the respondent can estimate the total number of hours without electricity during the dry season. Record the specific number provided by the respondent.)
- Option 2: **"Never"** (Choose this option if the respondent did not experience any power outages during the dry season.)
- Option 3: **"Do not know (enter 999)"** (Choose this option if the respondent is unsure or does not have the necessary information to provide an estimation.)

8. Record the response provided by the respondent accordingly.

Question 128: In your opinion, your household electricity supply during the rainy season is:

This question aims to assess the respondent's perception of their household's electricity supply during the rainy season. It helps to gather information about the consistency and reliability of electricity service during this specific period.

Instructions to the enumerator:

7. Clearly read out the question and specify that it refers to the rainy season.
8. Explain to the respondent that you would like to know their opinion regarding the electricity supply in their household during the rainy season.
9. Present the following response options:
 - Option 1: **"Normal"** (Choose this option if the respondent considers the electricity supply during the rainy season to be normal, meaning it meets their expectations and operates without significant issues.)
 - Option 2: **"Regular"** (Choose this option if the respondent perceives the electricity supply during the rainy season to be regular, indicating consistent and reliable service without frequent disruptions.)
10. Instruct the respondent to choose the most appropriate response that aligns with their perception of the electricity supply during the rainy season.
11. Record the response provided by the respondent accordingly.

Note: Ensure that the respondent understands the distinction between "normal" and "regular" in terms of their electricity supply during the rainy season. "Normal" refers to the supply meeting their general expectations, while "regular" implies consistent and reliable service without frequent interruptions.

Question 129: During the rainy season, could you please estimate the number of hours (in total) electricity service has not been available to your housing unit due to electricity cuts or blackouts?

This question aims to gather information about the extent of electricity service interruptions or blackouts experienced by the respondent's household during the rainy season. It helps in assessing the reliability and availability of electricity during this specific period.

Instructions to the enumerator:

7. Clearly read out the question and specify that it pertains to the rainy season.
8. Explain to the respondent that you would like them to estimate the total number of hours when their housing unit did not have electricity service due to cuts or blackouts during the rainy season.
9. Present the following response options:
 - Option 1: **"Number of hours"** (Choose this option if the respondent can provide an estimate of the total hours without electricity during the rainy season.)
 - Option 2: **"Never"** (Choose this option if the respondent did not experience any electricity cuts or blackouts during the rainy season.)
 - Option 3: **"Do not know (enter 999)"** (Choose this option if the respondent is unsure or does not have the necessary information to provide an estimate.)
10. Instruct the respondent to choose the most appropriate response based on their experience during the rainy season.
11. If the respondent selects option 1, ask them to provide the estimated number of hours without electricity.
12. Record the response provided by the respondent accordingly.

Note: Ensure that the respondent understands that they need to estimate the total hours without electricity specifically during the rainy season. Emphasize that their response should reflect the actual interruptions or blackouts experienced during that period.

Question 130: In case of power failure from the Mini-grid, what is the main backup source used by the household, if any?

This question aims to gather information about the backup sources used by households in case of power failures from the mini-grid.

Instructions to the enumerator:

7. Clearly read out the question to the respondent, specifying that it pertains to power failures from the mini-grid.
8. Explain that you would like to know the main backup source used by the household in different areas (lighting, cooking and heating, and electrical appliances) when there is a power failure from the mini-grid.
9. For each area (lighting, cooking and heating, and electrical appliances), present the options.
10. Instruct the respondent to choose the option that best represents their household's main backup source in each area during power failures from the mini-grid.
11. Record the response provided by the respondent accordingly.
12. If the respondent selects option 9 in any area, "Other Specify," politely ask them to describe the specific backup source they use. Ensure to note the backup source accurately and allow the respondent to provide their explanation and record it accurately.

Note: Emphasize that the question focuses on the backup sources used specifically during power failures from the mini-grid. Ensure that the respondent understands the options provided and can choose the most appropriate one or provide their own explanation if necessary.

SOLAR HOME SYSTEM

Question 131: How many months has it been since your household had solar home system installed?

This question aims to gather information about the duration since the household had a solar home system installed.

Instructions to the enumerator:

5. Clearly read out the question to the respondent, explaining that you would like to know how many months it has been since their household had a solar home system installed.

6. Ask the respondent to provide the number of months or years since the installation of the solar home system.
7. Record the response provided by the respondent.
8. If the respondent is unsure or does not know the exact number of months, politely ask them to estimate or provide an approximate duration.

Question 132: How much did your household purchase the Solar home system?

This question aims to gather information about the cost incurred by the household for purchasing the Solar home system.

Instructions for the Enumerator:

4. Explain to the respondent that you would like to know the amount of money their household paid for the mini-grid connection.
5. Inquire about the specific cost they incurred for the connection.
6. Record the response accurately in the survey form.

Question 133: What challenges does your household experience with the solar home system? (MULTI-RESPONSE)

This question aims to identify the challenges or difficulties that households may face in using a solar home system as their electricity source.

Instructions to the enumerator:

7. Read out the question to the respondent, explaining that you would like to know the challenges they experience with their solar home system.
8. Read out each response option and ask the respondent to select all the options that apply to their situation.
9. If the respondent selects "Other specify," provide a blank space for them to provide additional details regarding the specific challenge they face.
10. Record all the selected options or the respondent's specific challenge in the appropriate response spaces.
11. If the respondent indicates that they do not experience any challenges with their solar home system, select the option "No problem."
12. Ensure that the respondent understands the question and selects the most relevant options based on their experience with the solar home system.

Note: Encourage the respondent to provide detailed and accurate information regarding the challenges they face, as this will contribute to a better understanding of the limitations and areas of improvement for solar home systems.

Question 134: In the last 12 months, how many times has your solar home system broken down? If didn't break down enter 0

This question aims to assess the reliability and maintenance requirements of the solar home system by asking the frequency of breakdowns within the past 12 months. It provides insights into the performance and durability of the system.

Instructions to the enumerator:

6. Explain to the respondent that you would like to know how many times their solar home system has experienced breakdowns or failures in the last 12 months.
7. If the respondent indicates that their solar home system did not break down at all during this period, enter 0 as the response and skip to question (Q129).
8. If the respondent mentions any instances of breakdowns, ask them to provide the number of times it occurred and record the response accordingly.
9. Ensure that the respondent understands the question and provides accurate information based on their recollection of the breakdown incidents.
10. Encourage the respondent to provide an honest and accurate response to capture the reliability of their solar home system.

Note: It is important to differentiate between breakdowns and scheduled maintenance or repairs. Focus specifically on unexpected failures or malfunctions of the solar home system.

Question 135: When the Solar home system had broken down, which of the following parts broke down?

This question aims to identify the specific components of the solar home system that have experienced breakdowns or failures.

Instructions to the enumerator:

6. Explain to the respondent that you would like to know which part or component of their solar home system broke down when it experienced failures or breakdowns.

7. Read out the options clearly and ask the respondent to select the relevant part(s) that were affected during the breakdowns.
8. If multiple parts were affected, allow the respondent to select all applicable options.
9. If the respondent mentions a part that is not listed as an option, ask them to specify the part in the "Other" option.
10. Record the responses accurately based on the respondent's selection.

Question 136: If solar home system breaks down, how do you have it repaired?

This question aims to gather information about the repair process followed by households when their solar home system breaks down. Understanding the repair methods helps in assessing the accessibility and availability of repair services for solar home systems.

Instructions to the enumerator:

7. Ask the respondent about the repair process they follow when their solar home system breaks down.
8. Read out the options clearly and ask the respondent to select the appropriate response.
9. If the respondent mentions a repair method that is not listed as an option, ask them to specify the method in the "Other" option.
10. Record the responses accurately based on the respondent's selection.
11. Ensure that the respondent understands the question and provides the most relevant and specific information about their repair process.
12. Encourage the respondent to provide an honest and accurate response to capture the common repair methods used for solar home systems in their area.

