



WORKING PAPER

CGAP Smallholder Household Surveys

User Guide to the Data Set for Nigeria

April 2017

CONTENTS

BACKGROUND INFORMATION	1
CGAP’s work with smallholder households.....	1
Definition and focus of the sample in the survey	3
SAMPLE DESIGN	5
Sampling frame	5
Sample allocation and selection	5
Household listing	6
Sampling weights	6
Sampling errors	6
QUESTIONNAIRE	7
Developing the instrument	7
Overview of the questionnaire and its three parts.....	8
Questionnaire framework.....	10
How to leverage the questionnaire framework.....	10
FIELDWORK	11
Training.....	11
Dates	11
Deviations in the sample design.....	11
Response rates	11
Methods of data collection.....	11
Quality checks.....	11
DATASET	14
Location and access.....	14
REFERENCES	15
Annex 1. Listing Documents	16
Introduction	16
Definition of key terms	16
Responsibilities of the listing staff	17
Responsibilities of the supervisor	17
Responsibilities of the listing team	17
Steps in mapping and household listing	18

Segmentation of large enumeration areas	21
Household selection	22
Mapping and listing forms	23
Annex 2. Questionnaires	32
Household Questionnaire.....	32
Multi-Respondent Questionnaire.....	40
Single Respondent Questionnaire.....	63
Annex 3. Sampling Documents	110
Sampling frame	110
Sample allocation and selection	111
Sampling weights.....	111
Sampling errors	113

BACKGROUND INFORMATION

CGAP's work with smallholder households

CGAP's client orientation naturally extends to the largest global segment of those living on less than US\$2 a day: smallholder families. With its direct poverty focus and link to the broader development goal of food security, innovative financial solutions for these families are an important area for CGAP to explore.

Given that smallholder households are not only agricultural producers but also consumers who have diverse financial needs and varied sources of income, CGAP's work with smallholder families helps stakeholders to address the financial needs of the least-served smallholder segments (particularly noncommercial smallholders). The goal is to ensure smallholder segments have access to and actively use financial services that are tailored to the full array of their financial needs. This includes finance for both agricultural activities and other financial needs, such as off-farm enterprising and household priorities like school fees.

Finance for agricultural activities. Meeting the financial needs of smallholder households in their pursuit of agricultural activities is challenging. Agriculture is seasonal, with time passing between cash outflows and inflows. Farming depends on the quality of the resource base, it is vulnerable to pests and spoilage, and it is exposed to the volatility of weather and prices. Financial service providers face risk and liquidity management challenges because farmers in the same area generally borrow at the same time and often conduct the same activities, and therefore, they are often exposed to the same risks. Financial services providers need to understand both agriculture and finance—and

they often require greater incentives to work in remote rural areas, where sparse populations and weak infrastructure result in higher transaction costs. As a result, traditional microfinance has not reached the vast majority of smallholder farmers, and recent advances based on supply chain finance have primarily benefitted the relatively small number of smallholder farmers in tight value chains with agribusinesses, marketing companies, or processors.

Other financial needs. The irregular cash flows and risks of agricultural activities further complicate an already complex system of household cash management where agriculture is not always the only or most important source of income. Consequently, CGAP also focuses on identifying and meeting those financial needs of smallholder families that are not directly related to agricultural production, including off-farm enterprising and other household priorities. While these needs are not unique to smallholder families, these families often are uniquely impacted because of family reliance on agricultural activities. For example, in smallholder communities in parts of western Kenya, school fees are due soon after maize is harvested. This forces parents to sell their produce when the market is still flooded and prices are low. Ironically, the financial product these smallholder families may need most is not tied to agriculture at all, but instead to education: a financial mechanism that would allow them to store their harvest until market prices increase and pay for school fees.

Segmentation. Segmentation of smallholder families can help differentiate the demand for financial services among these households and can help develop tailored solutions. Drawing from a rich array of studies, CGAP proposed a segmentation based on the way smallholder families engage with markets (which is often a function of land size and whether

staple or cash crops are grown) (Christen and Anderson 2013). Not all poor smallholder families fit clearly within only one of the three segments. But segmentation does allow a greater understanding of the fact that different segments have different financial needs, and that this variety in demand cannot be met by the same suite of financial products, terms of service, or services providers.

Noncommercial smallholder families.

The approximately 300 million noncommercial smallholder families worldwide are generally considered subsistence farmers, and they are among the poorest households. They typically farm to contribute to their own sustenance and survival, not as a vocation or strategic business choice. Agricultural production is concentrated in staple crops (e.g., cereals, roots, tubers) that are consumed by the household. Irregular, small amounts of surplus might be sold in an informal, local market, and there is limited or no connection to a structured value chain. Noncommercial smallholder families are generally net buyers of food (supplementing their own production) and sellers of labor, which limits their ability to produce. They have very few purchase inputs, little mechanization to use, and relatively low outputs. Access to land, technology, education, markets, and information about weather or agricultural production is very limited, leaving the household highly vulnerable to income and other shocks. These households use informal financial mechanisms (e.g., local savings and loan groups) for basic financial services, to the extent that they are using any financial tools at all.

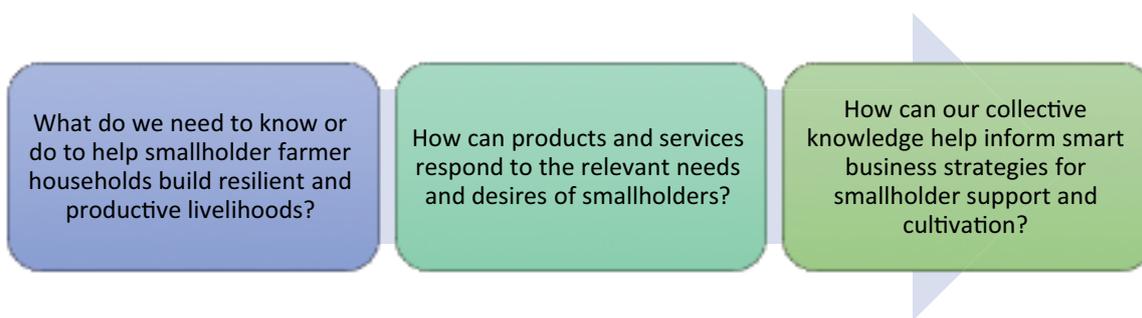
Commercial smallholder households in loose value chains. The approximately 165 million commercial smallholder households in loose value chains have access to somewhat more land and generate some level of surplus to sell. However, financial pressures and lack

of storage often force these families to sell when prices are low only to repurchase the same crop for consumption later when prices are higher. Their crop mix tends to focus on staples, which they sell through loosely structured markets and value chains, but it may also include some higher value cash crops (e.g., sugar, tea, coffee, oilseeds, fibers). Commercial smallholder households in loose value chains have limited access to inputs, information about weather, markets, and prices, but because they have some access to more effective agricultural practices and financial services, they are in a relatively more resilient position than noncommercial smallholder households.

Commercial smallholder households in tight value chains.

Broadly speaking, the approximately 35 million commercial smallholder households in tight value chains have access to at least two hectares of land and approach farming as a business—growing crops that generate a reliable output to sell in local or regional markets and/or through highly structured value chains. Because of their relationship with these relatively more organized value chains, farmers in this segment have access to improved seeds, inputs, agricultural and weather information, finance, and secure markets and prices. Their crop mix emphasizes higher value crops but is likely to also include staple crops. In terms of access to finance, they interact with a relatively wider range of financial services from both informal and formal financial services providers than do the other two segments.

To explore the financial and agricultural lives of smallholder farmer households in Nigeria, CGAP launched a comprehensive attitudinal and behavioral research program. The research project—consisting of qualitative research in the form of focus groups, a survey with an accompanying household listing, and a segmentation—sought to answer three key questions.



Definition and focus of the survey sample

The objectives of the Smallholder Household Survey in Nigeria are as follows:

- Generate a clear picture of the smallholder sector at the national level, including household demographics, agricultural profile, and poverty status and market relationships.
- Segment smallholder households in Nigeria according to the most compelling variables that emerge.
- Characterize the demand for financial services in each segment, focusing on customer needs, attitudes, and perceptions related to both agricultural and financial services.

- Detail how the financial needs of each segment are currently met, with both informal and formal services, and where there may be promising opportunities to add value.

Identifying target group of smallholder households. Discussions with consultants and stakeholders in sub-Saharan Africa and extensive desk research showed that there is no clear agreement on the characteristics that define a smallholder (Aidenvironment and Ecole Polytechnique Fédérale de Lausanne 2013). As a result of both of these lines of investigation, a matrix was developed of each of the key criteria that could be used to distinguish smallholder households from other agricultural households.

TABLE 1. Key Criteria in Defining Smallholder Households

Key Criteria	Considerations
Market orientation	Subsistence vs. market-oriented vs. hybrid
Landholding size	Threshold
Labor input	Family vs. hired
Income	Shared income from farming, multiple sources
Farming system	Technology, irrigation
Farm management responsibility	Owner, influence over how to farm
Capacity	Storage, management, administration
Legal aspects	Formal vs. informal
Level of organization	Member of group—producer, supply chain, services provider

The desk research also found a range of definitions of relevant terms across countries, reflecting the variations in their agricultural sectors. Some governments define smallholders solely by their landholding size. When landholding size was used to define a smallholder, the range differed greatly across Asian and African countries, from 2.5 hectares in India up to 46 hectares in Malaysia.

InterMedia proceeded to develop a high water mark for identifying the pool of smallholder households relevant to this research to be as inclusive

as possible, without diluting or distorting the population representation. The identification measure used two key criteria—landholding size and livestock count—as the starting point for identifying the target group. There was also a desire to ensure that the essence of smallholder farmers was included, so a series of self-identifying perception questions were asked. This was done to ensure that each smallholder household selected in the study viewed agriculture as a significant part of its household's livelihood, income, or consumption.

SAMPLE DESIGN

The survey of smallholder households in Nigeria is a nationally representative survey with a target sample size of 3,000 smallholder households. To take nonresponse into account, the target sample size was increased to 3,225 households assuming a response rate of 93 percent. The sample was designed to produce national estimates as well as estimates for each of the six geopolitical zones of Nigeria comprising the following states:

- North Central: Benue, Federal Capital Territory (FCT), Kogi, Kwara, Nasarawa, Niger, and Plateau
- North East: Adamawa, Bauchi, Borno, Gombe, Taraba, and Yobe
- North West: Jigawa, Kaduna, Kano, Katsina, Kebbi, Sokoto, and Zamfara
- South East: Abia, Anambra, Ebonyi, Enugu, and Imo
- South South: Akwa Ibom, Bayelsa, Cross River, Delta, Edo, and Rivers
- South West: Ekiti, Lagos, Ogun, Ondo, Osun, and Oyo

The survey encompassed smallholder households that are defined as households with criteria identified in Table 2.

Sampling frame

Nigeria is divided into 774 local governments (LGAs). In preparation for the

latest housing and population census in 2006, the National Population Commission (NPopC) demarcated over 662,000 enumeration areas (EAs) for the country. From these EAs, two hierarchical master sample frames were developed by the Nigeria Bureau of Statistics (NBS): the LGA master frame and the National Integrated Survey of Households (NISH). The smallholder survey used the NISH as the sampling frame, but retained only the EAs that contained agricultural households.

Sample allocation and selection

The total sample size was first allocated to the geopolitical zones in proportion to their number of agricultural EAs in the sampling frame. Within each zone, the resulting sample was then further distributed to states proportionate to their number of agricultural EAs. Given that EAs were the primary sampling units and 15 households were selected in each EA, 215 EAs were selected

The sample for the smallholder survey is a stratified multistage sample. A stratum corresponds to a state, and the sample was selected independently in each stratum.

In the first stage, EAs were selected as primary sampling units with equal probability. A household listing operation was conducted in all selected EAs to identify smallholder households and to provide a frame for the selection of smallholder households to be included

TABLE 2. Criteria to Identify the Universe of Smallholder Households for the Survey

Household with up to 5 hectares	OR	Agriculture provides a meaningful contribution to the household livelihood, income, or consumption
Farmers who have less than: 50 heads of cattle or 100 goats/sheep/pigs or 1,000 chickens		
	AND	

in the sample. In the second stage, 15 smallholders were selected in each EA with equal probability.

In each selected household, a Household questionnaire was administered to the head of the household, spouse, or any knowledgeable adult household member to collect information about household characteristics. A Multiple Respondent questionnaire was administered to all adult members in each selected household to collect information on their agricultural activities, financial behaviors, and mobile money use. In addition, in each selected household only one household member was selected using the Kish grid and was administered the Single Respondent questionnaire. The full description of the sample design can be found in Annex 3.

Household listing

The household listing operation was conducted in all selected EAs on 6–18 October 2016. For this purpose, Inter-Media developed a manual describing the listing and mapping procedures. The manual included listing forms along with questions used to identify smallholder households according to the agreed definition for the survey. This manual was used to train 74 listing teams, each consisting of one lister and one mapper. The training involved both classroom sessions and field practice.

The household listing was done on smartphones, which required that a script be developed in Dooblo Survey-ToGo software for the listing forms. The script was field tested and validated before it was used for the listing operation.

Sampling weights

Since the sample for the smallholder household survey is not self-weighting, sampling weights were calculated. The first component of the weights is the design weight based on the probability of selection for each stage. The second component uses the response rate at both household and individual levels.

The design weights for households were adjusted for nonresponse at the household level to produce adjusted household weights. Sampling weights for the Multiple Respondent data file were derived from adjusted household weights by applying to them nonresponse rates at the individual level. For the Single Respondent data file, the same process was applied after taking into account the subsampling done within the household.

Finally, household and individual sampling weights were normalized separately at the national level so the weighted number of cases equals the total sample size. The normalized sampling weights were attached to the different data files and used during analysis.

Sampling errors

The sample design for the smallholder household survey is complex and features clustering, stratification, and unequal probabilities of selection. For key survey estimates, sampling errors taking into account the design features can be produced using either the SPSS Complex Sample module or STATA based on the Taylor series approximation method.

QUESTIONNAIRE

Developing the instrument

Existing research and stakeholder discussions. Building on other household surveys in sub-Saharan Africa (e.g., agricultural censuses, Living Standards Measurement Study, FinScope, AgFiMS) and the 2013 CGAP global segmentation,¹ this methodology and survey instrument were designed to answer a number of questions about smallholder households in Nigeria:²

- **Understanding and segmenting smallholder households.** What are the key characteristics of the smallholder sector at the national level (e.g., demographics, poverty status, hectares, crops and livestock, level of intensification, market relationships)? And what segments of smallholder households emerge?
- **Attitudes and perceptions of smallholder households.** How do smallholder households perceive their agricultural activities (e.g., a subsistence activity, business), and do household members, especially youth, see a future in agriculture? On the financial side, what is the level of comfort with digital financial services and other channels and services providers?
- **Opportunities to improve financial inclusion for each segment of smallholder households.** Which financial mechanisms do each segment of smallholder households demand, through the lens of customer needs (store, transfer, build, secure, etc.) and products (e.g., credit, deposit, insurance)? What informal and formal suite of financial mechanisms do each segment currently use and

where are there opportunities to add value with new services and/or delivery channels?

The first months of the overall project included a series of deep-dives into the existing research on smallholders to determine what questions had already been asked, the findings, and how this research could complement and expand on these findings. Several stakeholders and organizations were consulted in the process, including Babban Gona, Bill & Melinda Gates Foundation, Cellulant, EFINA, Fortis Microfinance Bank, IFAD, IFC, Dalberg, Finmark Trust, AgFiMS, FinScope, FAO, GIZ, IFAD, Sahel Capital, Standard Microfinance Bank, USAID, and the World Bank. Secondary research and discussions with stakeholders identified a gap in information about the actual needs, desires, and perceptions of smallholder households. There seemed to be significant amounts of data and insight into the habits of smallholder households in Nigeria that either examined their agricultural activities or tracked their financial lives, but nothing to date had taken a more comprehensive view of the household. This research project also sought to connect the agricultural data to the financial data to dissect the interactions and intersections between the two.

After conducting secondary research on the smallholder sector and discussions with stakeholders, the design process for the survey instrument began. This process involved defining the end goal of the research by doing the following:

- Drawing from existing survey instruments.
- Considering the objectives and needs of the project.

¹ See Christen and Anderson (2013).

² CGAP also retained the services of InterMedia to manage the other smallholder household surveys in Mozambique, Uganda, Tanzania, Côte d'Ivoire, and Bangladesh.

- Accounting for stakeholder interests and feedback.
- Learning from the ongoing financial diaries in country.
- Building from a series of focus groups conducted early on in the study.

Overview of the questionnaire and its three parts

Using these building blocks, a framework for the survey instrument was developed to share with stakeholders and to capture all the relevant elements of a smallholder household. The framework consisted of five main subject areas: demographics, household economics, agricultural practices, mobile phones, and financial services.

To capture the complexity of smallholder households, the smallholder household survey was divided into three questionnaires: the Household Questionnaire, the Multiple Respondent Questionnaire, and the Single Respondent Questionnaire. It was designed in this way to capture the complete portrait of the smallholder household, as some members of the household may work on other agricultural activities independently and without the knowledge of others.

The Household Questionnaire collected information on the following:

- Basic household members' individual characteristics (age, gender, education attainment, schooling status, relationship with the household head).

TABLE 3. Framework for the Smallholder Questionnaire

Section	Demographics	Household Economics	Agricultural Practices	Mobile Phones	Financial Services
Topics	Relationship	Income	Land ownership	Use	Formal institutions
	Marital status	Jobs	Crops grown	Types of phones	Less than formal institutions
	Age	Government payments	Livestock	Barriers	Informal financial service providers
	School attendance	Saving	Value chain	Habits	Importance
	Income	Investing	Market relationship	Products	Borrowing
	Decision-making	Emergency planning	Water		Products
	Financial situation	Risk mitigation	Labor		
	Progress out of Poverty Index (PPI)		Inputs		
			Storage		
		Coping			

- Whether each household member contributes to the household income or participates in the household's agricultural activities. This information was later used to identify all household members eligible for the other two questionnaires.
- Household assets and dwelling characteristics.