Question 137: In the last 12 months, how much did your household spend on repairing the solar home system?

This question aims to gather information about the repair expenses incurred by households for their solar home systems. Understanding the repair costs helps in assessing the financial implications and affordability of maintaining and repairing solar home systems.

Instructions to the enumerator:

8. Ask the respondent about the amount of money their household spent on repairing the solar home system components in the last 12 months.
9. Read out the options clearly and ask the respondent to select the appropriate response for each component repaired.
10. If the respondent mentions repair expenses for a component not listed as an option, ask them to specify the component and the amount spent in the "Other" option.
11. Record the responses accurately based on the respondent's selection and the amount spent in ZMW (Zambian Kwacha).
12. If the respondent indicates that they did not repair any component, record the response as "Did not repair."
13. Ensure that the respondent understands the question and provides the most accurate information about the repair expenses for their solar home system.
14. Encourage the respondent to provide an honest and accurate response to capture the actual repair costs incurred by their household.

Question 138: In your opinion, your household electricity supply during the dry season is:

This question aims to gather the perception of the household regarding the electricity supply during the dry season.

Instructions to the enumerator:

1. Explain to the respondent that this question is about their opinion regarding the electricity supply during the dry season.
2. Read out the options clearly and ask the respondent to select the most appropriate response.
3. If the respondent is unsure or does not have an opinion, record the response as "Do not know."
4. For the options "Normal" and "Regular," ask the respondent to indicate whether they perceive the electricity supply during the dry season as "**Yes**" or "**No**."

Question 139: During the dry season, could you please estimate the number of hours (in total) electricity service has not been available to your housing unit due to electricity cuts or blackouts?

This question aims to gather information about the duration of electricity service unavailability due to cuts or blackouts during the dry season.

Instructions to the enumerator:

1. Explain to the respondent that this question is about estimating the total number of hours when electricity service was not available to their housing unit during the dry season due to cuts or blackouts.
2. Read out the response options clearly and ask the respondent to select the most appropriate response.
3. If the respondent has experienced electricity cuts or blackouts during the dry season, ask them to estimate the number of hours. If they are unsure, encourage them to provide their best estimate.
4. If the respondent has never experienced any electricity cuts or blackouts during the dry season, record their response as **"Never."**
5. If the respondent is uncertain and does not know the exact number of hours, record their response as **"Do not know"**, and enter **999**.

Question 140: In your opinion, your household electricity supply during the rainy season is:

This question aims to gather information about the reliability and consistency of electricity supply during the rainy season.

Instructions to the enumerator:

3. Explain to the respondent that this question is about their opinion regarding the electricity supply during the rainy season.
4. Read out the response options and provide a brief explanation of the terms "Normal" and "Regular" to ensure clarity:

"Normal": The electricity supply is considered to be within the expected range, without significant interruptions or issues.

"Regular": The electricity supply is consistent and follows a predictable pattern without frequent disruptions or irregularities.
5. If the respondent perceives their electricity supply during the rainy season as **"Normal,"** ask them to select **"Yes"** to indicate that it is normal.
6. If the respondent perceives their electricity supply during the rainy season as **"Regular,"** ask them to select **"Yes"** to indicate that it is regular.

7. If the respondent is uncertain about the quality of the electricity supply during the rainy season, they can select **"Do not know."**

Question 141: During the rainy season, could you please estimate the number of hours (in total) electricity service has not been available to your housing unit due to electricity cuts or blackouts?

This question aims to collect information on the frequency and duration of electricity cuts or blackouts experienced by the household during the rainy season.

Instructions to the enumerator:

1. Explain to the respondent that this question is about estimating the total number of hours when electricity service was unavailable to their housing unit due to cuts or blackouts specifically during the rainy season.
2. Read out the response options and provide a clear explanation:
 - **"Number of hours"**: Ask the respondent to estimate the total number of hours, to the best of their knowledge, during which electricity service was not available.
 - **"Never"**: If the respondent did not experience any electricity cuts or blackouts during the rainy season, they should select this option.
 - **"Do not know (enter 999)"**: If the respondent is unsure about the total duration or unable to provide an estimate, they can select this option and enter 999.
3. Ask the respondent to select the most appropriate response based on their experience or estimation.
4. If the respondent selects **"Number of hours,"** ask them to provide the estimated duration in hours.
5. If the respondent selects **"Do not know (enter 999),"** record 999 as the response.

Question 142: In case of power failure from the solar Home System, what is the main backup source used by the household, if any?

This question aims to gather information about the backup sources used by households in case of power failure from their solar home system. It helps in understanding the alternative options available to the household for lighting, cooking and heating, and powering electrical appliances during such situations.

Instructions to the enumerator:

5. Explain to the respondent that this question is about identifying the main backup source used by their household in case of a power failure from the solar home system.
6. Read out the backup source options for each category (lighting, cooking and heating, electrical appliances).
7. Ask the respondent to select the appropriate backup source for each category based on their household's backup arrangements.
8. If the respondent selects "Other (Specify)" for any category, ask them to provide details about the specific backup source they use.

BATTERIES (EXTERNALLY RECHARGEABLE BATTERIES)

Question 143: What type of battery does your household mainly use?

This question aims to gather information about the type of battery mainly used by households. It helps in understanding the prevalent battery technology used for energy storage in the surveyed area.

Instructions to the enumerator:

6. Explain to the respondent that this question is about identifying the type of battery mainly used by their household.
7. Show the provided pictures or visual representations of different battery types: Lithium Ion, Lead acid, Nickel, Sodium based.
8. Read out the options and provide a brief explanation for each option:
 - **"Lithium Ion"**: Lithium-ion batteries are commonly used in various applications due to their high energy density and long cycle life.



- **"Lead acid"**: Lead-acid batteries are known for their reliability and cost-effectiveness and are commonly used for energy storage.

- **"Nickel"**: Nickel-based batteries, such as Nickel-cadmium (Ni-Cd) or Nickel-metal hydride (Ni-MH).



- **"Sodium based"**: Sodium-based batteries, such as Sodium-ion or Sodium-sulphur batteries, are emerging as alternative energy storage solutions.



- **"Other (Specify)"**: If the respondent mentions a battery type not listed, ask them to specify.

9. Ask the respondent to select the appropriate battery type mainly used by their household.

10. If the respondent selects "Other (Specify)", ask them to provide details about the specific battery type they use.



Question 144: Do you use that battery for the following? (linked to response in preceding question)

This question aims to understand the specific applications or devices for which the battery mentioned in the preceding question is primarily used.

Instructions to the enumerator:

6. Explain to the respondent that this question is about the usage of the battery mentioned in the preceding question for different devices or applications.
7. Read out each item (a to d) and ask the respondent to indicate whether they use the mentioned battery for that particular device or application.
8. Record the respondent's response as **"Yes"** or **"No"** for each item.
9. If the respondent selects **"Yes"** for any item, it implies that they use the battery for that device or application. If they select **"No,"** it indicates that they do not use the battery for that particular purpose.
10. If the respondent mentions other devices or applications not listed in the options, ask them to specify the additional usage in the **"Other, specify"** field.

Question 145: How much did it cost to buy such a battery?

This question aims to gather information about the cost of purchasing the battery mentioned in the preceding questions. It helps in understanding the financial aspect of acquiring the battery and assessing its affordability for the household.

Instructions to the enumerator:

5. Explain to the respondent that this question is about the cost of purchasing the battery mentioned earlier.
6. Ask the respondent to provide the amount they spent to buy the battery, in Kwacha terms.
7. Record the response.
8. If the respondent is unsure or does not remember the exact amount, encourage them to provide an estimate.

Question 146: How often do you charge the battery per month?

This question aims to gather information about the frequency of charging the battery mentioned earlier.

Instructions to the enumerator:

6. Explain to the respondent that this question is about how often they charge the battery per month.

7. Ask the respondent to provide the approximate number of times they charge the battery in a typical month.
8. Emphasize that you are interested in the frequency of charging rather than the specific dates or durations.
9. Record the response in terms of the number of times per month.
10. If the respondent is unsure or their charging pattern varies, ask them to provide an estimate or an average.

Question 147: What is the primary charging source?

This question aims to identify the main source of energy used for charging the battery mentioned earlier.

Instructions to the enumerator:

5. Explain to the respondent that this question is about the main source they use to charge the battery.
6. Read out the options and provide a brief description of each option to ensure clarity.
 - **Option 1: National grid (ZESCO)** - Refers to charging the battery using electricity from the national grid provided by ZESCO.
 - **Option 2: Local mini grid** - Refers to charging the battery using electricity from a local mini-grid.
 - **Option 3: Solar** - Refers to charging the battery using solar energy, typically through solar panels.
 - **Option 4: Diesel/Petrol Genset** - Refers to charging the battery using a diesel or petrol-powered generator.
 - **Option 5: Pico hydro** - Refers to charging the battery using energy generated from a small-scale hydroelectric system.
 - **Option 6: Other Specify** - If the respondent uses a different charging source not mentioned in the above options, ask them to provide a brief description or details.
7. Ask the respondent to choose the appropriate number that corresponds to their primary charging source.
8. Record the response based on the selected number or the specified alternative charging source.

Question 148: How many days does one charge last?

The purpose of this question is to determine the duration for which the respondent's battery remains operational after being fully charged.

Instructions for the Enumerator:

6. Introduce the question: Explain to the respondent that this question aims to determine how long their battery can last after being fully charged.
7. Ask the respondent to estimate the number of days a fully charged battery typically lasts before it requires another charge.
8. Provide a clear understanding: Emphasize that the respondent should consider their typical usage and provide their best estimate based on their experience.
9. Record the number of days: Once the respondent provides their answer, record the number of days indicated.
10. Assist uncertain respondents: If the respondent is unsure or the duration varies, encourage them to provide their best approximation.

Question 149: Does your household have an inverter that allows you to use appliances such as TV, Fan, or Fridge?

The purpose of this question is to determine whether the respondent's household has an inverter installed that enables them to use appliances like a TV, fan, and fridge.

Instructions for the Enumerator:

6. Introduce the question: Explain to the respondent that this question aims to determine whether their household has an inverter that allows them to use appliances such as a TV, fan, and fridge.
7. Present the options: Read out the options to the respondent, which are:
 - c) Yes: If the household has an inverter for using appliances; and
 - d) No: If the household does not have an inverter for powering appliances.
8. Ask the respondent to select the appropriate option that represents their household's situation.
9. Once the respondent provides their answer, make sure to record it accurately in the survey form.

10.If the respondent selects "**No**," proceed to the next section of the questionnaire.

Question 150: What is the capacity of the inverter Kilowatts?

The purpose of this question is to determine the capacity of the inverter installed in the respondent's household, measured in kilowatts (kW). An inverter is a device that converts direct current (DC) electricity from sources such as batteries or solar panels into alternating current (AC) electricity used to power household appliances.

Instructions for the Enumerator:

5. Introduce the question: Explain to the respondent that this question aims to determine the capacity of the inverter they have in their household, which is measured in kilowatts.
6. Ask the respondent about the capacity: Inquire about the capacity of the inverter by asking the respondent how many kilowatts (kW) it can handle.
7. Record the response: Once the respondent provides the information, accurately record the capacity of the inverter in kilowatts (kW) in the survey form.
8. If the respondent is unsure or does not know the capacity, instruct them to provide an estimate or specify that they are unsure. Alternatively, request them to furnish you with a copy of or show you the inverter nameplate, which typically contains information about its capacity.

Question 151: What is the Capacity of the battery in Amperage Hour (Ah)?

The purpose of this question is to determine the capacity of the battery installed in the respondent's household, measured in ampere-hours (Ah). The battery capacity represents the amount of electric charge the battery can deliver over time.

Instructions for the Enumerator:

6. Introduce the question: Explain to the respondent that this question aims to determine the capacity of the battery they have in their household, which is measured in ampere-hours (Ah).
7. Ask for the capacity: Inquire about the capacity of the battery by asking the respondent to provide the ampere-hour (Ah) rating.

8. Provide clarification if needed: If the respondent is unsure about the ampere-hour (Ah) rating, instruct them to provide an estimate or specify that they are unsure.
9. Record the response: Once the respondent provides the information, accurately record the capacity of the battery in ampere-hours (Ah) in the survey form.
10. Thank the respondent for their cooperation and continue with the survey.



Question 152: What is the voltage of the rechargeable batteries?

The purpose of this question is to determine the voltage of the rechargeable batteries used in the respondent's household. Voltage is a measure of electric potential difference and is typically indicated on the batteries.

Instructions for the Enumerator:

5. Introduce the question: Explain to the respondent that this question aims to determine the voltage of the rechargeable batteries they use in their household.
6. Ask for the voltage: Inquire about the voltage of the rechargeable batteries by asking the respondent to provide the voltage rating.

7. Provide clarification if needed: If the respondent is unsure about the voltage rating, instruct them to check the batteries for the voltage information or provide an estimate if they remember.
8. Record the response: Once the respondent provides the voltage information, accurately record it in the survey form.

Question 153: How much did your household pay to recharge the batteries?

The purpose of this question is to determine the cost incurred by the household to recharge their batteries. This includes any expenses associated with recharging or replenishing the battery power.

Instructions for the Enumerator:

4. Introduce the question: Explain to the respondent that this question aims to determine the amount of money their household paid to recharge the batteries.
5. Ask for the payment amount: Inquire about the cost of recharging the batteries by asking the respondent to provide the amount they paid.
6. Record the response: Once the respondent provides the payment amount, accurately record it in the survey form.

Question 154: How often does your household have to recharge the battery?

The purpose of this question is to determine the frequency at which the household needs to recharge their battery.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to understand how often their household needs to recharge the battery.
2. Present the options: Read out the options to the respondent, which represent different time intervals for recharging the battery.
3. Ask the respondent to select the appropriate option that represents the frequency at which they recharge the battery.
4. Once the respondent provides their answer, make sure to record it accurately in the survey form.

Question 155: Is battery recharging limited by the availability of electricity supply?

The purpose of this question is to determine if the rechargeability of the battery is limited by the availability of electricity supply.

Instructions for the Enumerator:

4. Introduce the question: Explain to the respondent that this question aims to understand if the availability of electricity supply affects the ability to recharge the battery.
5. Present the options: Read out the options to the respondent, which are:
 - c) **Yes:** If the battery recharging is limited by the availability of electricity supply.
 - d) **No:** If the battery recharging is not affected by the availability of electricity supply.
6. Ask the respondent to select the appropriate option that represents their household's situation.

Once the respondent provides their answer, make sure to record it accurately in the survey form

Question 156: How many hours can you use your household's rechargeable batteries for electricity supply each day when fully charged if you wanted to?

The purpose of this question is to determine the estimated duration of electricity supply that can be obtained from the fully charged rechargeable batteries in the household.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to understand the approximate number of hours they can use their rechargeable batteries for electricity supply when fully charged.
2. Ask the respondent to provide their best estimate of the number of hours they can use the rechargeable batteries for electricity supply.
3. Record the response accurately in the survey form.

Question 157: How many hours does your household actually use rechargeable batteries for electricity supply each day?