Both the Multiple and Single Respondent Questionnaires collected different information on the following:

- Agricultural practices—farm information such as size, crop types, livestock, decision-making, farming association, and markets.
- Household economics—employment, income, expenses, shocks, borrowing and saving habits, and investments.

The Single Respondent Questionnaire collected the following information:

- Mobile phones—attitudes toward phones, use, access, ownership, desire, and importance.
- Financial services—attitudes toward financial products and services such as banking and mobile money, including ownership, use, access, and importance.

The questionnaires were translated into Igbo, Hausa, Yoruba, and Pidgin and were pretested on 5–7 November 2016. After the pretest, debriefing sessions were held with the pretest field staff, and the questionnaires were modified based on the observations from the pretest. After the questionnaires were finalized, a script was developed to support data collection on smartphones. The script was tested and validated before it was used in the field.

Table 4. Design of Smallholder Questionnaires

	Household Questionnaire	Multiple-Respondent Questionnaire	Single-Respondent Questionnaire
Target respondent(s)	Head of the household, their spouse, or a knowledgeable adult	All household members 15 years old and over who contribute to the household income or participate in its agricultural activities	One randomly selected adult in the household among adults who contribute to the household income or participate in its agricultural activities
Topics covered	<ul style="list-style-type: none"> ■ Basic information on all household members ■ Information about household assets and dwelling characteristics 	<ul style="list-style-type: none"> ■ Demographics ■ Agricultural activities ■ Household economics 	<ul style="list-style-type: none"> ■ Agricultural activities ■ Household economics ■ Mobile phones ■ Formal and informal financial tools

FIGURE 2. Questionnaire Framework

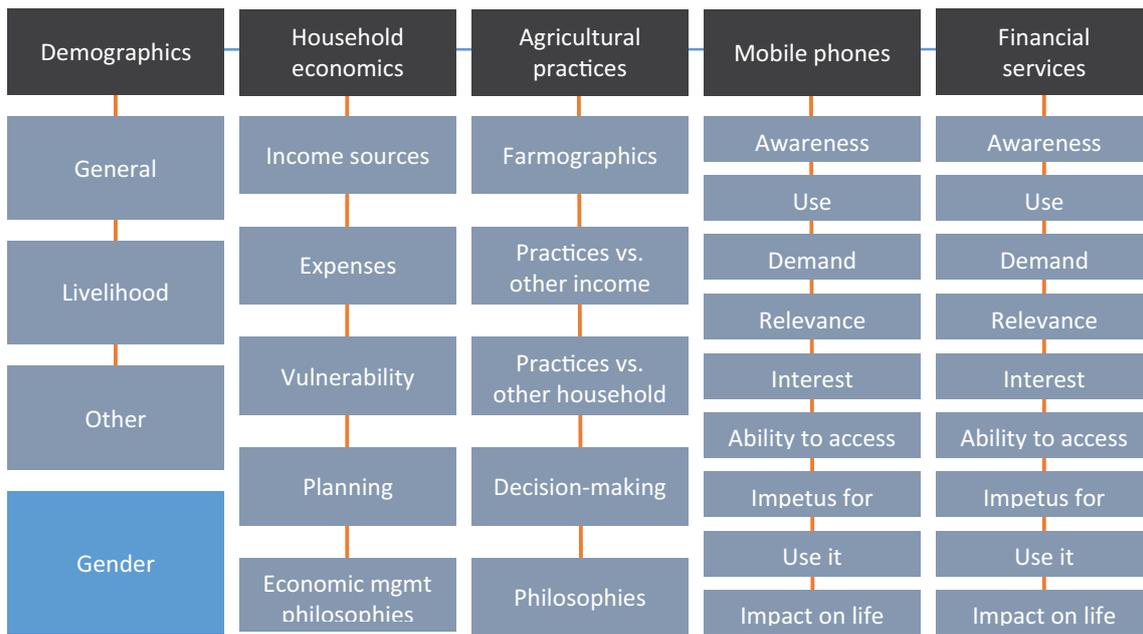
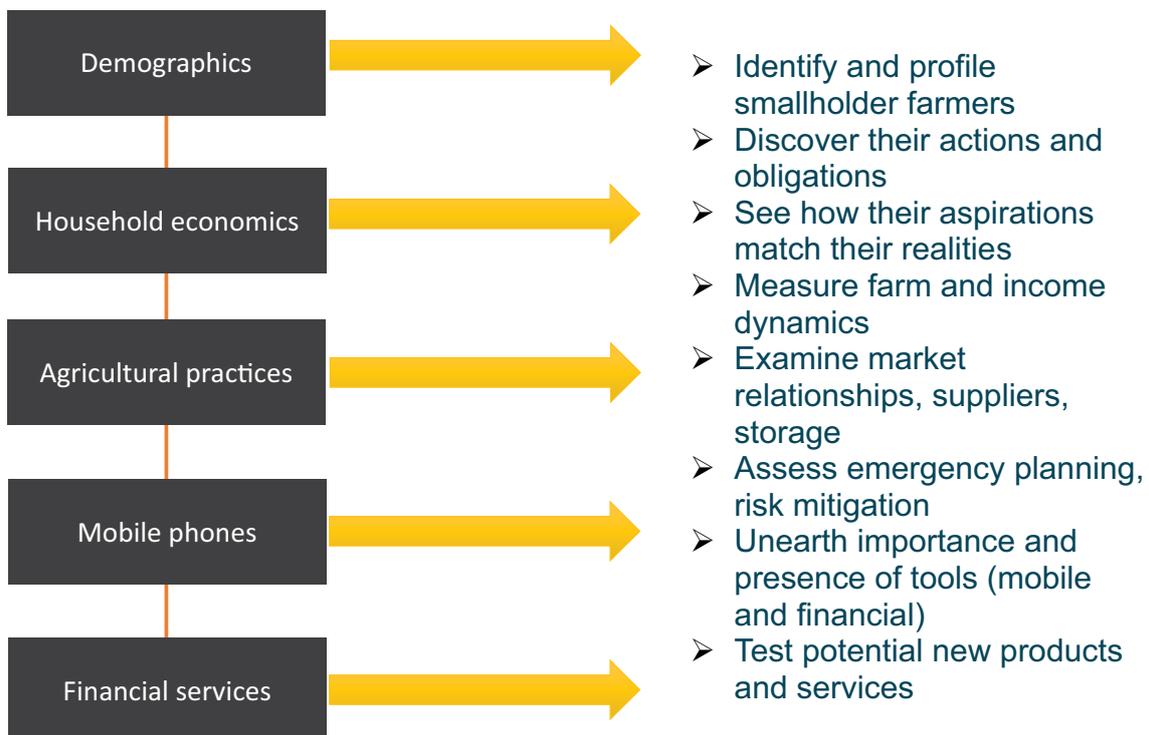


FIGURE 3. How to Leverage the Questionnaire Framework



FIELDWORK

Training

Ipsos Nigeria, InterMedia's local field partner, recruited interviewers and supervisors for the main fieldwork, taking into account their language skills. Following the recruitment of field staff, training was completed in two phases. First a centralized training of trainers was conducted in Lagos on 18 November 2016. This training was attended by the regional trainers for the different states, the field teams for Lagos state, and the independent field quality control (QC) team directly hired by InterMedia. The training covered interview techniques and field procedures, a detailed review of the survey questionnaires, mock interviews between participants in the classroom, and field practice with actual respondents in the areas outside the sampled EAs in Owode Apa and Iragon.

In addition, six regional training sessions were conducted by 36 supervisors trained during the centralized training session. The regional trainings were attended by the locally hired enumerators and QC team on 14–19 November 2016, except in Enugu and Kaduna, where it was held on 21–26 November 2016.

Dates

Data collection took place from 15 November to 9 December 2016 and was conducted by Ipsos Nigeria.

Deviations in the sample design

The household listing operation identified fewer than 15 smallholder households in many sampled EAs. As a result, the sample take of 15 households per EA could not be implemented in those EAs. To avoid situations where the sample fell short, the sample take was increased to 17 smallholder households where possible, while retaining in the sample all smallholder households in EAs with

fewer than 17 smallholder households. This yielded 3,457 sampled households.

Response rates

Tables 4, 5, and 6 show household and household member response rates for the Nigeria smallholder household survey. A total of 3,457 households were selected for the survey, of which 3,310 were found to be occupied during data collection. Of these occupied households, 3,026 were successfully interviewed, yielding a household response rate of 91 percent.

For the interviewed households, 6,643 eligible household members were identified for the Multiple Respondent Questionnaire. Interviews were completed with 5,128 eligible household members, yielding a response rate of 77 percent for the Multiple Respondent Questionnaire.

Among the 3,206 eligible household members selected for the Single Respondent Questionnaire, 2,773 were successfully interviewed, yielding a response rate of 92 percent.

Methods of data collection

Seventy-four interviewing teams collected the survey data on smartphones. Each team consisted of one supervisor and two to five interviewers.

Quality checks

Ipsos Nigeria recruited field teams (interviewers and supervisors) and supervised fieldwork activities along with the independent QC team hired by Intermedia to oversee the overall quality of data collection. The QC team stayed with the survey teams during fieldwork to closely supervise and monitor them.

InterMedia checked the final data files for inconsistencies and errors; corrections were made as necessary and where possible.

Table 4. Response Rate for the Household Questionnaire

	North Central	North East	North West	South East	South South	South West	Total
Households selected	553	535	900	431	508	530	3,457
Households occupied	529	516	867	391	507	500	3,310
Households interviewed	490	490	785	369	419	473	3,026
Household response rate	93%	95%	91%	94%	83%	95%	91%

	Urban	Rural	Total
Households selected	381	3,076	3,457
Households occupied	345	2,965	3,310
Households interviewed	336	2,690	3,026
Household response rate	97%	91%	91%

Table 5. Response Rate for the Multiple Respondent Questionnaire

	North Central	North East	North West	South East	South South	South West	Total
Eligible household members	1,145	972	1,765	777	962	1022	6,643
Eligible household members interviewed	871	760	1,318	583	842	754	5,128
Response rate	76%	78%	75%	75%	88%	74%	77%

	Urban	Rural	Total
Eligible household members	771	5,872	6,643
Eligible household members interviewed	617	4,511	5,128
Response rate	80%	77%	77%

Table 6. Response Rate for the Single Respondent Questionnaire

	North Central	North East	North West	South East	South South	South West	Total
Eligible household members	490	490	785	369	419	473	3,026
Eligible household members interviewed	472	432	678	347	400	444	2,773
Response rate	96%	88%	86%	94%	95%	94%	92%

	Urban	Rural	Total
Eligible household members	336	2,690	3,026
Eligible household members interviewed	302	2,471	2,773
Response rate	90%	92%	92%

DATA SET

Location and access

The data set and accompanying user guide are available for public download at the World Bank Group Microdata Library.

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ANNEX 1. LISTING DOCUMENTS

MANUAL FOR MAPPING AND HOUSEHOLD LISTING

September 2016

INTRODUCTION

This manual provides general guidelines for carrying out the household listing operation in the field along with the responsibilities of the listing staff, and the definition of terms used. It also describes the selection of households to be included in the survey.

Definition of key terms

The definitions of key terms used in this manual are provided below.

An **Enumeration Area (EA)** is the smallest geographical statistical unit created for a housing and population census. For example, an EA can be a city block, a village or part of a village, or a group of small villages. The EA should have well-defined boundaries identified on a map. The number of households per EA is generally small enough to be covered by one enumerator during the census. The size of the EAs is fairly uniform, although there is some variability in the number of households by EA. In some countries, the average size of EAs is different for urban and rural areas.

A **cluster** in the survey is the smallest geographical area comprised of a number of adjacent households. A cluster may correspond to an EA or a segment of a large EA with well-defined boundaries.

A **base map** is a reference map that describes the geographical location and boundaries of an EA.

A **location map** is a map produced during the household listing operation that shows the location of the cluster along with its boundaries. It also includes instructions on how to get to the cluster

and any information that can be used to find the cluster and its boundaries.

A **sketch map** is a map produced during the household listing operation that shows all of the structures found in the cluster during the listing operation. It also contains features such as landmarks (river, roads), public buildings (e.g., park, school, temple) and streets or roads, which helps the interviewer to find the selected households.

A **dwelling unit** is a room or a group of rooms normally intended as a place of residence for one household (e.g., a single house, an apartment, or a group of rooms in a house). However, a dwelling unit can also be shared by more than one household.

A **structure** is a free-standing building that can have one or more dwellings for residential or commercial use. Residential structures can have one or more dwelling units (e.g., a single house, an apartment building).

A **household** consists of a person or a group of related or unrelated persons, who live together in the same dwelling unit, who share common living arrangements, who acknowledge the same person as the household head, who eat together and are considered as one unit.

The **head of household** is defined as a usual resident member of the household who is acknowledged by the other members of the household as the household head.

Households are found in dwellings, dwellings in structures and structures in clusters.

In some cases, one may find a group of people living together in the same dwelling, but each person has separate eating arrangements and incomes. In such cases, each person constitutes a one-person household.

Collective living arrangements (sometimes also called institutional households) such as messes, hotels, residential hotels, rescue homes, homes for the elderly, orphanages, jails, army camps, workers' hostels and boarding schools are not considered as households and therefore, are excluded from the survey.

Note, however, that domestic servants and other workers living and eating in the same household should be included as household members.

Regardless of precise definition and examples, there will be some difficult cases coming up and you should consult your supervisor.

Responsibilities of the listing staff

The household listing operation will be carried out in each selected cluster by a household listing team prior to the main survey. Each team consists of two persons: one will work as the **mapper** while the other will be the **lister**. Supervisors will be overseeing teams, while the overall household listing operation will be monitored by a listing coordinator.

Responsibilities of the supervisor

- Obtain base maps for all clusters selected for the survey
- Assign clusters to teams
- Ensure that all listing materials (Manual for Mapping and Household Listing, mapping forms, and MDCs) are obtained before going to the field

- Plan and organize fieldwork logistics (e.g., arranging for transport, identifying and contacting local officials and village elders in each cluster to inform them about the listing operation and to obtain their cooperation)
- Receive and review duly completed maps and ensure that they are safely stored at the central office
- Ensure that each cluster has been fully covered and listed
- Monitor and verify that the quality of work is acceptable

Responsibilities of the listing team

- Identify the boundaries of the clusters
- Draw a detailed sketch map showing the location of the cluster and of all the structures it contains
- List all the structures and households in the cluster in a systematic manner
- Complete all listing forms including Segmentation Form if required
- Send all listing data to the central office
- Communicate to the supervisor problems encountered in the field and follow his/her instructions

The mapper and the lister should work together at the same time in the same area. They will first identify the cluster boundaries together, and then the mapper prepares the location and sketch map while the lister does the household listing. The sketch map and the household listing form must be prepared in tandem.

Steps in mapping and household listing

The household listing operation involves three main steps: locating each cluster, preparing the sketch map of each cluster, and the listing of all households found in each cluster. In some cases, segmentation is required and will be described later in this manual.

Step 1: Locating the cluster

The supervisor will provide the listing team with a base map containing the cluster assigned to the team. Upon arrival in a cluster, the team should first tour the cluster to identify its boundaries. This should be done with the assistance of the local authorities where the cluster is located. During this first tour of the cluster, the listing team should determine an efficient route of travel for listing all structures in the cluster.

In most cases, the cluster boundaries are recognizable natural features such as streams or rivers, or features such as roads or railroads. However, in some cases such as in rural areas where the cluster boundaries may not be marked with visible features, particular attention should be paid to the information provided on the base map. In such cases, assistance from local authorities will be particularly helpful.

Following the identification of the cluster boundaries, the listing team will tour the cluster a second time to create the listing and draw the sketch map of the cluster. A sketch map is a detailed map of the cluster showing all its structures and features such as roads.

Step 2: Preparing sketch maps

The mapping of the cluster and the listing of the households should be done in a systematic manner so that there are no

omissions or duplications. The cluster should be divided into parts if possible, and a part can be a block of structures. The team should finish each block before going to the adjacent one. Within each block, start at one corner of the block and move clockwise around the block. In rural areas where structures are found in small groups, the team should work in one group at a time. In each group, start from the center and move clockwise around it.

During the second tour of the cluster, using the Sketch Map Form, the mapper will draw a sketch map of all structures found in the cluster as follows:

1. Marking the starting point with a large **X**, identify on the map each structure by a small square at the spot where it is located in the cluster. Nonresidential structures should be identified by their use (e.g., school, shop, factory).
2. Number all structures in sequential order beginning with 1. Whenever there is a break in the numbering of structures (e.g., when moving from one block to another), use an arrow to indicate how the numbers proceed from one set of structures to another. Although it may be difficult to pinpoint the exact location of the structure on the map, even an approximate location is useful for finding the structure in the future.
3. Add to the sketch map landmarks, public buildings (e.g., park, school, temple) and streets or roads. Sometimes it is useful to add to the sketch map landmarks that are found outside the cluster boundaries, if they are helpful in identifying other structures inside the cluster.
4. Ensure that all of the structures within the cluster boundaries are covered.

5. An example of a sketch map can be found in the Examples section at the end of the document.

The listing team should be careful to locate hidden structures. In some areas, structures have been built so haphazardly that they can easily be missed. If there is a pathway leading from the listed structure, check to see if the pathway goes to another structure. People living in the area may help in identifying any hidden structures.

Step 3: Listing of households

Using the Household Listing Form, the Lister will record all structures and households found in the cluster as follows.

First page:

1. Begin by entering the state, LGA, and town names, and cluster number.
2. On the next row, enter the Mapper's name and ID number, Lister's name and ID number, and the Page number and total page count.
3. Leave blank the first two columns, which are reserved for office use.
4. **Column (1)** [*Serial number of structure*]: Record for each structure the same structure serial number that the Mapper enters on the Sketch Map Form.
5. **Column (2)** [*Address/description of structure*]: Provide the street address of the structure or any description of the structure that helps to locate it.
6. **Column (3)** [*Residence (Yes/No)*]: Indicate whether the structure is used for residential purposes (eating and sleeping) by circling **Y** for **Yes**. In cases where a structure is used for commercial or other purposes, circle **N** for **No**. Structures used for both residential and commercial purposes (e.g., a combination of store and home), should be classified as residential (i.e., circle **Y** in Column 3). Make sure to list any dwelling unit found in a nonresidential structure (e.g., a guard living inside a factory or in a church). All structures must be listed, including vacant structures and structures under construction, as well as structures where the household members refuse to co-operate, or are not at home at the time of listing.
7. **Column (4)** [*Serial number of household in the structure*]: This is the serial number assigned to each household found in the structure. There can be more than one household in a structure. The first household in the structure will always have number 01. If there is a second household in the structure, then this household should be recorded on the next line, and 02 is recorded in Column 4. If the structure is an apartment building, assign one serial number to the entire structure (only one square with one number appears on the Sketch Map Form), but complete Columns 4 through 7 for each apartment in the building individually.
8. **Column (5)** [*Name of the Head of Household*]: Write the name of the head of the household. There can only be one head per household.
9. **Column (6)** [*Status of dwelling*]
10. **Column (7)** [*Notes*]: Record any special information about the household or structure (e.g., non-residential structure, under construction, household refusal). Then go to the second page.

Second page:

11. **Column (1)** [*Serial number of structure*]: Copy this information from the first page. This is the same structure serial number that the Mapper enters on the Sketch Map Form.
12. **Column (4)** [*Serial number of household in the structure*]: Copy this information from the first page. This is the serial number assigned to each household found in the structure.
13. **Column (QQ1)** [*Does any member of this household operate any land that can be used for agriculture?*]: Ask this question to find out if any portion of the household's land is used for farming and circle **Y** for **Yes** or **N** for **No**. The land operated by the household can either be owned or rented. If the respondent says **No** then go to QQ3.
14. **Column (QQ2)** [*How much agricultural land do members of this household operate?*]: Ask this question to find out the land size and record the number. The land operated by the household can either be owned or rented. If the land size is less than 1 hectare, record **00** in the space provided. If the land size is unknown, try to estimate and record that number or record **DK** for **Don't Know**.
15. **Column (QQ3)** [*Does this household have any livestock, herds, other farm animals, or poultry?*]: Ask this question to find out if any animals are raised on the land and circle **Y** for **Yes** or **N** for **No**. If the respondent says **No** or **N**, then go to QQ5.
16. **Column (QQ4)** [*How many of the following animals does this household have?*]: Ask this question to find out how many animals are raised on the land and record the number for each of the animal types listed in Columns QQ4A through QQ4E. If the answer is **None**, then record **00** in the space provided. If the number of animals is unknown, try to estimate and record that number or record **DK** for **Don't Know**.
17. **Column (QQ4A)** [*How many of the following animals does this household have—cattle, milk cows, or bulls?*]: Ask this question and record the number of cattle, milk cows, or bulls in Column A. If the answer is **None**, then record **00** in the space provided. If the number of cattle, milk cows, or bulls is unknown, try to estimate and record that number or record **DK** for **Don't Know**.
18. **Column (QQ4B)** [*How many of the following animals does this household have—goats?*]: Ask this question and record the number of goats in Column B. If the answer is **None**, then record **00** in the space provided. If the number of goats is unknown, try to estimate and record that number or record **DK** for **Don't Know**.
19. **Column (QQ4C)** [*How many of the following animals does this household have—sheep?*]: Ask this question and record the number of sheep in Column C. If the answer is **None**, then record **00** in the space provided. If the number of sheep is unknown, try to estimate and record that number or record **DK** for **Don't Know**.
20. **Column (QQ4D)** [*How many of the following animals does this household have—pigs?*]: Ask this question and record the number of pigs in Column D. If the answer is **None**, then record **00** in the space provided. If the number of pigs is unknown, try to estimate and record

that number or record **DK** for **Don't Know**.)

21. **Column (QQ4E)** [*How many of the following animals does this household have—chickens?*]: Ask this question and record the number of chickens in Column E. If the answer is **None**, then record **00** in the space provided. If the number of chickens is unknown, try to estimate and record that number or record **DK** for **Don't Know**. Then continue to the third page.)

Third page:

22. **Column (1)** [*Serial number of structure*]: Copy this information from the first page. This is the same structure serial number that the Mapper enters on the Sketch Map Form.
23. **Column (4)** [*Serial number of household in the structure*]: Copy this information from the first page. This is the serial number assigned to each household found in the structure.
24. **Column (QQ5)** [*Does agriculture represent an important contribution to your household livelihood—yes or no?*]: Ask this question to find out if agriculture is important to the household's lives and circle **Y** for **Yes** or **N** for **No**.
25. **Column (QQ6)** [*Does agriculture represent an important contribution to your household income—yes or no?*]: Ask this question to find out if agriculture is important to the household's total income and circle **Y** for **Yes** or **N** for **No**.
26. **Column (QQ7)** [*Does agriculture represent an important contribution to your household consumption—yes or no?*]: Ask this question to find out if agriculture is important to the household's food consumption and circle **Y** for **Yes** or **N** for **No**.
27. **Column (8)** [*Comments about agricultural activity*]: Record here any comments about the household's agricultural and livestock activities, such as the land of the household is rented off or operated by someone else.

Segmentation of large enumeration areas

The complete listing of large EAs is not cost effective. For that reason, large EAs should be subdivided into smaller segments of which only one will be selected and listed. Upon arrival in a large EA that needs segmentation, the listing team should first tour the EA and do a quick count of dwellings in the EA. Each EA with more than 200 households will be subdivided into an appropriate number of segments. It is critical to adopt segment boundaries that are easily identifiable.

Each team should carry a number of Segmentation Forms to the field each with a random number printed in the appropriate space on the Form.

Segmentation and selection of a sample segment will be carried out as follows:

1. Using the Location Map Form, the mapper will then prepare a location map of the cluster. This involves drawing a map that shows the location of the cluster along with its boundaries and the boundaries of the parts that comprise the cluster. This location map should include all instructions on how to get to the cluster and any information that can be used to find the cluster and its boundaries.
2. Using clear boundaries such as roads or rivers, divide the EA into segments.
3. Show on the location map of the EA the boundaries of the newly created segments.

4. Number the segments sequentially.
5. For each segment, do a quick count of the number of dwellings.
6. Using the Segmentation Form, record the identification information of the EA, the segment number, and the size of each segment in the appropriate columns (number of dwellings, percentage and cumulative percentage).
7. Compare the cumulative percentage with the random number provided on the Segmentation Form.
8. Select the first segment for which the cumulative percentage is greater than or equal to the random number.
9. Draw a sketch map of the selected segment and list all the households found in the selected segment. The selected segment corresponds to the cluster for the CGAP survey.

Household selection

The household selection will be done at the central office once all the listing forms are completed for all EAs. To obtain the sample of smallholder households to be interviewed for the CGAP survey, the following steps are required.

Step 1: In Column **Eligible**, mark with an X all households listed in the EA that meet the definition of a smallholder household. A smallholder household is a:

Household with up to 5 hectares	AND	Agriculture provides a meaningful contribution to the household livelihood, income, or Consumption
OR		
Farmers who have less than: 50 heads of cattle; or 100 goats/sheep/pigs; or 1,000 chickens		

Step 2: In Column **Household number**, starting with 1, assign sequentially a number to all households marked with an X in step 1 that also meet one of the following three additional criteria:

- Occupied residential dwellings.
- Households that refused to cooperate during household listing.
- Households whose occupants were temporarily absent during household listing.

Leave the cell blank if the dwelling unit is not occupied (Column 6 = 2) or the structure is not a residential structure (Column 3 = N). The total number of smallholder households for each EA is the number assigned to the last household listed in that EA that meets the definition of the smallholder household and one the above three additional criteria.

Step 3: After sequentially numbering of all smallholder households listed in each EA, record the total number of smallholder households in the Excel spreadsheet Template used for household selection (CGAP Household Selection Template provided separately). For each EA, record also in the Template the percentage that the selected segment represents in the EA that was segmented in the Column

Proportion of the selected segment. The percentage to record is in the selected segment row of the **Percent of total** Column on the Segmentation Form of the EA. If no segmentation was carried out, leave the value of “1” in the Column in the Template (Proportion of the selected segment).

Step 4: The Excel spreadsheet Template used for household selection will automatically generate the household numbers for households to be interviewed in the survey. The selected households should be indicated on the Household Listing Form by circling the corresponding number in the **Household Number** Column.

ANNEX

Mapping and Household Listing Forms

CLUSTER INFORMATION FORM

Nigeria

IDENTIFICATION	
State name:	Local Government Area name:
CGAP Cluster number:	Town name:
Mapper's name and ID number: Name: ID:	Lister's name and ID number: Name: ID:

NOTES

LOCATION MAP FORM

Nigeria

LOCATION MAP

CGAP Cluster number:



SKETCH MAP FORM

Nigeria

SKETCH MAP	
	CGAP Cluster number:

SEGMENTATION FORM

Nigeria

IDENTIFICATION	
State	Local Government Area name:
CGAP Cluster number:	Town name:
Mapper's name and ID number:	Lister's name and ID number:
Name: ID:	Name: ID:

Number of segments to be created:	Random number between 1 and 100:
-----------------------------------	----------------------------------

Segment number	Number of dwellings	Percent of total	Cumulative percent of total
1			
2			
3			
4			
5			
Total			100

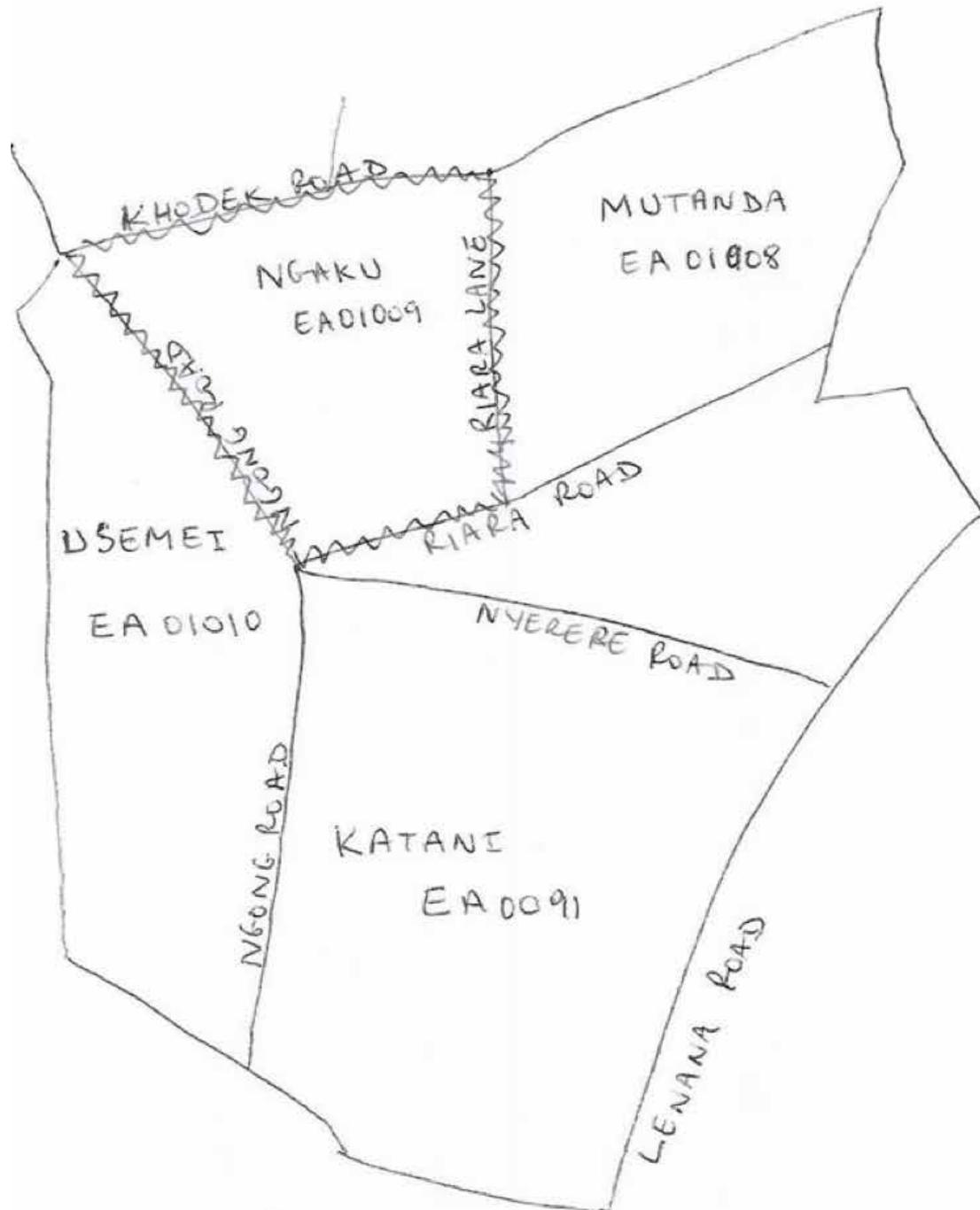
Segment selected:	
-------------------	--

EXAMPLES

Location and Sketch Map Forms

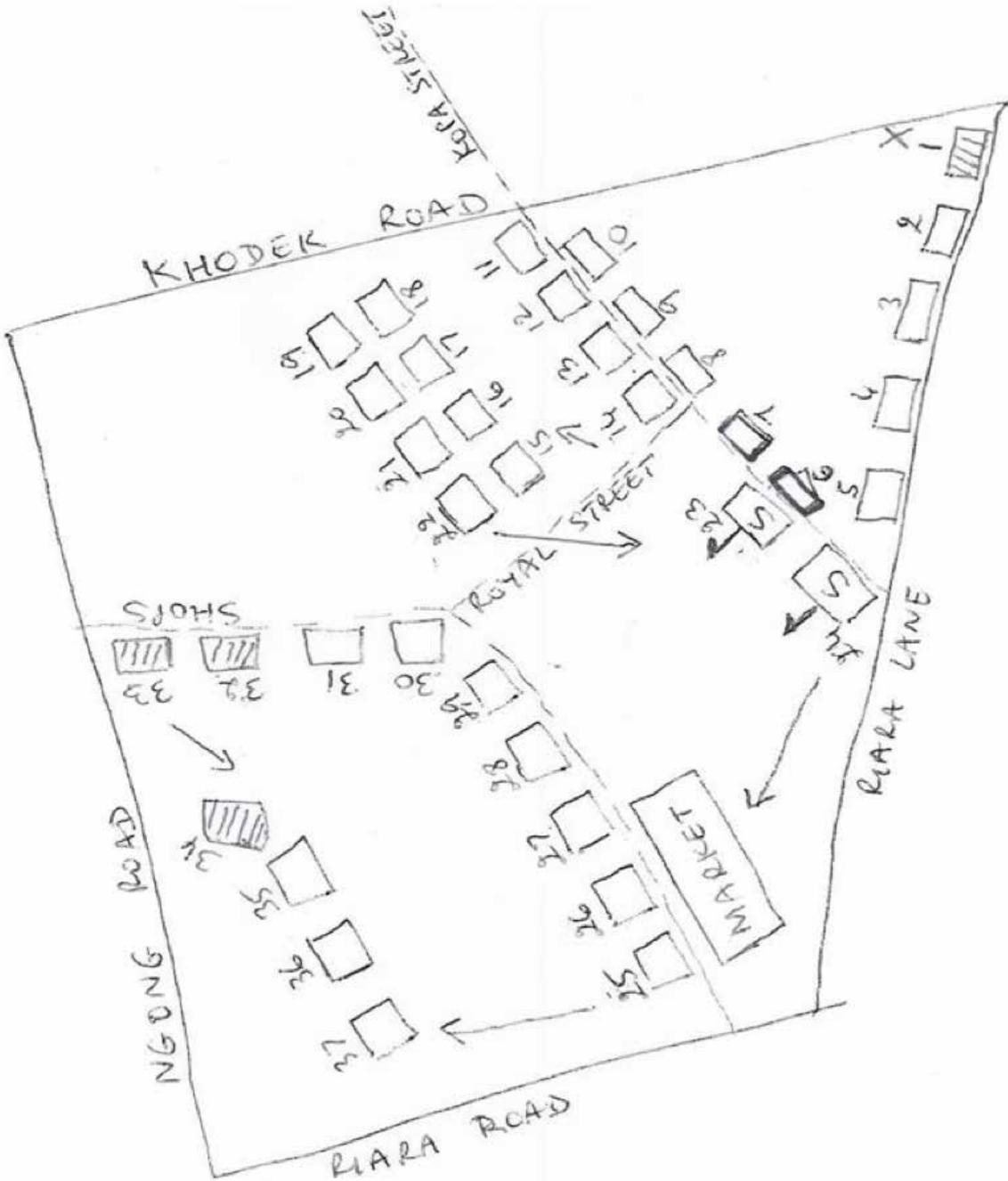
LOCATION MAP FORM EXAMPLE

CGAP Cluster number: 060



SKETCH MAP FORM EXAMPLE

CGAP Cluster number: 060



ANNEX 2. QUESTIONNAIRES

Smallholder Household Survey in Nigeria

Household Questionnaire

Household questionnaire	
HH1. CGAP cluster number: ___ ___ ___	HH2. Household number: ___ ___
HH3. Interviewer's name and number: Name _____	HH4. Supervisor's name and number: Name _____
HH5. Day / Month / Year of interview: ___ ___ / ___ ___ / 2016	HH6. State Name _____
HH7. LOCAL GOVERNMENT AREA Name _____	

We are from an independent market research company called **IPSOS based in Nigeria**. We are conducting a survey about smallholder households. I would like to talk to you about your household activities and financial behaviors. The interview will take about 15 minutes. All the information we obtain will remain strictly confidential and anonymous. May I start now?

- Yes, permission is given ⇒ Go to D0 to begin the interview.
- No, permission is not given ⇒ Circle 04 in HH8. Discuss this result with your supervisor.

HH8. Result of household interview:

Completed	01
No household member or no competent respondent at home at time of visit	02
Entire household absent for extended period of time	03
Refused	04
Dwelling vacant / Address not a dwelling.....	05
Dwelling destroyed	06
Dwelling not found.....	07
Other (specify).....	96

After the household questionnaire has been completed, fill in the following information:	After all questionnaires for the household have been completed, fill in the following information:
HH9. Respondent to Household Questionnaire: Name _____	HH12. Number of individual questionnaires completed: ___ ___
HH10. Total number of household members: ___ ___	
HH11. Number of eligible household members: ___ ___	

HOUSEHOLD QUESTIONNAIRE

This questionnaire should be administered to the head of household or, his/her spouse, or any knowledgeable adult household member (15 and over). Use an additional questionnaire if all rows in the List of Household Members have been used.