The purpose of this question is to determine the actual number of hours that the household utilizes rechargeable batteries for electricity supply on a daily basis.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to understand the actual number of hours they use rechargeable batteries for electricity supply each day.

2. Ask the respondent to provide their best estimate of the number of hours they use the rechargeable batteries for electricity supply.
3. Emphasize that the response should reflect the actual usage and not the maximum potential usage.
4. Record the response accurately in the survey form.

Question 158: What challenges, if any, does your household experience with the rechargeable batteries? (MULTI-RESPONSE)

The purpose of this question is to identify any challenges or issues that the household may encounter regarding the use of rechargeable batteries for electricity supply.

Instructions for the Enumerator:

5. Introduce the question: Explain to the respondent that this question aims to understand any challenges they face with rechargeable batteries.
6. Read out the options to the respondent and ensure they understand each option clearly. The options are:
 - g) **Limited power supply:** The rechargeable batteries do not provide sufficient power or energy for the required duration.
 - h) **Too expensive to use:** The cost of recharging the batteries is high or unaffordable for the household.
 - i) **Hard to maintain/service:** The batteries require frequent maintenance or service, which may be challenging for the household.
 - j) **Not durable:** The batteries have a short lifespan or do not last as long as expected.
 - k) **No problems:** The household does not face any challenges with the rechargeable batteries.
 - l) **Other (Specify):** In case there are challenges not mentioned in the provided options, ask the respondent to specify the specific challenge they encounter.
7. Ask the respondent to select all the options that apply to their situation or provide their own specific challenge under “Other Specify” if it is not listed.
8. Record the responses accurately in the survey form.

Question 159: How many hours per day does your household use the battery?

The purpose of this question is to determine the average number of hours per day that the household uses the battery for electricity supply.

Instructions for the Enumerator:

1. Introduce the question: Explain to the respondent that this question aims to determine the average number of hours per day that their household uses the battery for electricity supply.
2. Ask the respondent to estimate the number of hours per day that they typically use the battery.
3. Record the response accurately in the survey form.

Question 160: In case of power failure from the battery, what is the main backup source used by the household, if any?

The purpose of this question is to determine the main backup source/alternative source used by the household in case of power failure from the battery.

Instructions for the Enumerator:

5. Introduce the question: Explain to the respondent that this question aims to determine the main backup source used by their household in case of power failure from the battery.
6. Read out the options for each category (Lighting, Cooking and Heating, Electrical Appliances) and ask the respondent to select the appropriate backup source for each category.
7. Record "**No backup source**" in the event that the household does not have an alternative source of lighting, cooking & heating and/or powering electrical power appliances if there is no alternative source to the battery.
8. If the respondent selects "**Other Specify**" for any category, ask them to provide additional details about the backup source.

GENERATOR

Question 161: What does your household use the generator for? (MULTI-RESPONSE)

The purpose of this question is to determine the specific purposes for which the household uses the generator.

Instructions for the Enumerator:

4. Introduce the question: Explain to the respondent that this question aims to determine the different purposes for which their household uses the generator.

5. **Read out** the options to the respondent (Lighting, Television, Radio, Water Pumping, Home-based income activity, Cooking) and ask them to select all the purposes that apply.
6. If the respondent selects "**Other, specify**," ask them to provide additional details about the other purposes.

Question 162: Does your household own this generator?

The purpose of this question is to determine whether the household owns the generator mentioned.

Instructions for the Enumerator:

3. Introduce the question: Explain to the respondent that this question aims to determine whether their household owns the generator.
6. Ask the respondent to select the appropriate option that represents their household's situation.
7. Once the respondent provides their answer, make sure to record it accurately in the survey form.
8. If the respondent selects "Yes," proceed to question 165. If they select "No," continue with the survey.

Question 163: Who owns this generator?

The purpose of this question is to determine the ownership of the generator mentioned.

Instructions for the Enumerator:

6. Introduce the question: Explain to the respondent that this question aims to determine who owns the generator.
7. Present the options: Read out the options to the respondent, which are:
 - a) Another household: If the generator is owned by another household.
 - b) Rental company: If the generator is owned by a rental company.
 - c) NGO, Community: If the generator is owned by an NGO or the community.
 - d) Other: If the ownership falls under a category not mentioned, ask the respondent to specify.

8. Ask the respondent to select the appropriate option that represents the ownership of the generator.
9. If the respondent selects "**Other**," provide a space for them to specify the ownership.
10. Once the respondent provides their answer, make sure to record it accurately in the survey form.

Question 164: Does your household rent this generator?

The purpose of this question is to determine if the household rents the generator mentioned.

Instructions for the Enumerator:

7. Introduce the question: Explain to the respondent that this question aims to determine if they rent the generator.
8. Ask the respondent to select the appropriate option that represents their situation.
9. If the respondent selects "**No**," proceed to the next question.
10. If the respondent selects "**Yes**," continue to question 167.
11. Once the respondent provides their answer, make sure to record it accurately in the survey form.

Question 165: What mode of payment does your household use to pay for this rented generator?

The purpose of this question is to determine the mode of payment used by the household to pay for the rented generator.

Instructions for the Enumerator:

5. Introduce the question: Explain to the respondent that this question aims to determine the mode of payment used to pay for the rented generator.
6. Present the options and ask the respondent to select the appropriate option that represents their household's mode of payment.
7. If the respondent selects "**Other**," ask them to provide more details and record their response.
8. Once the respondent provides their answer, make sure to record it accurately in the survey form.

Question 166: How much did your household pay to purchase the generator?

The purpose of this question is to determine the amount paid by the household to buy the generator.

Instructions for the Enumerator:

4. Introduce the question: Explain to the respondent that this question aims to determine the amount they paid to buy the generator.
5. Ask the respondent to provide the total amount paid by their household when they bought the generator.
6. Once the respondent provides the information, record it accurately in the survey form.

Question 167: In the last 12 months, how much did your household pay for repairs/ parts/ maintenance of the generator?

The purpose of this question is to determine the amount paid by the household for repairs, parts, and maintenance of the generator in the last 12 months.

Instructions for the Enumerator:

4. Introduce the question: Explain to the respondent that this question aims to determine the amount they paid for repairs, parts, and maintenance of the generator in the last 12 months.
5. Ask the respondent to provide the total amount paid by their household for repairs, parts, and maintenance of the generator in the last 12 months.
6. Once the respondent provides the information, record it accurately in the survey form.

Question 168: What is the power rating of the generator?

The purpose of this question is to determine the power rating of the generator.

Instructions for the Enumerator:

5. Introduce the question: Explain to the respondent that this question aims to determine the power rating of their generator.
6. Present the options with definitions:
 - a) **Kilowatt (kW):** Kilowatt is a unit of power that measures the rate at which the generator can supply electricity. It represents the actual power output of the generator.
 - b) **Kilovolt-ampere (kVA):** Kilovolt-ampere is a unit of apparent power that measures the total power capacity of the generator, including both real power (kW) and reactive power. It represents the maximum load the generator can handle.
 - c) **Horsepower (HP):** Horsepower is a unit of power commonly used for generators. It represents the power output in terms of the work done by the generator.
7. Ask the respondent to select the appropriate unit that represents the power rating of their generator.
8. Once the respondent provides their answer, make sure to record it accurately in the survey form.

Note: if the respondent is not sure, request to see a copy of the generator nameplate if possible.

Question 169: How long has your household been using this generator?

The purpose of this question is to determine the duration for which the household has been using the generator from the time they had access to the generator to the time of interview.

Instructions for the Enumerator:

4. Introduce the question: Explain to the respondent that this question aims to determine how long their household has been using the generator in complete Years or Months.
5. This question has two options;
 - 1=Years.....
 - 2=Months.....

Therefore, If the respondent reports that the duration of use is less than one year, select option 2 (months) and enter the number months used.

Similarly, If the respondent reports that the duration of use is above one year, select option 1 (Years) and enter the number years used. For example, if they have been using the generator for 2 years and 6 months, they can provide the response as "2.6 years".

6. Once the respondent provides their answer, make sure to record it accurately in the survey form.

Question 170: What type of fuel does your household use in this generator?

The purpose of this question is to determine the type of fuel used in the generator by the household.

Instructions for the Enumerator:

5. Introduce the question: Explain to the respondent that this question aims to determine the type of fuel used in their generator.
6. Present the options: **Do not Read out** the options to the respondent, which are:
 - a) Diesel
 - b) Petrol
7. Ask the respondent to select the appropriate option that represents the type of fuel used in their generator.
8. Once the respondent provides their answer, make sure to record it accurately in the survey form.

Question 171: In the last 30 days, how much did your household spend on fuel for this generator?

The purpose of this question is to determine the amount of money in Zambian Kwacha spent by the household on fuel for the generator in the last 30 days.

Instructions for the Enumerator:

5. Introduce the question: Explain to the respondent that this question aims to determine the amount of money in Zambian Kwacha spent on fuel for the generator in the last 30 days.
6. Ask the respondent to provide the total amount of money spent on fuel during that period.
7. If the respondent is unable to provide an exact amount, ask them to provide an estimate or provide an approximate range if possible.

8. Once the respondent provides their answer, make sure to record it accurately in the survey form.

Question 172: Does your household share this generator with other households?

The purpose of this question is to determine whether the household shares the generator with other households.

Instructions for the Enumerator:

8. Introduce the question: Explain to the respondent that this question aims to determine whether their household shares the generator with other households.
9. The options are **Yes or No. Do not Read out** the options to the respondent, which are:
 - a) **Yes:** If the household shares the generator with other households.
 - b) **No:** If the household does not share the generator with other households.
10. Ask the respondent to select the appropriate option that represents their household's situation.
11. Once the respondent provides their answer, make sure to record it accurately in the survey form.
12. If the respondent selects "**No**," proceed to question 174, otherwise proceed to the next question.

Question 173: How many households are sharing electricity from this generator?

The purpose of this question is to determine the number of households that are sharing electricity from the generator.

Instructions for the Enumerator:

4. Introduce the question: Explain to the respondent that this question aims to determine the number of households that are sharing electricity from the generator.
5. Ask the respondent to provide the number of households that are sharing electricity from the generator.
6. Once the respondent provides the number, record it accurately in the survey form.

Question 174: What is the size of the fuel tank of this generator?

The purpose of this question is to determine the size of the fuel tank of the generator.

Instructions for the Enumerator:

5. Introduce the question: Explain to the respondent that this question aims to determine the size of the fuel tank of the generator.
6. Ask the respondent to provide the size of the fuel tank of the generator.
7. Once the respondent provides the size, record it accurately in the survey form.
8. If the respondent is unsure about the size or does not know, instruct them to provide an estimate or specify that they are unsure.

Question 175: How many hours could your household use this generator each day and night if you wanted to?

The purpose of this question is to determine the number of hours the household would use the generator each day and night continuously.

Instructions for the Enumerator:

9. Introduce the question: Explain to the respondent that this question aims to determine the number of hours their household would use the generator each day and night continuously.
10. Ask the respondent to provide the approximate number of hours.
11. Once the respondent provides the information, record it accurately in the survey form.
12. If the respondent is unsure or does not know the exact number, instruct them to provide their best estimate or specify that they are unsure.

Question 176: How many hours does your household use this generator each day?

The purpose of this question is to determine the number of hours the household actually uses the generator each day.

Instructions for the Enumerator:

13. Introduce the question: Explain to the respondent that this question aims to determine the number of hours their household actually uses the generator each day.
14. Ask the respondent to provide the approximate number of hours.

15. Once the respondent provides the information, record it accurately in the survey form.

16. If the respondent is unsure or does not know the exact number, instruct them to provide their best estimate or specify that they are unsure.

Question 177: What challenges does your household experience with this generator, if any? (MULTI-RESPONSE)

The purpose of this question is to determine the challenges the household experiences with the generator.

Instructions for the Enumerator:

3. Introduce the question: Explain to the respondent that this question aims to determine the challenges their household faces with the generator.
4. Present the options: Read out the options to the respondent, which are:
 - a) **Limited power supply:** This refers to situations where the generator does not provide sufficient power for all the required appliances or activities.
 - b) **Cannot power large appliances:** This refers to the generator's inability to supply electricity to larger appliances, such as air conditioners, cookers, refrigerators, or heavy machinery.
 - c) **Too expensive to use:** This refers to the high cost associated with running and maintaining the generator, including fuel expenses and maintenance costs.
 - d) **Non-availability of fuel:** This refers to difficulties in accessing or obtaining fuel for the generator, which leads to interruptions in its operation.
 - e) **Hard to maintain/service:** This refers to challenges in maintaining and servicing the generator, such as finding skilled technicians, acquiring spare parts, or performing regular maintenance tasks.
 - f) **Loud/Noisy:** This refers to the generator producing excessive noise during operation, which can be disruptive or bothersome.
 - g) **Unpredictable interruptions:** This refers to the generator frequently experiencing unexpected shutdowns or interruptions in its operation, affecting the availability of electricity.
 - h) **Other (specify):** In case the respondent mentions additional challenges that are not listed, instruct them to specify and record their response.

- i) **No challenges:** If the respondent indicates that their household does not experience any challenges with the generator, record "No challenges" in the survey form.
13. Ask the respondent to select all the options that apply to their household.
14. Once the respondent provides their answer, record each selected option accurately in the survey form, including any specified challenges.

QUESTION 178: In case of power failure from the generator, what is the main backup source used by the household, if any?

The purpose of this question is to determine the backup sources used by the household in case of power failure from the generator.

Instructions for the Enumerator:

4. Introduce the question: Explain to the respondent that this question aims to determine the backup sources their household relies on in case of power failure from the generator.
5. Present the options as provided in the survey questionnaire.
6. Ask the respondent to select the appropriate backup source(s) for each category that applies to their household.

Once the respondent provides their answer, record each selected option accurately in the survey form, including any specified backup sources.

HOUSEHOLD AMENITIES AND HOUSING CONDITION

A house is a building/physical structure that functions as a home, ranging from simple dwellings (places where people live) such as huts, makeshifts, to complex, fixed structures of wood, brick, concrete or other materials containing plumbing (pipes, tanks, fixtures and fittings i.e light fittings, sinks, bathtubs, toilet and cisterns, and other apparatus required for the water supply, heating, and sanitation), ventilation and electrical systems. Housing provides shelter to people, protecting them against nature such as wind/storms, rain/water, fire and any possible danger. Houses use a range of different roofing systems to keep precipitation such as rain from getting into the living spaces. The extent of access of households to various amenities (essentials) such as housing, water, sanitation, health, education and other social and economic infrastructure is an important measure of the population wellbeing. It is therefore important that detailed attention is given when getting this information from the respondents

Note that Housing is not just limited to a shelter but it encompasses all support services and community facilities which are necessary to human well-being. These include land, roads, electricity, running water and other infrastructure such as communication (Post Office, ICT and Telecommunication Facilities).

In this section, we shall get information on housing and household characteristics.

Read the introductory sentence of this section to the respondent as shown in the screenshot.

Type of Housing Unit

Question 1A: What kind of dwelling does your household live in?

In this question, we are interested in knowing the different types of housing units as shown in the screenshot; observe and select the appropriate type.

Hut – It is a building of a lower quality (mud bricks, mud floor, grass, palm leaf) materials that is used temporary or as seasonal shelter. In undeveloped places or primitive communities, it is used as a permanent dwelling or residence. It is usually made of locally available, unmodified earth materials, in their natural state such as mud bricks, mud floor, mud material around the walls and grass/palm leaf roof. It is mostly common in rural parts of Zambia, built using techniques passed down through generations. Huts have a hat shaped roof but can take many shapes.