First, please tell me the name of each person who usually lives here (excluding visitors), starting with the head of the household.

D0	D1	D2	D3	D4	D5	D6	D7	D8	D9	Household member 15 and over		
										D10	D11	D12
Household member's Line Number	Name	What is (name)'s relationship to the head of household	Is (name) 1=Male 2=Female	What is (name)'s marital status	Age (in years)	Has (name) ever attended school? 1=Yes 2=No >> SKIP TO D10	Is (name) currently attending school? 1=Full-time 2=Only part of the time 3=Not attending 98=Don't know	What is the highest educational level (name) has attended?	Did (name) complete (grade from D8)? 1=Yes 2=No	Does (name) contribute to the household income? 1=Yes 2=No	Does (name) participate in the household's agricultural activities? 1=Yes 2=No	Eligible for individual household member questionnaire (Only show eligible respondents)
01												
02												
03												
04												
05												
06												
07												
09												
10												
11												

Codes for D2 – Relationship to head of household: 1 = Head 2 = Spouse 3 = Son or daughter 4 = Step son / Step daughter 5 = Grandchild 6 = Father/Mother 7 = Parent-in-law 8 = Brother/sister 9 = Other relative 10 = Not related 98 = Don't know

Codes for D4 – Marital Status: 1 = Single/Never married 2 = Married 3 = Divorced/separated 4 = Widowed 5 = Living together/cohabiting 98 = Don't know

Codes for D8 – Highest grade: 0 = No formal schooling 1 = Informal schooling only (including Koranic schooling) 2 = Some primary schooling 3 = Primary school completed 4 = Some secondary school / high school 5 = Secondary school / high school completed 6 = Post-secondary qualifications, other than university e.g. a diploma or degree from a polytechnic or college 7 = Some university 8 = University completed 9 = Post-graduate 99 = Don't know [Do not read]

D14. What is the main language spoken in the household?

SINGLE ANSWER. _____ (98 for Don't know)

D15. What is your household's smallest source of income?

READ OUT. SINGLE ANSWER.

Earning wages or salary from regular job	1
Earning wages from occasional job	2
Running own business in retail or manufacturing (selling or making goods)	3
Running own business by providing services	4
Getting a grant, pension, stipend/allowances or subsidy of some sort	5
Getting money from family or friends / remittance from abroad	6
Growing something and selling it, such as crops, fruits, or vegetables	7
Rearing livestock, poultry, fish, or bees and selling it or its byproducts	8
Other (specify) _____	9
Don't know	98

D17. What is your household's largest source of income?

READ OUT. SINGLE ANSWER.

Earning wages or salary from regular job	1
Earning wages from occasional job	2
Running own business in retail or manufacturing (selling or making goods)	3
Running own business by providing services	4
Getting a grant, pension, stipend/allowances or subsidy of some sort	5
Getting money from family or friends / remittance from abroad	6
Growing something and selling it, such as crops, fruits, or vegetables	7
Rearing livestock, poultry, fish, or bees and selling it or its byproducts	8
Other (specify) _____	9
Don't know	98

D19. What is the minimum amount your household needs to survive per month (for personal expenses)? I am talking about the amount that will cover just your basic needs for food, transport, cooking fuel, and clothes.

SINGLE ANSWER. _____ NAIRA (98 for Don't know)

D20. Please look at this card and tell me which answer best reflects your household's current financial situation.

READ OUT. SINGLE ANSWER.	
We don't have enough money for food	1
We have enough money for food and clothes only	3
We have enough money for food and clothes and can save a bit, but not enough to buy expensive goods such as a TV set or a refrigerator	4
We can afford to buy certain expensive goods such as a TV set or a refrigerator	5
Don't know	98

D21. What is your household's average monthly income across all sources of money that your household receives? We recognize this may vary from month to month, so please just provide an average.

SINGLE ANSWER. _____ NAIRA (98 for Don't know)

D22. Generally, who makes decisions on the following agricultural activities?

	1 = Husband / boyfriend 2 = Wife / girlfriend 3 = Both husband and wife 4 = Another family member 5 = Not applicable 98 = Don't know
Planting time	
Purchase of farm inputs	
When to harvest	
Quantity of crops to sell	
When and where to sell crops	
Where to borrow money to support agricultural production	
When to sell livestock	
Quantity of livestock to sell	
What to plant	

D23. Regardless of what you have, how important is it to your household to have the following – very important, somewhat important, or not important?

READ OUT. SINGLE ANSWER.	1 = Very important 2 = Somewhat important 3 = Not important 98 = Don't know
Bank account (non-savings)	
Mobile phone	
Mobile money account	
Insurance	
Savings account	
Loan	
Credit	

D24. ASK ALL. How many members does the household have?

READ OUT. SINGLE ANSWER	
Ten or more	1
Eight or Nine	2
Seven	3
Six	4
Five	5
Four	6
Three	7
One or Two	8

D25. ASK ALL. How many separate rooms do the members of the household occupy (do not count bathrooms, toilets, storerooms, or garage)?

READ OUT. SINGLE ANSWER	
One	1
Two	2
Three	3
Four	4
Five or More	5

D26. ASK ALL. The roof of the main dwelling is predominantly made of what material?

READ OUT. SINGLE ANSWER	
Grass, clay tiles, asbestos or plastic sheets, or others	1
Concrete, zinc, or iron sheets	2

D27. ASK ALL. What kind of toilet facility does the household use?

READ OUT. SINGLE ANSWER	
None, bush, pail/bucket, or other	1
Uncovered pit latrine, or V.I.P. latrine	2
Covered pit latrine, or toilet on water	3
Flush to septic tank, or flush to sewage	4

D28. ASK ALL. Does the household own a gas cooker, stove (electric, gas table, or kerosene), or microwave?

READ OUT. SINGLE ANSWER	
No	1
Yes	2

D29. ASK ALL. How many mattresses does the household own?

READ OUT. SINGLE ANSWER	
None	1
One	2
Two	3
Three or More	4

D30. ASK ALL. Does the household own a TV set?

READ OUT. SINGLE ANSWER	
No	1
Yes	2

D31. ASK ALL. How many mobile phones does the household own?

READ OUT. SINGLE ANSWER	
None	1
One	2
Two	3
Three or More	4

D32. ASK ALL. Does the household own a motorbike or a car or other vehicle?

READ OUT. SINGLE ANSWER	
No	1
Only Motorbike	2
Car (regardless of motorbike)	3

D33. ASK ALL. Does any member of this household practice any agricultural activity such as crop, livestock, or fish farming, or own land that is not cultivated? If so, does the household own any sprayers, wheelbarrows, or sickles?

READ OUT. SINGLE ANSWER	
Farms or has uncultivated land, but no sprayers, wheelbarrows, or sickles	1
Farms or has uncultivated land, and has sprayers, wheelbarrows, or sickles	2
Does not farm nor has uncultivated land	3

Smallholder Household Survey in Nigeria

Multiple Respondent Questionnaire

This questionnaire will be administered to **ALL** individual household members who contribute to the household income or participate in the household's agricultural activities, that is, the head of household and spouse and other household members aged 15 and over who contribute to the household income or participate in the household's agricultural activities. These household members will be identified from the household questionnaire.

Individual questionnaire	
11. CGAP cluster number: ___ ___ ___	12. Household number: ___ ___
13. Household member's name: Name _____	14. Household member's line number: ___ ___
15. Interviewer's name and number: Name _____ ___ ___	16. Supervisor's name and number: Name _____ ___ ___
17. Day / Month / Year of interview: ___ ___ / ___ ___ / 2016	18. STATE Name _____
19. LOCAL GOVERNMENT AREA Name _____	

Repeat greeting if not already read to this household member:

We are from *Ipsos*. We are conducting a survey about smallholder households. I would like to talk to you about your household activities and financial behaviors. The interview will take about 20 minutes. All the information we obtain will remain strictly confidential and anonymous. May I start now?

- Yes, permission is given ⇒ Go to A0 to begin the interview.
 No, permission is not given ⇒ Circle 03 in I10. Discuss this result with your supervisor.

I10. Result of household member's interview:

Completed	01
Not at home at time/Not available at the time of visit.....	02
Refused	03
Partly completed.....	04
Incapacitated.....	05
Other (specify).....	96

MODULE ON AGRICULTURAL PRACTICES

A0. MATCH TO D11. Do you participate in the household's agricultural (including livestock) activities?

SINGLE ANSWER.		
No	2	SKIP TO H1
Yes	1	

I would like to ask you some questions about your agricultural practices.

A1. What is the form of ownership of your main agricultural land?

READ OUT. SINGLE ANSWER.	
Individual ownership with lease or certificate	1
Individual ownership under customary law	2
Communal (resources are shared)	3
State ownership	4
Other (specify) _____	5
Don't know	98

A2. How much agricultural land do you own?

SINGLE ANSWER. RECORD EXACT RESPONSE AND PROBE FOR UNIT TYPE

Size	Unit (hectare, acre, square feet, square mile, decimals)

98 for Don't know. Record zero if do not own any agricultural land

A3. How much agricultural land do you rent, borrow or have the right to use?

SINGLE ANSWER. RECORD EXACT RESPONSE AND PROBE FOR UNIT TYPE

Size	Unit (hectare, acre, square feet, square mile, decimals)

98 for Don't know. Record zero if do not rent, borrow or have the right to use any agricultural land

A4. Do you consider your farm to be a business?

SINGLE ANSWER.	
Yes	1
No	2
Don't know	98

A5. Which of the following crops do you grow?

A6. ASK ONLY FOR CROPS MENTIONED IN A5, IF ANSWERED 'NONE' IN A5, SKIP TO A7. Which of the following crops that you grow is the most important to you and your family?

READ OUT.	A5. ALLOW FOR MULTIPLE ANSWERS.	A6. SINGLE ANSWER.
	<i>Grow</i>	<i>Most important</i>
Wheat	1	1
Rice, paddy	2	2
Maize	3	3
Millet	4	4
Sorghum	5	5
Fonio	6	6
Potatoes	7	7
Sweet potatoes	8	8
Cassava	9	9
Taro (cocoyam)	10	10
Yams	11	11
Sugar cane	12	12
Cow peas	13	13
Pulses	14	14
Beans	15	15
Soybeans	16	16
Groundnuts	17	17
Coconuts	19	19
Palm Oil	20	20
Karite nuts (sheanuts)	21	21
Sesame seed	22	22
Melonseed	23	23
Seed cotton	24	24
Tomatoes	26	26
Cabbage	29	29
Onions	30	30

READ OUT.	A5. ALLOW FOR MULTIPLE ANSWERS.	A6. SINGLE ANSWER.
	<i>Grow</i>	<i>Most important</i>
Cashew nut	31	31
Banana	32	32
Cotton	33	33
Tobacco	34	34
Pyrethrum	35	35
Coffee	36	36
Orange	37	37
Pepper	38	38
Watermelon	39	39
Other 1 (specify) _____	40	40
Other 2 (specify) _____	41	41
Other 3 (specify) _____	42	42
None	43 -> SKIP TO A7	43

A7. Which of the following crops do you grow that you consume at home? LIST ONLY CROPS SELECTED IN A5.

A8. ASK ONLY FOR CROPS MENTIONED IN A7, IF ANSWERED **NONE** IN A7, SKIP TO A9. Which of these crops that you grow do you consume the most?

READ OUT.	A7. ALLOW FOR MULTIPLE ANSWERS.	A8. SINGLE ANSWER.
	<i>Grow for consumption</i>	<i>Most consume</i>
Wheat	1	1
Rice, paddy	2	2
Maize	3	3
Millet	4	4
Sorghum	5	5
Fonio	6	6
Potatoes	7	7
Sweet potatoes	8	8
Cassava	9	9
Taro (cocoyam)	10	10
Yams	11	11
Sugar cane	12	12
Cow peas	13	13
Pulses	14	14
Beans	15	15
Soybeans	16	16
Groundnuts	17	17
Coconuts	19	19
Palm Oil	20	20
Karite nuts (sheanuts)	21	21
Sesame seed	22	22
Melonseed	23	23
Seed cotton	24	24
Tomatoes	26	26
Cabbage	29	29
Onions	30	30
Cashew nut	31	31
Banana	32	32
Cotton	33	33

READ OUT.	A7. ALLOW FOR MULTIPLE ANSWERS.	A8. SINGLE ANSWER.
	<i>Grow for consumption</i>	<i>Most consume</i>
Tobacco	34	34
Pyrethrum	35	35
Coffee	36	36
Orange	37	37
Pepper	38	38
Watermelon	39	39
Other 1 (specify) _____	40	40
Other 2 (specify) _____	41	41
Other 3 (specify) _____	42	42
None	43 -> SKIP TO A9	43

A9. Do you buy any of the following crops?

READ OUT. ALLOW FOR MULTIPLE ANSWERS.			
Wheat	1	Sesame seed	22
Rice, paddy	2	Melonseed	23
Maize	3	Seed cotton	24
Millet	4	Tomatoes	26
Sorghum	5	Cabbage	29
Fonio	6	Onions	30
Potatoes	7	Cashew nut	31
Sweet potatoes	8	Banana	32
Cassava	9	Cotton	33
Taro (cocoyam)	10	Tobacco	34
Yams	11	Pyrethrum	35
Sugar cane	12	Coffee	36
Cow peas	13	Orange	37
Pulses	14	Pepper	38
Beans	15	Watermelon	39
Soybeans	16	Other 1 (specify) _____	40
Groundnuts	17	Other 2 (specify) _____	41
Coconuts	19	Other 3 (specify) _____	42
Palm Oil	20	None	42
Karite nuts (sheanuts)	21		

A10. Do you have any livestock, herds, other farm animals, fish, or poultry?

SINGLE ANSWER.		
Yes	1	
No	2	SKIP TO A15

A11. How many of each of the following do you rear?

READ OUT. ALLOW FOR MULTIPLE ANSWERS. RECORD '0' IF DO NOT REAR ANY	Count
Indigenous cattle	
Cattle - dairy	
Cattle - beef	
Indigenous goat	
Goat - dairy	
Goat - meat	
Sheep	
Pigs	
Chicken - layers	
Chicken - broilers	
Fish (number of ponds)	
Bees (number of hives)	
Camel	
Donkey	
Horse	
Dog	
Other (specify) _____	

A12. Which of the following do you rear *AND* get an income from? USE LIVESTOCK SELECTED IN A11 > 0

A13. ASK ONLY FOR LIVESTOCK MENTIONED IN A12, IF ANSWERED **NONE** IN A12, SKIP TO A14. Which of these generates the most income for you?

A14. Which of the following livestock or byproducts do you rear to consume at home? USE LIVESTOCK SELECTED IN A11 > 0

READ OUT.	A12. ALLOW FOR MULTIPLE ANSWERS	A13. SINGLE ANSWER	A14. ALLOW FOR MULTIPLE ANSWERS
	<i>Get income from</i>	<i>Most income</i>	<i>Consumption</i>
Indigenous cattle	1	1	1
Cattle—dairy	2	2	2
Cattle—beef	3	3	3
Indigenous goat	4	4	4
Goat—dairy	5	5	5
Goat—meat	6	6	6
Sheep	7	7	7
Pigs	8	8	8
Chicken—layers	9	9	9
Chicken—broilers	10	10	10
Fish (number of ponds)	11	11	11
Bees (number of hives)	12	12	12
Camel	13	13	13
Donkey	14	14	14
Horse	15	15	15
Dog	16	16	16
Other (specify) _____	17	17	17
None	18 -> SKIP TO A14	18	18

A15. Who do you normally purchase your main agricultural and livestock inputs (such as seeds, fertilizer, or pesticide) from?

READ OUT. ALLOW FOR MULTIPLE ANSWERS.	
Cooperative	1
Wholesaler	2
Processor	3
Retailer	4
Government agency	5
Middleman/Trading company	6
Other (specify) _____	7
I do not purchase any agricultural or livestock inputs	8 -> SKIP TO A22
Don't know	98

A17. How do you usually pay your suppliers?

READ OUT. ALLOW FOR MULTIPLE ANSWERS.	
Cash	1
Cheque	2
Pay cash into bank	3
Electronic funds transfer	4
Mobile banking	5
Payment in-kind (crops, labor, etc.)	6
Prepaid debit card	7
Other (specify) _____	8
I do not buy supplies	9 -> SKIP TO A22

A18. Do your suppliers give you the option to pay them later (with credit) or do you have to pay them immediately?

SINGLE ANSWER.	
Pay later	1
Pay immediately	2

A22. Which of the following statements best describe your water situation?

READ OUT. SINGLE ANSWER.

I always have enough water available, but if I had more water I would be able to grow my agricultural activities faster	1
I always have water available, and it is enough for the needs of my agricultural activities	2
I have intermittent water supply, but this does not affect my agricultural activities	3
I have intermittent water supply, which does affect my agricultural activities	4

A23. For managing the land and livestock, what types of external labor do you use?

READ OUT. ALLOW FOR MULTIPLE ANSWERS.

Friends or neighbors labor, on a reciprocity basis	1	
Hired labor for extended period	2	
Family labor	3	
Daily rate for agricultural labor	4	
Other (specify) _____	5	
None	6	SKIP TO A25

A24. What do you use the labor for?

READ OUT. MULTIPLE ANSWERS

Land ploughing and preparation	1
Planting	2
Weeding	3
Harvesting	4
Selling crops	5
Livestock care	6
Livestock sale	7
Other (specify) _____	8

A25. Which of the following crops that you grow do you sell? LIST ONLY CROPS SELECTED IN A5

A26. ASK ONLY FOR CROPS MENTIONED IN A25, IF ANSWERED **NONE** IN A25, SKIP TO A36. Which of these crops that you grow do you get the most money from selling?