Note: Even if it is located in urban areas it must be recorded as a hut.



Detached House –This is a durable, well built dwelling which is an independent or free standing residential building/housing unit (two or single storey) that does not share walls with another house.

Single storey (ground **storey** only)



Double storey



Semi-Detached House: A semi-detached house, (double or single storey) is one that is joined to another house by a common dividing wall that they share which extends from the ground to the roof. Semi-detached houses are often mirror images of each other. There are two units in one building and shares one common wall with the next/neighbouring house.



Terraced House: One of a row of similar houses joined together by their side walls. It is a house in a row of houses that shares a wall with houses next to it. They are

three or more in a row.



Flat/Apartment/Multi unit: A set of rooms forming an individual residence/housing unit, typically on one or more floors and within a larger singular building containing a **number of such residences/housing units**. It usually has one common stair way. Flat and apartment are generally used interchangeably.



Mobile Housing Unit -any type of living quarter that has been produced to be transported or a moving unit such as a caravan, trailers, boats, tents etc. occupied as living quarters at the time of the census.



Makeshift Housing Unit -an independent, makeshift-shelter or structure built of mostly waste or salvaged materials and without a predetermined design or plan



for the purpose of habitation by one household, which is being used as living quarters though it may not comply with generally accepted standards for habitation. Such a unit will be generally found in unplanned settlements or shanty areas. Not all structures in shanty areas may be considered as improvised as many of these may have been built in

a planned manner from regular building materials.

Collective Living Quarters -include structurally separate and independent places of abode intended for habitation by large groups of individuals or several households with no common bond, public objective or interest. Such quarters usually contain common facilities such as kitchen, bathrooms, lounge or dormitories, which are shared by occupants. Examples are hotels, motels, inns, lodges, boarding houses etc., which provide lodging on a fee basis.

Institutional Quarters /Hostels- sets of premises in a permanent structure or structures designed to house groups of persons (usually large) who are bound by either a common public objective or a common personal interest. In this type of living quarters persons of the same sex frequently share dormitories. Examples are Hospitals, military barracks, boarding schools, convents, seminaries, prisons, etc.

Unintended Living Quarters/Unconventional - structurally separate and independent places of abode not constructed, converted or arranged for human habitation. They may be used for habitation at the time of the census. For example; bridges, storage warehouses, market stalls, shop corridors, garages, containers, classroom, office space etc.

Incomplete building

A structure that has not been yet completed but which provides a living space for the household



Other, Specify -a residual category of living quarters or housing units not stated above.

Question 1B: How many rooms are occupied by this household excluding bathrooms and toilets?

Find out from the respondent how many rooms the housing unit has, excluding passage ways, verandahs, lobbies, bathrooms and toilet rooms. Note: In case a household occupying more than one housing unit all the rooms in the housing units should be counted

A room is defined as a space in a housing unit enclosed by walls reaching from the floor to the ceiling or roof, of a size large enough to fit a bed for an adult. A hut meeting these two qualifications will also be treated as a room. Normally, bedrooms and living rooms will be included in this definition. Passage ways, verandahs, lobbies, bathrooms and toilet rooms are not counted as rooms even

if they meet the criteria. A garage and a storeroom meeting these requirements should be treated as rooms only if these are actually being used for living purposes at the time of enumeration.

Question 2: On what basis does your household occupy the dwelling you live in? Is it....

Find out whether the household lives in housing they own (owner-occupied), or rented, or is free housing. If rented or free housing-record from whom.

Building materials

Question 3: What kind of building materials is/are the [...] of this dwelling mainly made of?

This question is important in assessing the quality of the dwelling the household lives in. There are various types of materials used for roofing, walls and floor. In some cases, you may need to ask the respondent what material their wall, roof or floor are made of if you are not able to see them. Be observant.

In the cases of the floor, household with wall-to-wall carpets or other coverings, which are stuck to that floor, should be regarded as covered concrete, cover. Make sure you probe to find out what is beneath the carpet, to ensure that it is concrete.

[IF A MULTI-STOREY/UNIT BUILDING RECORD BUILDING MATERIALS OF THE OUTER ROOF (ROOF TOP) AND OUTER WALL].

Main Roof Material

In this question, we would like to ascertain the main type of material used for the roof. Do not ask the respondents this question, just observe and record the answer. In case it is not very obvious such as a hidden roof or if in doubt, ask the respondent. Select the appropriate response.

Grass Thatch/Palm Leaf: This is a roofing type with traditional roofing materials of either grass thatch or palm leaf. The thatch thickness increases with an increase in angle with traditional roofing materials of either grass thatch or palm leaf



Rustic Mat: This is a roof type that uses rustic grass commonly found in western



Zambia

Palm/Bamboo: Bamboo is a plant which is a type of grass with a hard, woody, hollow stem.



Wood Planks: Timber that is flat, elongated and rectangular with parallel faces that are higher and longer than wide. It is cut from logs into variety of sizes and used for building materials.



Cardboard: Are prefabricated boxes primary used for packaging goods and materials. Cardboard roofs are sometimes used without being cut into smaller pieces



Metal/Iron Sheets: These are usually galvanized or corrugated roofing sheets.



Wood: Processed plank - material from tree trunks used in construction as timber.



Asbestos: Is a material fibre that is used as roof covering?



Ceramic Tiles: Roof Tiles; these are small rectangular roofing materials made from fine concrete quarry and slates.



Cement Tiles: Cement is a fine soft, powdery type substance made from a mixture of elements that are found in natural materials such as limestone, clay sand and/ shale.



Roofing Shingles: Are a roof covering consisting of individual overlapping element that are typically flat rectangular shapes laid in rows from the bottom edge of the roof up, with each successive higher row overlapping the joints in the row below.



Mud/Clay Tiles: These are produced by baking molded **clay**. Clay tiles are usually rougher than cement tiles.



Other, Specify: Whatever is not mentioned above.

Main Wall Material

Do not ask the respondents this question, just observe and record the answer. Generally, if you are not able to tell what the material is, ask the respondent.

Pole and Dagga/mud: These are walls made of gum poles with mud infill.



Pole and Grass: These are walls built of gum poles and grass infill

Burnt Bricks: Brick molded from seasoned/hardened clay and burnt at a certain temperature.



Mud Bricks: Brick made of mud and sun dried.



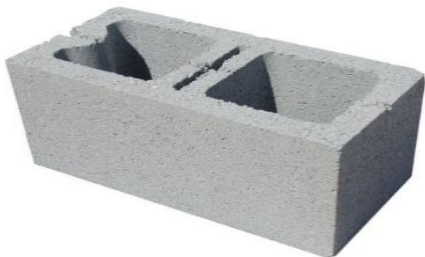
Compressed Mud Brick: This is an appropriate mix of dirt, clay and aggregate into a compressed block. These are also called soil stabilized bricks, which can also be self-locking.



Compressed Cement Bricks: A type of brick made from a mixture of cement and sand, molded under pressure.



Concrete Blocks: It is made from a mixture of cement with coarse/rough materials such as sand, gravel and crushed stones.



Cement Blocks: They are made by mixing cement, and sand together and forming the mixture into blocks of varying size.



Pan-Brick: Is an insulated thin brick panel which is made of a combination of clay or shale (fine-grained sedimentary rock that forms from the compaction of silt and clay-size mineral particles), dried and fired in kilns.



Pre-Cast Concrete Slab: Precast concrete is a construction product produced by casting concrete in a reusable mold or "form" which is then cured in a controlled environment, transported to the construction site and lifted into place ("tilt up").