READ OUT.	A25. ALLOW FOR MULTIPLE ANSWERS.	A26. SINGLE ANSWER.
	<i>Grow for selling</i>	<i>Most money from</i>
Wheat	1	1
Rice, paddy	2	2
Maize	3	3
Millet	4	4
Sorghum	5	5
Fonio	6	6
Potatoes	7	7
Sweet potatoes	8	8
Cassava	9	9
Taro (cocoyam)	10	10
Yams	11	11
Sugar cane	12	12
Cow peas	13	13
Pulses	14	14
Beans	15	15
Soybeans	16	16
Groundnuts	17	17
Coconuts	19	19
Palm Oil	20	20
Karite nuts (sheanuts)	21	21
Sesame seed	22	22
Melonseed	23	23
Seed cotton	24	24
Tomatoes	26	26
Cabbage	29	29

READ OUT.	A25. ALLOW FOR MULTIPLE ANSWERS.	A26. SINGLE ANSWER.
	<i>Grow for selling</i>	<i>Most money from</i>
Onions	30	30
Cashew nut	31	31
Banana	32	32
Cotton	33	33
Tobacco	34	34
Pyrethrum	35	35
Coffee	36	36
Orange	37	37
Other 1 (specify) _____	38	38
Other 2 (specify) _____	39	39
Other 3 (specify) _____	40	40
None	41 -> SKIP TO A36	41

A27. Who do you sell your crops and livestock to?

READ OUT. ALLOW FOR MULTIPLE ANSWERS.	
Co-operative	1
Wholesaler	2
Processor	3
Retailer	4
Direct to the public/Open market	5
Direct to a government agency	6
Middleman / Trading company	7
Other (specify) _____	8
Don't know	98

A28. Where do you normally sell your crops and livestock?

READ OUT. MULTIPLE ANSWERS.		
At farm to neighbor or traveling merchant	1	
In village	2	
Local market	3	
Regional market	4	
Other (specify) _____	5	
Don't know	98	SKIP TO A30

A29. Why do you sell your crops and livestock at this location?

READ OUT. MULTIPLE ANSWERS.	
I get the best price at this market	1
I do not have access to transport to other markets	2
Poor road conditions to other markets	3
I am not aware of prices at other markets	4
I don't produce enough to transport to a bigger market	5
Other (specify) _____	6
Don't know	98

A30. When you sell your crops and livestock, do you get the current market price?

SINGLE ANSWER		
No	2	
Yes	1	SKIP TO A32
Don't know	98	SKIP TO A32

A31. Why do you not get the current market price?

DO NOT READ OUT. CODE INTO CATEGORIES BELOW. SINGLE ANSWER.	
Too few customers	1
My customers take advantage of me	2
I have to pay high commission rates to middlemen	3
Corruption	4
No access to transport to other markets	5
Poor crop quality	6
Other (specify) _____	7
Don't know	98

A32. Do you have a contract to sell any of your crops or livestock?

SINGLE ANSWER	
Yes	1
No	2
Don't know	98

A33. How do you usually get paid for what you sell?

READ OUT. ALLOW FOR MULTIPLE ANSWERS.	
Cash	1
Cheque	2
Electronic funds transfer	3
Mobile banking	4
Payment in-kind (crops, labor, etc.)	5
Prepaid debit card	6
Other (specify) _____	7

A35. What challenges do you face in terms of getting your crops and livestock to your customers?

READ OUT. ALLOW FOR MULTIPLE ANSWERS.	
Distance to the market	1
Transportation	2
Goods or products get damaged in transit	3
Lack of storage facilities	4
Lack of refrigeration facilities	5
Unreliable middlemen	6
I don't face any challenges	7
Other (specify) _____	8

A36. Which of the following crops that you grow do you barter trade? LIST ONLY CROPS SELECTED IN A5

A37. ASK ONLY FOR CROPS MENTIONED IN A36, IF ANSWERED **NONE** IN A36, SKIP TO H1. Which of these crops that you grow do you trade the most?

READ OUT.	A36. ALLOW FOR MULTIPLE ANSWERS.	A37. SINGLE ANSWER.
	<i>Grow for trading</i>	<i>Most trade</i>
Wheat	1	1
Rice, paddy	2	2
Maize	3	3
Millet	4	4
Sorghum	5	5
Fonio	6	6
Potatoes	7	7
Sweet potatoes	8	8
Cassava	9	9
Taro (cocoyam)	10	10
Yams	11	11
Sugar cane	12	12
Cow peas	13	13
Pulses	14	14
Beans	15	15
Soybeans	16	16
Groundnuts	17	17
Coconuts	19	19
Palm Oil	20	20
Karite nuts (sheanuts)	21	21
Sesame seed	22	22
Melonseed	23	23
Seed cotton	24	24
Tomatoes	26	26
Cabbage	29	29
Onions	30	30

READ OUT.	A36. ALLOW FOR MULTIPLE ANSWERS.	A37. SINGLE ANSWER.
	<i>Grow for trading</i>	<i>Most trade</i>
Cashew nut	31	31
Banana	32	32
Cotton	33	33
Tobacco	34	34
Pyrethrum	35	35
Coffee	36	36
Orange	37	37
Other 1 (specify) _____	38	38
Other 2 (specify) _____	39	39
Other 3 (specify) _____	40	40
None	41 -> SKIP TO H1	41

MODULE ON HOUSEHOLD ECONOMICS

Now I would like to ask you some questions about your personal income.

H1. Do you generate income from the following sources?

READ OUT. ACCEPT MULTIPLE ANSWERS.	
Earning wages or salary from regular job	1
Earning wages from occasional job	2
Running own business in retail or manufacturing (selling or making goods)	3
Running own business by providing services	4
Getting a grant, pension, stipend/allowances, or subsidy of some sort	5
Getting money from family or friends / remittance from abroad	6
Growing something and selling it, such as crops, fruits, or vegetables	7
Rearing livestock, poultry, fish, or bees and selling it or its byproducts	8
Other (specify) _____	9

H2. Which of these has been your main source of income in the last <INSERT TIME>?

READ OUT CATEGORIES FROM H1. SINGLE ANSWER.	<i>H2A. Month</i>	<i>H2B. 12 months</i>
Earning wages or salary from regular job	1	1
Earning wages from occasional job	2	2
Running own business in retail or manufacturing (selling or making goods)	3	3
Running own business by providing services	4	4
Getting a grant, pension, stipend/allowances, or subsidy of some sort	5	5
Getting money from family or friends/remittance from abroad	6	6
Growing something and selling it, such as crops, fruits, or vegetables	7	7
Rearing livestock, poultry, fish, or bees and selling it or its byproducts	8	8
Other (specify) _____	9	9
Don't know	98	98

H3. Which of the following income sources is most important to you?

H4. Which of the following income sources do you like getting the most?

H5. Which of the following income sources is most reliable for you?

READ OUT CATEGORIES FROM H1. SINGLE ANSWER.	H3. Most important	H4. Like getting the most	H5. Most reliable
Earning wages or salary from regular job	1	1	1
Earning wages from occasional job	2	2	2
Running own business in retail or manufacturing (selling or making goods)	3	3	3
Running own business by providing services	4	4	4
Getting a grant, pension, stipend/allowances, or subsidy of some sort	5	5	5
Getting money from family or friends remittance from abroad	6	6	6
Growing something and selling it, such as crops, fruits, or vegetables	7	7	7
Rearing livestock, poultry, fish, or bees and selling it or its byproducts	8	8	8
Other (specify) _____	9	9	9
Don't know	98	98	98

H6. What is your primary job (i.e., the job where you spend most of your time)?

READ OUT AND PROBE. CHOOSE CODE FROM THE LIST. SINGLE ANSWER.	
Farmer	1
Professional, e.g., doctor, teacher, nurse	2
Shop owner	3
Business owner	4
Laborer	5
Other (specify) _____	6

H7. What are your secondary or side jobs?

READ OUT AND PROBE. CHOOSE CODE FROM THE LIST. PROBE FOR MULTIPLE ANSWERS.

Farmer	1
Professional, e.g., doctor, teacher, nurse	2
Shop owner	3
Business owner	4
Laborer	5
Other (specify) _____	6
None	7

H8. How frequently do you receive your main source of income—daily, weekly, monthly, annually, after a certain period of time, or according to the harvest?

	1 = Daily 2 = Weekly 3 = Monthly 4 = Annually 5 = After a certain period of time 6 = According to the harvest 98 = Don't know
READ OUT. SINGLE ANSWER.	
Earning wages or salary from regular job	
Earning wages from occasional job	
Running own business in retail or manufacturing (selling or making goods)	
Running own business by providing services	
Getting a grant, pension, stipend/allowances, or subsidy of some sort	
Getting money from family or friends/remittance from abroad	
Growing something and selling it, such as crops, fruits, or vegetables	
Rearing livestock, poultry, fish, or bees and selling it or its byproducts	
Other (specify) _____	

H9. Are there any other ways that you get income?

READ OUT. PROBE FOR MULTIPLE ANSWERS.	
Buy/get agricultural products from farmers and process it/change it to another form (e.g., maize to flour)	1
Buy/get agricultural products from farmers/processors and sell it ottext	2
Provide a service to farmers or processors of farming products (e.g., renting ploughs, tractors, other equipment) ottext	3
Rent land to farmers for farming purposes ottext	4
Other (specify) _____	5
No other way	6

H10. Do you receive income from any of the following?

READ OUT. ACCEPT MULTIPLE ANSWERS. SINGLE ANSWER PER ROW.		
Government benefits (pension, disability, welfare, etc.)	1	
Remittances/monetary or other help from family or friends	2	
Other donor/NGO benefits	3	
Occasional paid assignments, labor for hire	4	SKIP TO H14
Occasionally sell my belongings	5	
Other (specify) _____	6	

H11. You said you receive a payment from the government (benefits, welfare, stipend, grant, or another payment). How do you usually get this payment?

READ OUT. MULTIPLE ANSWERS.	
Direct deposit to a bank account	1
Personal pick-up in cash	2
Personal pick-up in cheque	3
Courier delivery	4
Deposit to your m-money account	5
Deposit to an agent's m-money account	6
Deposit to another person's m-money account	7
Digital card (prepaid card, credit card)	8
Western Union/Money Gram	9
Other (specify) _____	10
Don't know	98

H14. How often do you make each of the following expenses?

READ OUT. SINGLE ANSWER.	1 = At least once a week 2 = At least once a month 3 = A few times a year 4 = Once a year 5 = According to the harvest 6 = Never 98 = Don't know
Grocery purchases	
Transportation	
Medicine, medical payments, hospital charges	
Educational expenses, school fees	
Bills: utility bills, mobile phone and airtime, rent, taxes, etc.	
Emergency expenses (specify) _____	
Investment in business, farm or future, e.g., buying livestock, land, seeds, equipment and machinery, etc.	
Make a large purchase, such as TV, car or bicycle, house, etc.	
Home repairs	
Other (specify) _____	

F62. MATCH TO D8. ASK ONLY IF D8 IS BETWEEN 0 AND 3 INCLUSIVE OR 99. SHOW SENTENCES ON SCREEN. Can you read any part of these sentences to me?

DO NOT READ. SINGLE ANSWER	
Cannot read at all	1
Able to read only parts of sentences	2
Able to read whole sentences	3
No card with required language	4
Blind / visually impaired.	5
Refused	6

1. Parents love their children.
2. Farming is hard work.
3. The child is reading a book.
4. Children work hard at school.

F63. Do you have any of the following types of an official identification?

READ OUT. ACCEPT MULTIPLE ANSWERS	1 = Yes	2 = No
Government-issued ID/national ID		
ECOWAS passport		
International passport		
Driver's license		
School-issued ID		
Voter's card		
Ration card		
Employee ID (for government/civil servants)		
Military ID		
Birth certificate		
Bank Verification Number		
Other (Specify) _____		

Smallholder Household Survey in Nigeria

Single Respondent Questionnaire

This questionnaire will be administered to **ONLY ONE** household member who contributes to the household income or participates in the household's agricultural activities that is, the head of household, his/her spouse or another household member aged 15 and over who contributes to the household income or participates in the household's agricultural activities. This household member will be randomly selected from the list of eligible household members identified in the household questionnaire.

This questionnaire is administered to **ONLY ONE** household member who contributes to the household income or participates in the household’s agricultural activities that is, the head of household, his/her spouse or another household members aged 15 and over who contributes to the household income or participates in the household’s agricultural activities. This household member is randomly selected among all eligible household members identified in the household questionnaire.

Individual questionnaire	
11. CGAP cluster number: ___ ___ ___	12. Household number: ___ ___
13. Household member’s name: Name _____	14. Household member’s line number: ___ ___
15. Interviewer’s name and number: Name _____	16. Supervisor’s name and number: Name _____
17. Day / Month / Year of interview: ___ ___ / ___ ___ / 2016	18. STATE Name _____
19. LOCAL GOVERNMENT AREA Name _____	

Repeat greeting if not already read to this household member:

We are from *Ipsos*. We are conducting a survey about smallholder households. I would like to talk to you about their household activities and financial behaviors. The interview will take about 45 minutes. All the information we obtain will remain strictly confidential and anonymous. May I start now?

- Yes, permission is given ⇒ Go to A99 to begin the interview.
- No, permission is not given ⇒ Circle 03 in I10. Discuss this result with your supervisor.

I10. Result of household member’s interview:

Completed	01
Not at home at time/ Not available at the time of visit	02
Refused	03
Partly completed	04
Incapacitated.....	05
Other (specify).....	96

MODULE ON AGRICULTURAL PRACTICES

A99. MATCH TO D11. Do you participate in the household's agricultural activities?

SINGLE ANSWER.		
No	2	SKIP TO H16
Yes	1	

I would like to ask you some questions about your agricultural practices.

A38. How many years have you been farming?

READ OUT. SINGLE ANSWER.	
Less than 2 years	1
2 to 5 years	2
6 to 10 years	3
More than 10 years	4
Don't know	98

A39. Do you intend to keep working in agriculture?

SINGLE ANSWER.		
No	2	
Yes	1	SKIP TO A41
Don't know	98	SKIP TO A41

A40. What would make you less likely to stay in agriculture?

SINGLE ANSWER.	
I do not make enough money from agriculture/poor returns	1
I don't have money to obtain inputs/inputs are expensive	2
Poor access to inputs/inputs are not available	3
Poor access to markets/lack of market for my produce	4
Bad or uncertain weather conditions	5
Poor harvests	6
Pest/weed infestation	7
Lack of land to continue with agriculture	8
Due to old age/health reasons	9
Going to other business/other job	10
Other Specify _____	11
Don't Know	98

A41. Do you agree or disagree with the following statements?

READ OUT. SINGLE ANSWER.	1=Agree 2=Disagree 98=Don't know
I enjoy agriculture	
I would not want to do any other kind of work	
I want to expand my agricultural activities by looking at new products and/or markets	
I would take full time employment if I were offered a job	
I am satisfied with what my agricultural activities have achieved	
I regard my agricultural activities as the legacy I want to leave for my family	
I just work to make ends meet	
I want my children to continue in agriculture	

A42. Are you a member of any of the following groups or associations?

READ OUT. MULTIPLE ANSWERS.		
A planting, weeding, and harvesting group	1	IF NO TO ALL OR REFUSED, SKIP TO A44
An exporting group or association	2	
Trade union	3	
Merry go round/informal savings network	4	
Women's group or association	5	
Processors group	6	
Cooperative/Producers' group	7	
Farm implement group	8	
SACCO (Savings and Credit Cooperative Society)	9	
Other (specify) _____	10	

A43. What types of services do you get from these groups or associations?

READ OUT. ALLOW FOR MULTIPLE ANSWERS.	
Business advice	1
Farming advice	2
The group markets our products	3
Access to farm implements	4
Buying products and services on credit	5
Start-up livestock, seeds, etc.	6
Financial advice	7
Access to inputs, fertilizer, seeds, labor, fuel, etc.	8
Storage facilities	9
Access to loans	10
Share in the profit	11
Savings account	12
Insurance	13
Other (specify) _____	14
None	15
Don't know	98

A44. How often do you use each of the following sources of information for agricultural activities?

	1 = Daily 2 = Weekly 3 = Monthly 4 = More than monthly 5 = Never 98 = Don't know
READ OUT. SINGLE ANSWER PER ROW.	
Cell phone/SMS	
Radio	
Television	
Internet or social media	
Newspapers/magazines	
Friends or family members	
Religious leaders	
Community members	
Rural development agents/NGOs	
School teachers	
Government officials/Agricultural extension officer	
Input (such as seeds, fertilizer, or pesticides) suppliers	
Merchants	
Government extension workers	
Intermediaries/middlemen	
Other (specify) _____	

A47. How important is it to keep money aside for the following agricultural needs—very, somewhat, or not important?

A48. Do you currently keep money aside for any of the following agricultural needs?
ASK ONLY IF A47 IS 1 OR 2

A49. Do you want to keep money aside for any of the following agricultural needs?

READ OUT.	A47. Importance	A48. Currently keep	A49. Want
SINGLE ANSWER	1 = Very important 2 = Somewhat important 3 = Not important 98 = Don't know	1 = Yes >> NEXT ITEM 2 = No 98 = Don't know	1 = Yes 2 = No 98 = Don't know
Fertilizer			
Seeds			
Pesticides			
Equipment			
Fuel			
Hiring staff/workers			
Security			
For future investment opportunities			
Crop storage after harvest			
Irrigation			
Transportation			
Agriculture machinery (e.g., tractor, thresher, etc.)			
Other (specify) _____			

A52. Do you currently store any of your crops after the harvest?

SINGLE ANSWER.		
Yes	1	
No	2	SKIP TO A57

A53. Which crops do you normally store? USE ONLY CROPS LISTED IN A5

READ OUT. ACCEPT MULTIPLE ANSWERS.	
Wheat	1
Rice, paddy	2
Maize	3
Millet	4
Sorghum	5
Fonio	6
Potatoes	7
Sweet potatoes	8
Cassava	9
Taro (cocoyam)	10
Yams	11
Sugar cane	12
Cow peas	13
Pulses	14
Beans	15
Soybeans	16
Groundnuts	17
Coconuts	19
Palm Oil	20
Karite nuts (sheanuts)	21
Sesame seed	22
Melonseed	23
Seed cotton	24
Tomatoes	26
Cabbage	29
Onions	30
Cashew nut	31
Banana	32
Cotton	33
Tobacco	34
Pyrethrum	35
Coffee	36
Orange	37
Pepper	38
Watermelon	39
Other 1 (specify) _____	40
Other 2 (specify) _____	41
Other 3 (specify) _____	42
None	43

A55. Where do you store your crops?