Prefabricated Wall Panels: Prefabrication is the practice of assembling components of a structure in a factory or other manufacturing site, and transporting complete assemblies or sub-assemblies to the construction site where the structure is to be located.



Stone with Building Lime: This is a stone with high mass of lime which is carved into various shapes.



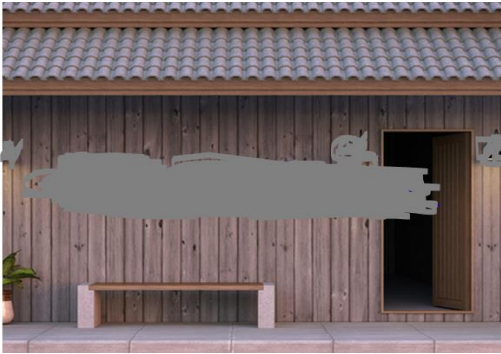
Iron Sheets: Is a building material composed of sheets of hot dip galvanized mild steel to produce a linear pattern in them. Iron sheets are predominantly used as roofing materials, however, they are in some cases used as walling materials



Asbestos: Is a silicate, fibrous material that is used as roof covering.



Hardboard/Wood: Heavy thin boards usually 4 millimetres to 8 millimetres in width.



Other, Specify: Whatever is not mentioned above.

Main Floor Material

In this question, we would like to establish the type of material used for the floor finishing. Do not ask the respondents this question, just observe and record the answer. Just like in H03 above, the respondent may be of assistance in this question. However, if it is quite obvious to you as an enumerator to see the floor finishing, select the appropriate response.

Concrete floor: Is a durable coarse or rough floor made from crushed stones, river sand and cement, with the right amount of water.



Cement Screed: Is a thin layer of cement paste and sand/fine aggregates laid on to a concrete floor base to act as a smooth flat levelling surface for taking on the final floor finish



Brick: This is molded from seasoned clay and burnt at a certain temperature



Polyvinyl Chloride (PVC) Tiles: This is a synthetic plastic polymer which is rigid used in construction for tiles and pipes. They are plasticized tiles.



Ceramic Tiles: This is made from red or white clay and other materials (sand, stone, silica, water) molded to form square or rectangular tiles baked in kiln/oven



Mud: This is usually from treated or seasoned clay mixed with cow dung. It makes a hard shiny floor. It is mostly found in traditional houses.



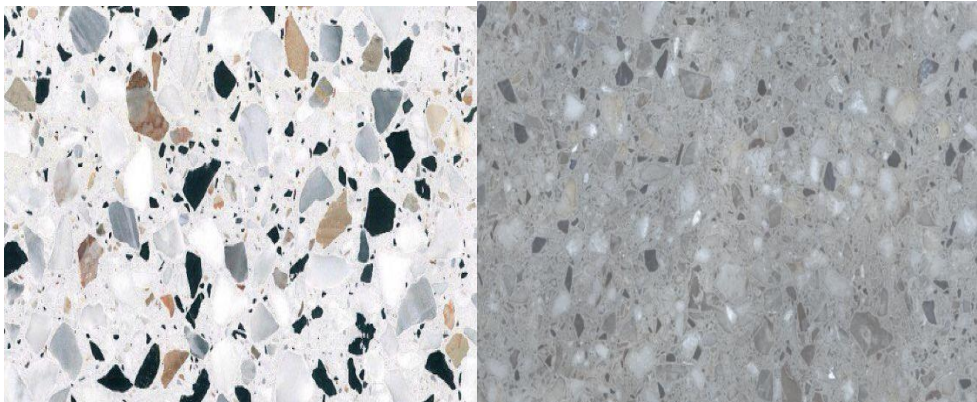
Wood (Not Wooden Tiles): Usually floor fitted on top of the primary floor material.



Marble: Marble are cut from stone (marble stone) in flat sheet and polished to give a shiny finish. It can be in the form of tiles or slabs. It makes a high durable shine.



Terrazzo: Terrazzo tile is made by mixing marble, granite, quartz, or glass chips into a cement binder, terrazzo is attractive and one of the toughest products available when it comes to tiling materials. The top is grinded flat with a machine and then polished. The floor finish is usually black or white.



Parquet: flooring composed of wooden blocks arranged in a geometric pattern

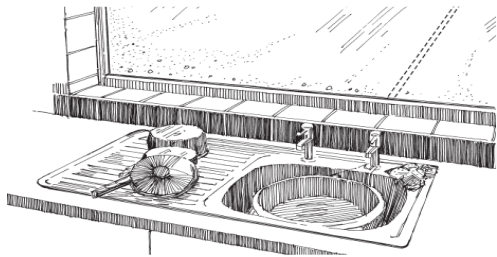


Other, Specify: Whatever is not mentioned above.

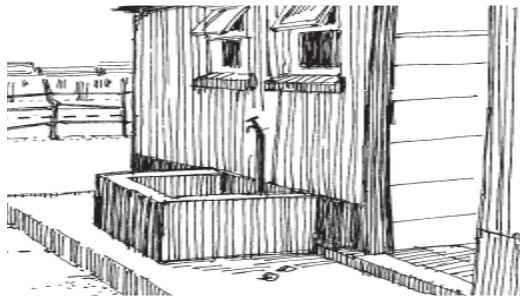
Question 4: Main Source of Water for Other Purposes, such as cooking and hand washing

Find out from the respondent the main source of water supply for drinking for the household.

Piped water inside the housing unit: This is water that is usually supplied to households through pipes. The pipes are connected from the source to inside the housing unit.



Piped water outside the housing unit within stand/plot: This is water that is usually supplied to households through pipes. The pipes are connected from the source to the individual's stand or plot.



Piped to neighbor (Neighbor's piped water): Pipe connected to neighbor's dwelling, yard or plot

Communal Tap: Is usually supplied through pipes. The pipes are connected from the source to a public place for a group of people.



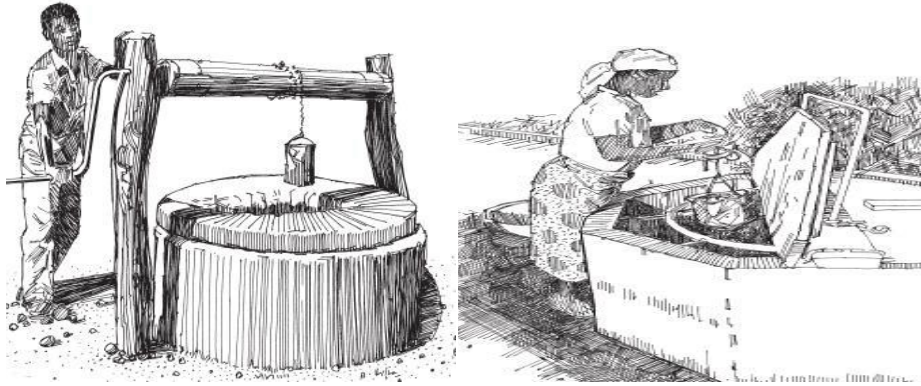
Protected Boreholes: These are boreholes drilled to a depth not less than 30 metres. The sides are cased by iron casing pipes while the last bottom pipe is perforated. The top is concreted together with the suction pipe.



Unprotected Boreholes: They are similar in design to protected boreholes except that the top as well as the suction pipe are left uncovered and large enough to let a jar or small bucket go through.



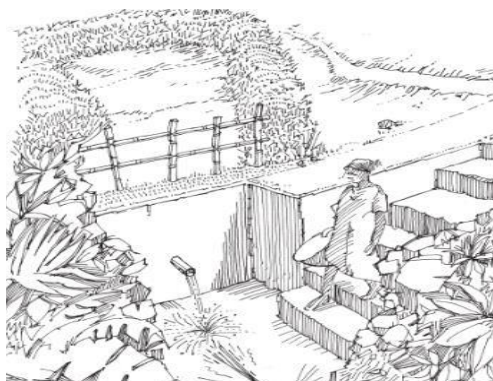
Protected Well: The wall of this well is usually lined with a brick wall or concrete block wall up to the ground level. The finish on top is of a reinforced concrete slab with an opening large enough to let a bucket go through. The opening is always covered.



Unprotected Well: The well is not lined with a brick wall or concrete wall. The top has no concrete slab though it has a sizeable opening to let a bucket go through. The opening is usually uncovered.



Protected spring: A spring protected from runoff, birds and animals droppings by a “spring box”. A spring box is typically constructed of brick 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.



Unprotected spring: A spring that is subject to runoff and/or bird and animal droppings. Unprotected springs typically do not have a “spring box”

Surface water (River/dam/stream/lake/pond/canal): This is where a household draws water directly from a river/dam/stream for home use.



Rain Water: This is water harvested by a household e.g from the roofs for various uses. It is always advisable to have it covered after the collection.

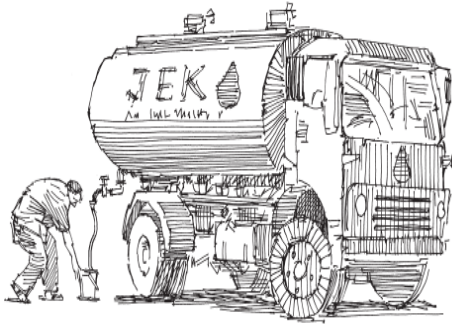


Water Kiosk: This is a public water tap run by a water utility company. The public can go to this tap in order to buy water.



Water Vendor: This includes water that is bought from individuals or companies and sold to households who do not have water. In some cases wheelbarrows and or tankers are used as the mode of transport to sell to households.

Tanker truck: Water is obtained from a provider who uses a truck to transport water into the community. Typically the provider sells the water to the household



Other, Tap: Any other tap not mentioned above.

Other specify: Any other source not mentioned above

SECTION 5: INCOME

This section is intended to find out information on income earned from various sources. Ask only to household members that are 5 years and above.

Income earned in the last 30 days

Question 1: Did earn any income in the last 30 days

This question is intended to find out whether each member of the household aged 5 years or older earned any income in the last 30 days.

Income from main economic activity

Question 2: How much income in total doesearn from his/her main economic activity in the last 30 days (excluding income from farming activities)?

This question is intended to find out how much income in total did each member of the household aged 5 years or older earned from his/her main economic activity in the last 30 days. This should exclude the income earned from farming activities.

Remittances

Question 3: Did.....receive any remittance in the last 12 months

Remittances are transfers in cash or in-kind from one household to another. In this section, the value given in Kwacha both for the remittances paid in cash or in-kind are asked for. Thus you should give the value of remittances paid in-kind based upon the price of such an item within that particular locality.

Note that remittances do not include transfers to household members even if they are temporarily away.

Question 4: How much in total did receive in the last 12 months? (In Zambian Kwacha) Use prevailing rate at the time of receipt

Record any income in cash and kind received by a person in the household during the last 12 months. Remittances may be in the form of money, food items, school uniforms, clothes, etc. sent to an individual by relatives or friends. For remittances in kind convert, them to cash using the prices they would have been bought at the time of being sent/given. The income from remittances should be accrued to the person who actually received the remittances, regardless of whether it is for personal use or for the benefit of the whole household.

Question 5: Didreceive income from any other sources in the last 30 days? (Excluding remittances)?

This question is intended to find out whether each member of the household aged 5 years or older earned any income in the last 30 days from any other source excluding remittances.

Question 6: How much in total did receive from any other sources in the last 30 days?

This question is intended to find out how much income in total each member of the household aged 5 years or older earned from his/her main economic activity in the last 30 days. This should exclude the income earned from farming activities.

Question 7: Did.....earn any income from his /her household farming activities in the last 12 months?

This question is intended to find out whether each member of the household aged 5 years or older earned any income in the last 12 months from farming activities. The income asked for is from production of hybrid maize, local maize, cassava, groundnuts, rice, millet, sorghum, beans, Soya beans, sweet potatoes, Irish potatoes, vegetables, cotton, tobacco, sunflower, paprika, cattle, goats, sheep, pigs, livestock products, chickens, ducks, other poultry and finally eggs.

Question 8: How much income in total did.....earn from his/her household farming activities in the last 12 months?

This question is intended to find out how much income in total each member of the household aged 5 years or older earned from farming activities in the last 12 months.

SECTION 6: HOUSEHOLD EXPENDITURE AND CONSUMPTION

This section is intended to find out information on the expenditure and consumption of various food and non-food items out of purchases, own production and gifts over different reference periods.

Make sure that the respondent excludes expenditure on production or gifts for hosting or attending large events like weddings or funerals for example. For food items, the reference period is 7 days, while for non-food items, the reference period is 30 days.

Question 1: Did your household spend on the following?

This question is intended to find out information on household expenditure and consumption. This should include estimates on direct purchases, consumption from bulk purchases, consumption from own produce and gifts/in-kind over different reference periods.

Question 2: How much did your household spend on the following in the last 30 days?

This question is intended to find out how much the household spent on consumption of non-food items that are not frequently purchased.

Question 3: How much did your household spend on.....in the last 7 days?

This question is intended to find out how much the household spent on consumption of food items that are frequently purchased.

Question 4: In how many weeks in the last 30 days did you buy? “maximum 4”

This question is intended to find out the household frequency on purchases of certain items every week in the last 30 days.

If you can't give a breakdown, please provide the total amount spent on food and beverages

If the household is unable to give a breakdown by item, ask them to provide the total amount spent on food and non-food items.

Food items include:

Cooking Oil, Mealie Meal, Cassava consumption, Chicken, Fish, Beef and Pork (including other meat types), Sugar, Bread, Salt, Spices (e.g. Curry Powder, chilli), Vegetables (e.g tomatoes, onion, cabbage, etc), Soft Drinks (including juices), Alcoholic beverages.

[If you can't give a breakdown, please provide the total amount spent on food and beverages]

Non-food items:

Cosmetics (top society, fair & lovely), Soap and Detergent (boom, lifebuoy), Hair Dressing/Barber, Electricity, Water, Kerosene/Paraffin, Airtime, Transport(Fuel, bus fair), Charcoal, Fire Wood, Cooking Gas, Salaries including Salaries/Wages for Domestic Workers, Remittances (in cash and kind), Sanitary Towels, Diapers.

Question 5: Did your household spend on the following in the last 30 days

This question is intended to find out information on household expenditure and consumption. This should include estimates on direct purchases, consumption from bulk purchases, consumption from own produce and gifts/in-kind over different reference periods of non food items.

Question 6: How much did your household spend on the following in the last 30 days?

This question is intended to find out how much the household spent on consumption of food items that are not frequently purchased in the last 30 days.

SECTION 7: HOUSEHOLD ASSETS

The answers to these questions on ownership of certain items will be used as a rough measure of the socio-economic status of the household.

NOTE: In this section, the assets being referred to are those that are owned by households in good working condition or temporarily out of order but are usable.

Read out each item and select the answer given whether it is a "Yes" or "No". Make sure you do not leave any item(s) blank. If the respondent reports that a household item such as a radio is broken, try to find out how long it has been broken and whether it will be fixed. If the item appears to be out of use only temporarily, select '1' for YES. Otherwise, select '2' for NO.

Question 1: Does this household own (ITEM)

If a household is keeping an asset for somebody else and using it, do not include it among the assets owned no matter how long they have had it. Assets that are inherited should be included among assets owned so long they are in working condition.

Question 2: How many (ITEM) s does your household own?

Record the total number of a specific asset owned by the household.

THE END