SINGLE ANSWER. _____ (98 for Don't know)

A56. Why do you store your crops?

DO NOT READ OUT. CODE INTO CATEGORIES BELOW. ALLOW FOR MULTIPLE ANSWERS.		
I am waiting for the price to get better	1	SKIP TO A58
Storage is good way to minimize hazards or risks	2	
So my family can have extra money after harvest season	3	
I store so I can pay for school fees	4	
I store for another major expense	5	
I store it so we can consume it later	6	
Other (specify) _____	7	
Don't know	98	

A57. Why do you not currently store any of your crops?

DO NOT READ OUT. CODE INTO CATEGORIES BELOW. ALLOW FOR MULTIPLE ANSWERS.		
There is no available storage place nearby	1	
Storage is too expensive	2	
There are no leftover crops to store	3	
It is not a good idea to store crops	4	
I need to use the money after the harvest	5	
Other (specify) _____	6	
Don't know	98	

A58. Have you ever purchased livestock as an investment?

SINGLE ANSWER		
Yes	1	
No	2	SKIP TO A60

A59. Do you currently have livestock that are investments?

SINGLE ANSWER	
Yes	1
No	2

A60. Which of the following factors pose the *most significant* risk to your agricultural activities?

READ OUT. SINGLE ANSWER.	
Weather-related event (drought, floods, late rains)	1
Power failure/shortage	2
Market prices	3
Input (such as seeds, fertilizer, or pesticides) prices or availability	4
Pests/diseases	5
Contracts not being honored	6
Crops or livestock not being sold	7
Perils and accidents (e.g., fire) or theft	8
Health (your own, your family's, or your workers')	9
Land being taken away from them, due to informal ownership	10
Breakdown of equipment	11
Input quality	12
Fuel prices or availability	13
Other (specify) _____	14
Don't know	98

A61. Have your agricultural activities been seriously affected by any of the following events in the past three years?

READ OUT. SINGLE ANSWER PER ROW.	1 = Yes 2 = No		
Weather-related event (drought, floods, late rains)			
Pests/diseases			
Accident (e.g., fire) or theft			
Unexpected price fluctuation in the market			
Unexpected price fluctuation of inputs (such as seeds, fertilizer, or pesticides)			
Contracts not being honored			
Market downturn/crops or livestock not able to be sold			
Breakdown of equipment			
Health (your own, your family's, or your workers')-related event			
Death in the family			
Political unrest or war			
Don't know			SKIP TO H16

A62. How did you mainly cope when this happened?

READ OUT ANSWERS FROM A61. SINGLE ANSWER PER ROW.	1 = Temporary job 2 = Took a loan 3 = Borrowed 4 = Sold livestock/crops 5 = Sold asset 6 = Used savings 7 = Was covered by insurance 8 = Stopped farming 9 = Did not need to do anything special 10 = Did not do anything 98 = Don't know
Weather-related event (drought, floods, late rains)	
Pests/diseases	
Accident (e.g., fire) or theft	
Unexpected price fluctuation in the market	
Unexpected price fluctuation of inputs (such as seeds, fertilizer, or pesticides)	
Contracts not being honored	
Market downturn/crops or livestock not able to be sold	
Breakdown of equipment	
Health (your own, your family's, or your workers')-related event	
Death in the family	
Political unrest or war	

MODULE ON HOUSEHOLD ECONOMICS

Now I would like to ask you some questions about how you manage money.

H16. When it comes to financial or income-related advice, who do you regularly talk to?

READ OUT. PROBE FOR MULTIPLE ANSWERS.			
Chief or Village leader	1	Savings and credit group	9
Local Councilor or LC	2	Other community group	10
Lead farmer	3	Friends and family	11
Other community leader	4	Spouse	12
Farmers' association or co-op	5	Don't know who to go to	13
Extension agents	6	Don't have anyone to go to	14
Financial institution like a bank or microfinance	7	Don't ask for advice	15
Middle men	8		

H17. In your opinion, how important is it for your household to save for each of the following?

H18. Which of the following do you feel your household needs to save for *the most*?

READ OUT. SINGLE ANSWER.	H17. Save for	H18. Do the most
	1 = Very important 2 = Somewhat important 3 = Not important 98 = Don't know	
Save money for a future purchase		1
Save money for an unexpected event		2
Save money for regular purchases		3
Save money for school fees		4
Save money for marriage ceremony/dowry		5
Save money for health care		6
Save money for death in the family		7
Save money for future loss of income		8
Don't know		98

H19. In your opinion, how important is it for your household to save at each of the following?

H20. Which of the following do you feel your household needs to save at ***the most***?

	H19. <i>Save at</i>	H20. <i>Do the most</i>
	1 = Very important 2 = Somewhat important 3 = Not important 98 = Don't know	
READ OUT. SINGLE ANSWER PER ROW.		
Save money at a financial institution		1
Save money with an informal group like a merry go round		2
Save money at home		3
Save money on a mobile phone		4
Don't know		98

H21. In your opinion, how important is it for your household to invest in each of the following?

H22. Which of the following do you feel your household needs to do ***the most***?

	H21. <i>Invest in</i>	H22. <i>Do the most</i>
	1 = Very important 2 = Somewhat important 3 = Not important 98 = Don't know	
READ OUT. SINGLE ANSWER.		
Invest money in a farm or buying land		1
Invest money in a home/home improvement		2
Invest money in a future educational opportunity		3
Invest money in a business (nonfarm)		4
Invest money in health care		5
Don't know		98

H23. In the past 12 months, have you saved money with any of the following?

READ OUT. SINGLE ANSWER PER ROW.	1 = Yes 2 = No 98 = Don't know
Bank or other formal financial institution	
Microfinance institution	
SACCO (Savings and Credit Cooperative Society)	
Cooperative	
Merry go round/informal savings network/Esusu	
VSLAs (Village Savings and Lending Associations)	
Friends and family	
At home	
On a mobile phone	
Other (specify) _____	

H24. What would make you *most likely* to save money with a bank or formal financial institution?

READ OUT. SINGLE ANSWER.	
Having a bank account that you could access through your mobile phone	1
Having a bank that was close to your home	2
Having a bank account that met your needs	3
Having a bank agent that was close to your home	4
Knowing more about how to get a bank account	5
If fees or minimum deposit requirements were not an issue	6
Knowing that others in your community also used the bank	7
Knowing that people at the bank would be there to help you	8
Having bank staff that had a positive attitude/made you feel welcome	9
Another reason (specify) _____	10
I do not want to save with a bank	11
Don't know	98

H25. Now I would like to ask you a few questions about how you manage your money.

READ OUT. SINGLE ANSWER PER ROW.	1 = Yes 2 = No 98 = Don't know
A. In the event of an emergency, could you get extra money through relatives sending money or by selling assets?	
B. In the past 4 weeks, has anyone in your household skipped a meal to save money?	
C. In the past 4 weeks, has your house been unlit at night because you could not buy charcoal/kerosene/etc. to light the house?	
D. In the past 12 months, has the household head missed any work because he/she was too sick to work?	
E. Does your family receive income (upkeep money or regular support) from a person outside your community or city?	

H26. I am going to read you a few statements and for each, please tell me if you agree or disagree.

READ OUT. SINGLE ANSWER PER ROW.	1 = Agree 2 = Disagree 98 = Don't know
When my money is in an account, it is constantly working for me	
I like to store money somewhere for a specific purpose	
I like to save my money in case of an emergency	
I like to store my money somewhere I trust	
I like to save my money in an account because it is safer	
Storing my money somewhere is easier than saving in an account	
I need to be able to access my money immediately	

H27. Imagine that you have an emergency and you need to pay 100,000 Naira. How possible is it that you could come up with 100,000 Naira within the next month—very possible, somewhat possible, or not possible?

DO NOT READ OUT. SINGLE ANSWER.		
Very possible	1	
Somewhat possible	2	
Not possible	3	SKIP TO H30
Don't know	98	SKIP TO H30

H28. What would be the main source of money that you would use to come up with the 100,000 Naira within the next month?

READ OUT. SINGLE ANSWER.	
Savings	1
Family, relatives, or friends	2
Money from working	3
Loan from employer	4
Credit card	5
Borrowing from a financial institution	6
Borrowing from a savings and credit group	7
Borrowing from an informal money lender	8
Borrowing from mobile credit	9
Other source (specify) _____	10
Don't know	98

H30. I will read several statements. Please, tell me how often does the following apply to you?

READ OUT. SINGLE ANSWER PER ROW.	1 = Always or most of the time 2 = Sometimes 3 = Rarely 4 = Never 98 = Don't know
I spend less money than I make each month	
I have an emergency fund to cover for unplanned expenses	
I pay my bills on time	
My savings are larger than my debts	

H31. Do you have any of the following?

READ OUT. ALLOW FOR MULTIPLE RESPONSES.		
An insurance plan	1	SKIP TO H33
A living will; I know what will happen to my money if I die unexpectedly	2	
A retirement plan (employer provided or personal) that will help me live comfortably after I stop working	3	
A savings plan	4	
An investment	5	
None	6	

H32. Which of the following types of insurance do you have?

READ OUT. MULTIPLE ANSWERS.	
Medical	1
Life	2
Car	3
Agriculture	4
House/property	5
Unemployment/income protection	6
Livestock	7
Funeral	8
Other (specify) _____	9
Don't know	98

H33. Which of the following types of insurance do you feel your household needs the most?

READ OUT. SINGLE ANSWER.	
Medical	1
Life	2
Car	3
Agriculture	4
House/property	5
Unemployment/income protection	6
Livestock	7
Funeral	8
Other (specify) _____	9
Don't know	98

H43. Do you have access to credit?

SINGLE ANSWER.	
Yes	1
No	2

H34. Does your family have a plan to manage the unexpected expenses, which might result from the following?

READ OUT. SINGLE ANSWER PER ROW.	1 = Yes 2 = No 98 = Don't know
Loss of a house due to fire, flood or another natural disaster	
Major medical emergency, including illness, injury and childbirth	
Bankruptcy/loss of a job or a business	
Loss of harvest or livestock due to weather conditions or a disease	
Loss of property due to theft or burglary	
Death in the family	
An extended period of time without your own food supply	
Crop failure	

H35. In the past 12 months, have you experienced any of the following events?

READ OUT. ACCEPT MULTIPLE ANSWERS.			
Medical emergencies	1	Housing repair or construction	7
Death of a family member	2	Relocation	8
Income lost due to theft	3	Birth of a family member	9
Loss of job	4	Crop failure	10
Loss of wage labor	5	None	11
Wedding or marriage	6	Don't know	98

H37. Do you agree or disagree with the following statements?

READ OUT EACH STATEMENT. SINGLE ANSWER PER ROW.	1 = Agree 2 = Disagree 98 = Don't know
My life is determined by my own actions.	
I can mostly determine what will happen in my life.	
I only focus on the short-term.	
I live more for the present day than for tomorrow.	
The future will take care of itself.	
When I get what I want, it is usually because I worked hard for it.	
My experience in my life has been that what is going to happen will happen.	
I feel like what happens in my life is mostly determined by powerful peoples.	

H38. Do you agree or disagree with the following statements?

READ OUT EACH STATEMENT. SINGLE ANSWER PER ROW.	1 = Agree 2 = Disagree 98 = Don't know
I always work hard to be among the best at what I do.	
I do things after giving them much thought.	
It is not always wise for me to plan too far ahead because many things turn out to be a matter of good or bad fortune.	
I am impulsive.	
I say things before I think them through.	
I always look for opportunities for improving my situation.	
I have many aspirations.	

H42. When it comes to household expenses, which statement best matches the role that you play?

READ OUT. SINGLE ANSWER.	
I do not take any decisions regarding daily expenses (decisions are all made by someone else in my household)	1
I make decisions regarding daily expenses together with someone else in my household	2
I make decisions regarding daily expenses on my own (without any help from anyone else in my household)	3
Don't know	98

H39. Now, I would like to ask you just a few questions about your financial habits and preferences. In the past 30 days (1 month), how many times did you do the following...?

H40. Now, how many times did you do the following activities in the past 90 days (3 months)?

READ OUT THE LIST OF ACTIVITIES. WRITE DOWN THE NUMBER. SINGLE ANSWER PER ROW.	H39. In the past 30 days	H40. In the past 90 days
Deposit money		
Withdraw money		
Buy airtime top-ups		
Pay a school fee		
Pay utility bills (electricity, solar lantern, water, TV, cable)		
Send money to family members or friends		
Receive money from family members or friends		
Take a loan		
Other (specify) _____		

H41. ASK NEXT QUESTION ONLY FOR ACTIVITIES THAT THE RESPONDENT CODED IN H40. IF NO ACTIVITIES REPORTED, THEN SKIP TO M1 IN NEXT SECTION. Which method did you use most frequently for this activity (READ THE ACTIVITY MARKED IN H40, THEN READ OUT THE LIST OF METHODS)?

<p>READ OUT THE LIST OF ACTIVITIES. SINGLE ANSWER PER ROW.</p>	<p>H41. 1 = Direct to/from a bank 2 = Personal delivery by self 3 = Courier delivery 4 = Post office transfer 5 = Bank and other Informal Services 6 = Own m-money account 7 = Agent's m-money account 8 = Other person's m-money account 9 = Digital card 10 = Western Union/Money Gram 11 = Door-to-door agents 12 = Delivery through friend/relative 13 = Other, specify</p>
Deposit money	
Withdraw money	
Buy airtime top-ups	
Pay a school fee	
Pay utility bills (electricity, solar lantern, water, TV, cable)	
Send money to family members or friends	
Receive money from family members or friends	
Take a loan	
Other (specify) _____	

MODULE ON MOBILE PHONES

Now I would like to ask you some questions about mobile phones.

M1. Have you ever used a mobile phone?

SINGLE ANSWER		
Yes	1	SKIP TO M3
No	2	

M2. How interested would you be in using a mobile phone – very, somewhat, or not interested?

READ OUT. SINGLE ANSWER.		
Very interested	1	SKIP TO M19
Somewhat interested	2	
Not interested	3	
Don't know	98	

M3. What type of phone have you used?

READ OUT. ALLOW FOR MULTIPLE ANSWERS.	
Basic phone (no internet capability)	1
Feature phone (basic phone with internet capability)	2
Smartphone (touch screen)	3
Don't know	98

M4. Do you currently own a personal mobile phone?

SINGLE ANSWER		
Yes	1	
No	2	SKIP TO M7

M5. How many mobile phones do you own?

SINGLE ANSWER. _____ (98 for **Don't know**, IF **NONE**, SKIP TO M7)

M6. What type of phone(s) do you own?

READ OUT. SINGLE ANSWER PER ROW.	<i>First phone</i>	<i>Second phone</i>	<i>Third phone</i>	
Basic phone (no internet capability)	1	1	1	SKIP TO M10
Feature phone (basic phone with internet capability)	2	2	2	
Smartphone (touch screen)	3	3	3	
Don't know	98	98	98	

M7. You said you don't own a personal mobile phone. Do you borrow or pay to use a mobile phone elsewhere?

SINGLE ANSWER	
Yes	1
No	2

M8. What is the main reason you do not have a mobile phone?

DO NOT READ OUT. CODE INTO CATEGORIES BELOW. SINGLE ANSWER.	
I am not allowed to use a phone by my spouse or family	1
Using a phone is against my culture/religion	2
I don't have money to buy phone	3
I don't have money to pay for airtime	4
There is no network where I live/work	5
I worry about what people in my community would think	6
I don't have a need to use a phone	7
There is no place to charge a phone	8
I don't know how to use a phone	9
I worry that the phone will get stolen	10
No specific reason	11
Other (specify) _____	12
Don't know	98

M9. How likely are you to purchase a mobile phone in the next twelve months—very likely, somewhat likely, or not likely?

SINGLE ANSWER	
Very likely	1
Somewhat likely	2
Not likely	3
Don't know	98

M10. Do you personally have an active/working SIM card registered in your name?

SINGLE ANSWER		
Yes	1	
No	2	SKIP TO M12

M11. How many active / working SIM cards do you have with the following providers?

READ OUT. ACCEPT MULTIPLE ANSWERS.		
MTN		SKIP TO M14
Airtel		
Glo		
Etisalat		
Other (Specify) _____		

M12. You said you don't personally own a SIM card. Do you use a SIM card that belongs to somebody else?

SINGLE ANSWER	
Yes	1
No	2

M13. How likely are you to purchase your own SIM card in the next twelve months?

SINGLE ANSWER	
Very likely	1
Somewhat likely	2
Not likely	3
Don't know	98

M14. What are the benefits to having your own mobile phone or SIM card?

DO NOT READ OUT. CODE INTO CATEGORIES BELOW. MULTIPLE RESPONSES.	
Talking to friends and family	1
Running your business	2
Conducting financial transactions	3
Downloading/Watching /Listening to music, games, videos, ringtones	4
Browsing social media (Facebook, Twitter, Instagram, WhatsApp)	5
Getting information related to crop production and market price	6
Other (specify) _____	7
Don't know	98

M15. Is having a mobile phone important to you?

SINGLE ANSWER.	
Yes	1
No	2
Don't know	98

M16. DO NOT ASK IF **NO** IN M7. Apart from today, when was the last time you performed the following activities on the mobile phone you use?

READ OUT. SINGLE ANSWER.	1 = Yesterday 2 = In the past 7 days 3 = In the past 30 days 4 = In the past 90 days 5 = More than 90 days ago 6 = Never 98 = Don't know
Made/received calls	
Sent/received text messages or photos	
Used/browsed the internet	
Downloaded music, video, games, or mobile phone application	
Made a financial transaction such as send/receive money, pay debt, or banking transaction	
Used "Call Tunes" or other audio/video on-demand from operator services	
Used Facebook, WhatsApp, Twitter, Instagram or another social networking site	
Took a color picture	
Retrieved information related to agricultural activities	

M19. How important is each of the following abilities to your household's agricultural activities—very important, somewhat important, or not important?

M20. Do you currently have any of the following abilities for your agricultural activities?

M21. ASK NEXT QUESTION ONLY FOR PRODUCTS THAT THE RESPONDENT DOES NOT HAVE IN M20. IF THE RESPONDENT HAS ALL ABILITIES CODED IN M20, THEN GO TO NEXT QUESTION. Do you want to have any of the following abilities for your agricultural activities?

READ OUT.	M19. <i>Importance</i>	M20. <i>Currently have</i>	M21. <i>Want</i>
SINGLE ANSWER.	1 = Very important 2 = Somewhat important 3 = Not important 98 = Don't know	1 = Yes 2 = No >>> NEXT QUESTION	1 = Yes 2 = No 98 = Don't know
Ability to access weather information on a mobile phone			
Ability to access market pricing information on a mobile phone			
Ability to access farming information on a mobile phone			
Ability to track the transportation of inputs and crops on a mobile phone			
Ability to buy and sell on a mobile phone			
Ability to charge my phone at a central location			
Ability to access financial services on a mobile phone			
Other (specify) _____			

M22. Have you heard of the following agricultural information services that are accessible on a mobile phone?

M23. ASK IF AT LEAST ONE SERVICE MARKED IN M22. IF **NO** FOR ALL IN M22, SKIP TO F1. Do you have access to any of the following agricultural information services?

READ OUT.	M22. <i>Heard</i>	M23. <i>Have</i>
SINGLE ANSWER.	1 = Yes 2 = No	1 = Yes 2 = No
Growth Enhancement Support Scheme (GESS) by the Federal Ministry of Agriculture and Rural Development		
Price Information by Novus Agro		

MODULE ON FINANCIAL SERVICES

I would like to ask you some questions about financial services.

F1. How important is it to *your agricultural activities* to have the following—very important, somewhat important, or not important?

READ OUT. SINGLE ANSWER.	1 = Very important 2 = Somewhat important 3 = Not important 98 = Don't know
Bank account (nonsavings)	
Mobile phone	
Mobile money account	
Insurance	
Savings account	
Loan	
Credit	

For the next few questions, I am going to ask you about banks and formal financial institutions, such as Zenith Bank, Guaranty Trust Bank, Standard Chartered Bank, and Skye Bank.

F2. Have you ever been inside a bank?

SINGLE ANSWER.	
Yes	1
No	2

F3. What are the benefits to having an account at a formal financial institution?

DO NOT READ OUT. CODE INTO THE FOLLOWING CATEGORIES. ALLOW FOR MULTIPLE ANSWERS.	
Avoid lengthy wait times for bill payments	1
Ability to save money	2
Saving money in a secure location	3
Ability to do more business	4
Ability to send or receive money to/from family members or friends	5
Ability to send or receive payments	6
Ability to get a loan	7
My employer/buyers/others require it	8
Other (specify) _____	9
Don't know	98

F4. Do you personally have a bank account that is registered in your name?

SINGLE ANSWER		
Yes	1	
No	2	SKIP TO F5

F80. At which institution(s) do you have an account?

DO NOT READ OUT. CODE INTO THE FOLLOWING CATEGORIES. ALLOW FOR MULTIPLE ANSWERS.			
Access Bank	1	Wema Bank	19
Citibank Nigeria Limited	2	Zenith Bank	20
Diamond Bank	3	Heritage Banking Company Ltd.	21
Ecobank Nigeria	4	First Bank of Nigeria Ltd	22
Enterprise Bank	5		
Fidelity Bank	6		
First City Monument Bank	7		
Guaranty Trust Bank	8		
Key Stone Bank	9		
MainStreet Bank	10		
Skye Bank	11		
Stanbic IBTC Bank Ltd.	12		
Standard Chartered Bank Nigeria Ltd.	13		
Sterling Bank	14		
SunTrust Bank Nigeria Limited	15		
Union Bank of Nigeria	16	Other (specify) _____	33
United Bank For Africa	17	Don't know	98
Unity Bank	18		

SKIP TO F8

F5. What is the main reason you do not have an account?

DO NOT READ OUT. SINGLE ANSWER.	
I do not know what it is	1
I do not know how to open one	2
I never thought about using one	3
There are none close to where I live	4
I do not have money/I do not have enough money to make any transactions with such account	5
I do not need one, I do not make any transactions	6
Registration fee is too high/fees for using an account are too high	7
They do not offer the services I need	8
I am not allowed to do so by my spouse or other family member	9
I had one before, but I closed it	10
I do not have the proper ID or paperwork	11
I do not trust or feel comfortable with banks	12
I prefer to use other types of institutions	13

F6. Do you use an account that belongs to somebody else if you need to?

SINGLE ANSWER.		
Yes	1	
No	2	SKIP TO F17

F7. Whose account are you *most likely* to use if you need to?

DO NOT READ OUT. CODE INTO THE FOLLOWING CATEGORIES. SINGLE ANSWER.	
Spouse	1
Parent	2
Child	3
Other relative (specify) _____	4
Not related	5
Don't know	98

F8. Who else has access to your account or the account you use that belongs to someone else?

READ OUT. MULTIPLE ANSWERS.	
Spouse	1
Parent	2
Child	3
Other relative (specify) _____	4
Not related	5
None	6
Don't know	98

F9. Which of the following services does the institution you use offer? It does not matter if you don't use those services, I just want to know if they are available to you.

READ OUT. ALLOW FOR MULTIPLE ANSWERS.		
At least one of the following—savings, money transfers, insurance, investments	1	
Only loans	2	SKIP TO F17
None of the above	3	SKIP TO F17
Don't know	98	SKIP TO F17

F11. Apart from today, when was the last time you made a deposit or withdrawal using an account or used an account for any other financial activity?

READ OUT. SINGLE ANSWER.		
Yesterday	1	
In the past 7 days	2	
In the past 30 days	3	
In the past 90 days	4	
More than 90 days ago	5	
Never	6	SKIP TO F17
Don't know	98	SKIP TO F17

F12. When you use an account for any financial activity, do you use any of the following?

READ OUT. ALLOW FOR MULTIPLE ANSWERS.		
Over the counter in a branch of the institution	1	
ATM	2	
Over the counter at a retail store/agent	3	
Institution's website	4	
Mobile app from the bank	5	
A door-to-door agent or another person who is associated with this institution	6	
Through a mobile wallet by transferring money from my account to my phone	7	
Other (specify) _____	8	
Don't know	98	SKIP TO F14

F13. Of the different ways you use a bank for financial activities, which is your preferred way?

READ OUT ANSWERS FROM F12. SINGLE ANSWER.	
Over the counter in a branch of the institution	1
ATM	2
Over the counter at a retail store/agent	3
Institution's website	4
Mobile app from the bank	5
A door-to-door agent or another person who is associated with this institution	6
Through a mobile wallet by transferring money from my account to my phone	7
Other (specify) _____	8
Don't know	98

F14. Which of the following have you ever done using an account?

READ OUT. SINGLE ANSWER PER ROW.	1 = Yes 2 = No
Deposit money	
Withdraw money	
Buy airtime top-ups	
Pay a school fee	
Pay utility bills (electricity, solar lantern, water, TV, cable)	
Send money to family members or friends	
Receive money from family members or friends	
Other (specify) _____	

F15. Do you use an account for the following payments or purchases?

READ OUT. SINGLE ANSWER PER ROW.	1 = Yes 2 = No	
Pay employees		SKIP TO F17
Pay suppliers		
Receive payments from customers		
Receive payments from suppliers		
Receive payments from the government, e.g., for inputs or production loan		
Make investment, e.g., buy new equipment or expand the office or business building		
Pay business associated expenses, including rent, taxes, utility and transportation bills		
Pay for agricultural inputs (seeds, pesticides, fertilizers, etc.)		
Other (specify) _____		
I do not use my bank account to make business transactions		

F16. You said you do not use an account for any payments or purchases. Please tell me why.

DO NOT READ. CODE INTO THE FOLLOWING CATEGORIES. ALLOW FOR MULTIPLE ANSWERS.	
I do not have a business	1
I will have to pay extra taxes	2
I will have to pay bribes to government officials to avoid taxation/licensing/paper work	3
My business is not registered, it is not formal	4
To pay account fees I will have to raise prices and people won't buy from me	5
My business is too small to need a bank account	6
I use other methods of payment	7
Other (specify) _____	8
Don't know	98

For the next few questions, I will ask you about microfinance institutions, SACCOs (Savings and Credit Cooperative Society), and cooperatives, which are financial service providers that are less formal than banks, such as Livestock Farmers Association, Tractor Hiring Farmers' Cooperatives and Fish Farmers Cooperatives.

F17. Have you ever used any of the following?

READ OUT. SINGLE ANSWER PER ROW.	1 = Yes 2 = No	
Microfinance institution		IF NO TO ALL, SKIP TO F24
SACCO (Savings and Credit Cooperative Society)		
Cooperative		
VSLAs (Village Saving and Lending Associations)		
Post office bank		

F19. ASK ONLY FOR OPTIONS MARKED **YES** IN F17. Do you have an account/membership in your name with any of the following?

F20. ASK ONLY FOR OPTIONS MARKED **YES** IN F19. OTHERS GO TO F24. Apart from today, when was the last time you used the account/membership in your name?

READ OUT.	F19. Have account	F20. Last used
SINGLE ANSWER PER ROW.	1 = Yes 2 = No	1 = Yesterday 2 = In the past 7 days 3 = In the past 30 days 4 = In the past 90 days 5 = More than 90 days ago 6 = Stopped using altogether 98 = Don't know
Microfinance institution		
SACCO (Savings and Credit Cooperative Society)		
Cooperative		
VSLAs (Village Saving and Lending Associations)		
Post office bank		

F21. ASK ONLY IF ANSWERED **YES** IN F17 OR F19, OTHERS SKIP TO F24. Which of the following services does your <INSERT F19 INSTITUTION> offer? It does not matter if you use those services, I just want to know if they are available to you.

READ OUT. ALLOW FOR MULTIPLE ANSWERS.	
At least one of the following—savings, money transfers, insurance, investments	1
Only loans	2
None of the above	3
Don't know	98

F81. ASK ONLY IF ANSWERED **YES** IN F17 OR F19, OTHERS SKIP TO F24. At which microfinance institutions, SACCOs (Savings and Credit Cooperative Society), or cooperatives do you have an account?

ALLOW FOR MULTIPLE ANSWERS. _____ (98 for **Don't know**)

F22. ASK ONLY IF ANSWERED **YES** IN F19, OTHERS SKIP TO F24. Which of the following have you ever done using a <INSERT F19 INSTITUTION> account?

READ OUT. SINGLE ANSWER PER ROW.	1 = Yes 2 = No
Deposit money	
Withdraw money	
Buy airtime top-ups	
Pay utility bills (electricity, solar lantern, water, TV, cable)	
Send money to family members or friends	
Receive money from family members or friends	
Other (specify) _____	

F23. ASK ONLY IF ANSWERED **YES** IN F19, OTHERS SKIP TO F24. Do you use a <INSERT F19 INSTITUTION> account for the following payments or purchases?

READ OUT. SINGLE ANSWER PER ROW.	1 = Yes 2 = No
Pay employees	
Pay suppliers	
Receive payments from customers	
Receive payments from suppliers	
Make investment, e.g., buy new equipment or expand the office or business building	
Pay business associated expenses, including rent, taxes, utility and transportation bills	
Pay for agricultural inputs (seeds, pesticides, fertilizers, etc.)	
Other (specify) _____	
I do not use my account to make these transactions	

F24. The next few questions are about mobile money. Have you ever heard of something called mobile money?

SINGLE ANSWER		
Yes	1	
No	2	SKIP TO F46

F25. Are there benefits to having a mobile money account?

SINGLE ANSWER		
Yes	1	
No	2	SKIP TO F27

F26. What are the benefits to having a mobile money account?

DO NOT READ OUT. CODE INTO THE FOLLOWING CATEGORIES. ALLOW FOR MULTIPLE ANSWERS.

Avoid lengthy wait times for bill payments	1
Ability to save money	2
Saving money in a secure location	3
Ability to do more business	4
Ability to send or receive money to/from family members or friends	5
Ability to send or receive payments	6
Ability to see balance	7
Ability to get a loan	8
Ability to transact anytime/anywhere/convenience	9
I can always find an agent	10
Other (specify) _____	11
Don't know	98

F27. To the best of your knowledge, for what types of financial activities can you use mobile money?

READ OUT. ALLOW FOR MULTIPLE ANSWERS.

Deposit and/or withdrawal	1
Person-to-person money transfers	2
Bill pay	3
Save or store money for a long-term purpose	4
Make business transactions	5
Buy airtime	6
Can connect bank account to mobile wallet	7
Split payments between people	8
Earn interest	9
Get or repay a loan	10
Send or receive international remittances	11
Other (specify) _____	12
Don't know	98

F28. Please tell me the names of any mobile money providers that you are aware of?

F29. ASK ONLY ABOUT PROVIDERS NOT MENTIONED IN F28. Have you ever heard about the following mobile money providers?

F30. ASK IF AT LEAST ONE PROVIDER MARKED IN F28 OR F29. IF **NO** FOR ALL IN F29, SKIP TO F46. From which source of information did you first learn about this mobile money provider?

	<i>Unaided recall</i>	<i>Prompted recall</i>	<i>Information source</i>
	F28. DO NOT READ OUT. SINGLE ANSWER.	F29. READ OUT. SINGLE ANSWER.	F30. READ OUT. SINGLE ANSWER.
	1 = Yes 2 = No	1 = Yes 2 = No	1 = Radio 2 = TV 3 = Billboards/ posters 4 = Newspapers/ Magazines 5 = Relatives 6 = Non-relatives 7 = Other (specify) _____
Access Bank (Access mobile)			
Airtel Money			
Cellulant Nigeria (Cellulant)			
Chams Mobile			
Diamond/MTN Y'ello			
Eartholeum Networks (QikQik)			
Ecobank (Ecobank Mobile Money)			
Etisalat Easywallet			
ETranzact (Pocket moni)			
FETS Solution (Mywallet)			
Fidelity Bank (Quick-Pay)			
Fortis Microfinance bank (Fortis Mobile Money)			
FCMB Flash Me Cash			
Glo Mobile Money			
GT Bank (GT Mobile Money)			
Hedonmark Management Services (Click n Pay)			
MKudi (Mimo)			
Pagatech (Paga)			

	<i>Unaided recall</i>	<i>Prompted recall</i>	<i>Information source</i>
	F28. DO NOT READ OUT. SINGLE ANSWER.	F29. READ OUT. SINGLE ANSWER.	F30. READ OUT. SINGLE ANSWER.
	1 = Yes 2 = No	1 = Yes 2 = No	1 = Radio 2 = TV 3 = Billboards/ posters 4 = Newspapers/ Magazines 5 = Relatives 6 = Non-relatives 7 = Other (specify) _____
Parkway Projects (ReadyCash)			
Pay Com			
Pridar System (FirstMonie/ First Bank)			
Stanbic IBTC (Stanbic #909 Mobile Money)			
Teasy International (Teasy Mobile Money)			
Virtual Terminal Network (Vcash)			
Zenith Bank (Eazymoney)			
Zinternet			
Other (Specify)			

F31. ASK IF AT LEAST ONE PROVIDER MARKED IN F28 OR F29. OTHERS SKIP TO F46. Have you ever used this mobile money provider for any financial activity?

F32. ASK FOR EACH MOBILE MONEY PROVIDER MARKED IN F31. IF NO PROVIDERS MARKED IN F31, SKIP TO F36. Apart from today, when was the last time you conducted any financial activity with this mobile money provider?

F33. ASK IF AT LEAST ONE PROVIDER MARKED IN F31. OTHERS SKIP TO F36. Do you have a registered account (account registered in your name) with this mobile money provider?

	F31. <i>Used</i>	F32. <i>When used</i>	F33. <i>Have account</i>
READ OUT. SINGLE ANSWER PER ROW.	1 = Yes 2 = No	1 = Yesterday 2 = In the past 7 days 3 = In the past 30 days 4 = In the past 90 days 5 = More than 90 days ago	1 = Yes 2 = No
Access Bank (Access mobile)			
Airtel Money			
Cellulant Nigeria (Cellulant)			
Chams Mobile			
Diamond/MTN Y'ello			
Eartholeum Networks (QikQik)			
Ecobank (Ecobank Mobile Money)			
Etisalat Easywallet			
ETranzact (Pocket moni)			
FETS Solution (Mywallet)			
Fidelity Bank (Quick-Pay)			
Fortis Microfinance bank (Fortis Mobile Money)			
FCMB Flash Me Cash			
Glo Mobile Money			
GT Bank (GT Mobile Money)			
Hedonmark Management Services (Click n Pay)			
MKudi (Mimo)			
Pagatech (Paga)			
Parkway Projects (ReadyCash)			
Pay Com			
Pridar System (FirstMonie/ First Bank)			
Stanbic IBTC (Stanbic #909 Mobile Money)			
Teasy International (Teasy Mobile Money)			
Virtual Terminal Network (Vcash)			
Zenith Bank (Eazymoney)			
Zinternet			
Other (Specify)			

F34. ASK IF AT LEAST ONE PROVIDER MARKED IN F33. IF NO PROVIDERS MARKED IN F33, SKIP TO F36. Do you usually make transactions with your mobile money account yourself or does somebody else do them on your behalf?

SINGLE ANSWER	
I make the transactions myself	1
Somebody does them on my behalf	2
Don't know	98

F35. ASK FOR EACH MOBILE MONEY PROVIDER MARKED IN F31. IF NO PROVIDERS MARKED IN F31, SKIP TO F36. How do you usually access this mobile money provider?

	1 = Over the counter or by using an agent's account 2 = Account of a family member in this household 3 = Account of a family member in another household, other relative, friend or a neighbor 4 = Account of a workmate or a business partner 5 = My own account 6 = Other (specify) _____
READ OUT. ALLOW FOR MULTIPLE ANSWERS.	
Access Bank (Access mobile)	
Airtel Money	
Cellulant Nigeria (Cellulant)	
Chams Mobile	
Diamond/MTN Y'ello	
Eartholeum Networks (QikQik)	
Ecobank (Ecobank Mobile Money)	
Etisalat Easywallet	
ETranzact (Pocket moni)	
FETS Solution (Mywallet)	
Fidelity Bank (Quick-Pay)	
Fortis Microfinance bank (Fortis Mobile Money)	
FCMB Flash Me Cash	
Glo Mobile Money	
GT Bank (GT Mobile Money)	
Hedonmark Management Services (Click n Pay)	
MKudi (Mimo)	
Pagatech (Paga)	
Parkway Projects (ReadyCash)	
Pay Com	
Pridar System (FirstMonie/First Bank)	

READ OUT. ALLOW FOR MULTIPLE ANSWERS.	1 = Over the counter or by using an agent's account 2 = Account of a family member in this household 3 = Account of a family member in another household, other relative, friend or a neighbor 4 = Account of a workmate or a business partner 5 = My own account 6 = Other (specify) _____
Stanbic IBTC (Stanbic #909 Mobile Money)	
Teasy International (Teasy Mobile Money)	
Virtual Terminal Network (Vcash)	
Zenith Bank (Eazymoney)	
Zinternet	
Other (Specify)	

F36. ASK ONLY IF **NO** FOR ALL IN F31. OTHERS SKIP TO F37. What is the main reason you have never used mobile money services?

DO NOT READ OUT. CODE INTO THE FOLLOWING CATEGORIES. SINGLE ANSWER.		
I do not know what it is	1	SKIP TO F46
I do not know how to open one	2	
I do not have a state ID or other required documents	3	
There is no point-of-service/agent close to where I live	4	
I do not need one, I do not make any transactions	5	
Using such account is difficult	6	
I never have money to make transactions with this service	7	
I do not trust that my money is safe on a mobile money account	8	
It is too expensive	9	
I do not have the permission of my spouse or other family member	10	
Poor network connectivity	11	
Unreliable services	12	
I don't have a mobile phone	13	
Other (specify) _____	14	

F37. ASK ONLY IF AT LEAST ONE MOBILE MONEY SERVICE IS SELECTED IN F31. OTHERS GO TO F46. What is the main reason you started using mobile money?

DO NOT READ OUT. CODE INTO THE FOLLOWING CATEGORIES. SINGLE ANSWER.

I had to send money to another person	1
I had to receive money from another person	2
Somebody/a person requested I opened an account	3
I had to send money to an organization/government agency, e.g., had to pay a bill	4
I had to receive money from an organization/government agency, e.g., pension, unemployment payment or welfare benefits	5
An agent or sales person convinced me	6
I saw posters/billboards/radio/TV advertising that convinced me	7
A friend or family member recommended it	8
I saw other people using it and wanted to try by myself	9
I wanted to start saving money with an m-money account	10
I wanted a safe place to store my money	11
I got a discount on airtime	12
I got a promotional amount of money to spend if I start using m-money	13
Other (specify) _____	14

F38. ASK IF AT LEAST ONE MOBILE MONEY SERVICE IS SELECTED IN F31. OTHERS GO TO F46. Have you ever used a mobile money account to do the following . . .?

READ OUT. SINGLE ANSWER PER ROW.	1 = Yes 2 = No
Deposit money	
Withdraw money	
Buy airtime top-ups	
Pay a school fee	
Pay utility bills (electricity, solar lantern, water, TV, cable)	
Send money to family members or friends	
Receive money from family members or friends	
Other (specify) _____	

F39. ASK IF AT LEAST ONE MOBILE MONEY SERVICE IS SELECTED IN F31. OTHERS GO TO F46. Do you use a mobile money account to make the following payments or purchases?

READ OUT. SINGLE ANSWER PER ROW.	1 = Yes 2 = No	
Pay employees		SKIP TO F41
Pay suppliers		
Receive payments from customers		
Receive payments from suppliers		
Make investment, e.g., buy new equipment or expand the office or business building		
Pay business associated expenses, including rent, taxes, utility and transportation bills		
Pay for agricultural inputs (seeds, pesticides, fertilizers, etc.)		
Other (specify) _____		
I do not use my mobile money account to make these transactions		

F40. You said you do not use a mobile money account for any payments or purchases. Please tell me why.

DO NOT READ. CODE INTO THE FOLLOWING CATEGORIES. ALLOW FOR MULTIPLE ANSWERS.	
I do not have a business	1
I will have to pay extra taxes	2
The agent fees/charges are high	3
I will have to pay bribes to government officials to avoid taxation/licensing/paper work	4
My business is not registered, it is not formal	5
To pay account fees I will have to raise prices and people won't buy from me	6
My business is too small to need a mobile money account	7
I use other methods of payment	8
It is too expensive	9
It takes too much time	10
Other (specify) _____	11
Don't know	98

F41. ASK ONLY IF AT LEAST ONE PROVIDER MARKED IN F31. OTHERS SKIP TO F46.
Which of the following mobile money agents are the closest to where you live, regardless of what service you use?

READ OUT. ALLOW FOR MULTIPLE ANSWERS.	
Access Bank (Access mobile)	1
Airtel Money	2
Cellulant Nigeria (Cellulant)	3
Chams Mobile	4
Diamond/MTN Y'ello	5
Eartholeum Networks (QikQik)	6
Ecobank (Ecobank Mobile Money)	7
Etisalat Easywallet	8
ETranzact (Pocket moni)	9
FETS Solution (Mywallet)	10
Fidelity Bank (Quick-Pay)	11
Fortis Microfinance bank (Fortis Mobile Money)	12
FCMB Flash Me Cash	
Glo Mobile Money	13
GT Bank (GT Mobile Money)	14
Hedonmark Management Services (Click n Pay)	15
MKudi (Mimo)	16
Pagatech (Paga)	17
Parkway Projects (ReadyCash)	18
Pay Com	19
Pridar System (FirstMonie/First Bank)	20
Stanbic IBTC (Stanbic #909 Mobile Money)	21
Teasy International (Teasy Mobile Money)	22
Virtual Terminal Network (Vcash)	23
Zenith Bank (Eazymoney)	24
Zinternet	25
Other (Specify)	96

F42. ASK ONLY IF AT LEAST ONE PROVIDER MARKED IN F31. OTHERS SKIP TO F46.
How do you usually get to a mobile money agent? Do you. . . ?

READ OUT. SINGLE ANSWER.

Walk	1
Use a motorcycle taxi or a mini-bus taxi	2
Use a regular bus	3
Have to take a train	4
The agent comes to me	5
Ride a bicycle	6
Ride in my own car or motorbike	7
Get a car/motorbike ride for free with a friend, relative or neighbor	8
Other (specify) _____	9
Don't know	98

F43. ASK ONLY IF AT LEAST ONE PROVIDER MARKED IN F31. OTHERS SKIP TO F46.
Do you usually go to a mobile money agent at or near the following places?

READ OUT. ALLOW FOR MULTIPLE ANSWERS.

Your home	1
Your work	2
Where you shop for food	3
Near your children's school/childcare facility	4
Near a public transportation hub, e.g., a bus stop or station	5
Near a shop where you go to charge your mobile phone	6
Near/at the shop where you buy airtime	7
Other (specify) _____	8
Don't know	98

F46. The next few questions are about informal financial services and service providers such as merry go round, money guards, or savings collectors. Have you ever used any of the following?

F47. ASK ONLY FOR OPTIONS MARKED **YES** IN F46. OTHERS GO TO F51. Apart from today when was the last time you used these services or service providers for any financial activity?

READ OUT.	F46. Used	F47. Last used
SINGLE ANSWER PER ROW.	1 = Yes 2 = No >> IF NO TO ALL, SKIP TO F51	1 = Yesterday 2 = In the past 7 days 3 = In the past 30 days 4 = In the past 90 days 5 = More than 90 days ago 6 = Stopped using altogether 98 = Don't know
Merry go round/informal savings network		
A money guard/someone in workplace or neighborhood that collects and keeps savings deposits on a regular basis		
Savings collectors		
Shop keepers		
A digital card, a recharge card that is not attached to a bank or MFI account		
Other group (specify) _____		

F49. Which of the following services do these groups provide?

READ OUT. ACCEPT MULTIPLE ANSWERS.	
Give one member all the monies collected in one round (merry go round)	1
Lend money out to non-members who borrow and repay with interest added	2
Lend money out to members who borrow and repay with little or no interest added	3
Buy household goods, groceries, or food for members	4
Act as a guarantor or security for members	5
Invest the money in shares, company shares, or a business	6
Contribute money to purchase working tools	7
Purchase fixed assets like land or houses as a group or for members	8
Raise the money needed for funerals or emergencies (part or all)	9
Help members save money	10
Other (specify) _____	11
Don't know	98

F50. Which of these service providers or services is the most important to you?

READ OUT. SINGLE ANSWER.		
Merry go round/informal savings network	1	SKIP TO F52
A money guard/someone in workplace or neighborhood that collects and keeps savings deposits on a regular basis	2	
Savings collectors	3	
Shop keepers	4	
A digital card, a recharge card that is not attached to a bank or MFI account	5	
Other group (specify) _____	6	

F51. Why do you not have a membership with any of these groups?

DO NOT READ OUT. CODE INTO THE FOLLOWING CATEGORIES. ACCEPT MULTIPLE ANSWERS.	
You have an account in a bank or other formal institution	1
You don't have any money	2
People steal your money	3
You don't know about them	4
You don't need any service from them	5
You don't trust them	6
Groups require too much time in meetings	7
Another reason (specify) _____	8

F52. On a scale of 1 to 5, where 1 means **fully distrust** and 5 means **fully trust**, how much do you trust each of the following as financial sources?

	1 = Fully distrust 2 = Somewhat distrust 3 = Neither trust nor distrust 4 = Somewhat trust 5 = Fully trust 98 = Don't know
READ OUT. SINGLE ANSWER PER ROW.	
Banks and other formal financial institutions	
Bank agents	
Microfinance institutions	
Mobile money providers	
Mobile money agents	
Savings groups	
Friends, neighbors or relatives who borrow from/ save money for me	

F53. What would be the main reasons for borrowing money?

READ OUT. ALLOW FOR MULTIPLE ANSWERS.	
To start a new business or expand my business	1
To improve the cash flow situation of my business	2
To buy inputs (such as seeds, fertilizer, or pesticides)	3
To make big purchases (not inputs) such as land or modern equipment	4
For other agricultural activities	5
For emergency expenses	6
To pay for school fees	7
To cover daily expenses	8
Other (specify) _____	9
Don't know	98

F54. For your agricultural activities, how important to you is it to borrow from each of the following: very important, somewhat important, or not important?

F55. In the past 12 months, have you attempted to borrow from any of the following?

F56. If the need arose, would you attempt to borrow from any of the following?

READ OUT.	F54. Importance	F55. Attempted	F56. Would attempt
SINGLE ANSWER PER ROW	1 = Very important 2 = Somewhat important 3 = Not important 98 = Don't know	1 = Yes 2 = No	1 = Yes 2 = No
Bank or other formal financial institutions			
Microfinance institution			
SACCO (Savings and Credit Cooperative Society)			
Cooperative			
Informal money lender			
VSLAs (Village Savings and Lending Associations)			
Friends and family			
Other (specify) _____			

F57. What factors would you consider when you want to borrow money?

READ OUT. ALLOW FOR MULTIPLE ANSWERS.

Quickest access to money	1	Best repayment terms	8
Most convenient to get to	2	Met minimum requirements	9
Best interest rates	3	Trust in a financial institution	10
Was desperate/no other options	4	Confidentiality	11
Recommended by a friend	5	Loan size	12
Easiest to use	6	Other (specify) _____	13
Have borrowed from them before	7	Don't know	98

F58. Do you currently have any loans?

SINGLE ANSWER.

Yes	1
No	2

F59. How important is each of the following products to your agricultural activities: very important, somewhat important, or not important?

F60. Do you currently have any of the following products for your agricultural activities?

F61. ASK ONLY IF THE ANSWER TO F60 IS **NO**. Do you want to have any of the following products for your agricultural activities?

READ OUT.	F59. <i>Importance</i>	F60. <i>Currently have</i>	F61. <i>Want</i>
SINGLE ANSWER PER ROW	1 = Very important 2 = Somewhat important 3 = Not important 98 = Don't know	1 = Yes 2 = No	1 = Yes 2 = No 98 = Don't know
A loan that came with a bank account			
A loan that is accessed directly through a bank account			
A loan that is accessed through a mobile money account and linked to a bank account			
A loan that is accessed through a mobile money account			
A loan that came with a mobile money account			
A mobile money account that came with a smartphone			
A loan that came with an insurance plan (e.g., home, business, life, medical)			
A credit plan for school fees			
A goal savings plan or contractual savings plan for school fees			
A savings plan for inputs, such as seeds, fertilizers, or pesticides			
A payment plan for inputs, such as seeds, fertilizers, or pesticides			
A pre-paid card to make payments			
A pre-paid card for receiving income			
Other (specify) _____			

ANNEX 3. SAMPLING DESIGN

The smallholder household survey in Nigeria is a nationally representative survey with a target sample size of 3,000 smallholder households. In order to take nonresponse into account, the target sample size was increased to 3,225 households assuming a response rate of 93 percent. The sample was designed to produce national level estimates as well as estimates for each of the six geopolitical zones of Nigeria comprised of the following states:

- North Central: Benue, Federal Capital Territory (FCT), Kogi, Kwara, Nasarawa, Niger, and Plateau
- North East: Adamawa, Bauchi, Borno, Gombe, Taraba, and Yobe
- North West: Jigawa, Kaduna, Kano, Katsina, Kebbi, Sokoto, and Zamfara
- South East: Abia, Anambra, Ebonyi, Enugu, and Imo
- South South: Akwa Ibom, Bayelsa, Cross River, Delta, Edo, and River
- South West: Ekiti, Lagos, Ogun, Ondo, Osun, and Oyo

Smallholder households were defined as households with the following criteria:

Household with up to 5 hectares	AND	Agriculture provides a meaningful contribution to the household livelihood, income, or consumption
OR		
Farmers who have less than 50 heads of cattle; or 100 goats/sheep/pigs; or 1,000 chickens		

Sampling Frame

Nigeria is divided into 774 local governments (LGAs) and its last housing and population census took place in 2006. In preparation for this last census, the National Population Commission (NPopC) demarcated over 662,000 enumeration areas (EAs) for the country. From these EAs, two hierarchical master sample frames were developed by the Nigeria Bureau of Statistics (NBS) as described below.

LGA Master Frame

The National Population Commission gave NBS access to their list of EAs demarcated for the 2006 Housing and Population Census. NBS drew a Master Sample of 30 Enumeration Areas from each LGA in the 36 states and 40 EAs in each of the 6 LGAs in the FCT, Abuja. The EAs which were selected with equal probability constitute the LGA master sample. This LGA master sample contains a total number of 23,280 EAs. The 30 EAs in each LGA were selected into 3 replicates using a random systematic sampling method. Thus, each replicate contains 10 sample EAs.

NISH Master Sample Frame

The National Integrated Survey of Households (NISH) is a two-stage replicated and rotatable cluster sample design. The NISH Master Sample Frame was constructed from the LGA Master Sample in each state by pooling together the 30 EAs in each LGA for all the LGAs in the state. Therefore, the total number of EAs in the LGA master sample for each state is equal to 30 times the number of the LGAs in the state except in FCT, Abuja where it is 40 times. A sample of 200 EAs was then selected using a systematic selection procedure across all LGAs within the state. These 200 EAs that form the NISH master sample were selected into 20 replicates, with each replicate containing 10 sample EAs.

The National Integrated Survey of Households (NISH) master sample serves as the sampling frame for all household surveys conducted by NBS in the period 2014–2019. The smallholder survey used the NISH as sampling frame but retained only the EAs containing agricultural households.

Sample allocation and selection

The total sample size was first allocated to the geopolitical zones in proportion to their number of agricultural EAs in the sampling frame. Within each zone, the resulting sample was then further distributed to states proportionally to their number of agricultural EAs. Given that EAs were the primary sampling units and 15 households were selected in each EA, a total number of 215 EAs were selected (Table 7).

The sample for the smallholder survey is a stratified multistage sample. A stratum corresponds to a state and the sample was selected independently in each stratum.

In the first stage, EAs were selected as primary sampling units with equal probability. A household listing operation was carried out in all selected EAs to identify smallholder households and to provide a frame for the selection of smallholder households to be included in the sample. In the second stage, 15 smallholders were selected in each EA with equal probability.

In each selected household, a household questionnaire was administered to the head of the household, the spouse or any knowledgeable adult household member to collect information about household characteristics. A multiple respondent questionnaire was administered to all adult members in each selected household to collect information on their agricultural activities, financial behaviors and mobile money usage. In addition, in each selected household only

one household member was selected using the Kish grid and was administered the single respondent questionnaire.

Sampling weights

The sample for the smallholder survey is not self-weighting, therefore sampling weights were calculated. The first component of the weights is the design weight based on the probability of selection for each stage of selection. The second component uses non-response rates at both household and individual levels.

Taking into account the selection of EAs into the LGA master frame, and then into NISH, the sample for the smallholder survey sample finally included 3 stages of selection for the EAs. In addition, probabilities of selection were calculated for households and household members.

Let N_{LGA} be the total number of EAs in the LGA

b_{LGA} be the number of EAs selected from the LGA into the LGA master sample (30 or 40)

N_{State} be the number of EAs in the state

a_{State} be the number of EAs selected for the smallholder survey in each state

The final probability of selection of the EA into the smallholder sample is given by:

$$P_{EA} = \frac{b_{LGA}}{N_{LGA}} \times \frac{200}{N_{State}} \times \frac{a_{State}}{200} = \frac{b_{LGA}}{N_{LGA}} \times \frac{a_{State}}{N_{State}}$$

The conditional probability of selection of households given the EA is selected is given by

$$P_{hh} = \frac{15}{L_{EA}}$$

where L_{EA} is the number of smallholder households listed.

Table 7. Sample allocation

Zone	State	Total number of agricultural EAs	Number of selected agricultural EAs	Number of selected households
North Central	Benue	561	6	90
	Kogi	529	5	75
	Kwara	458	5	75
	Nasarawa	316	3	45
	Niger	740	7	105
	Plateau	452	5	75
	FCT	210	2	30
	Subtotal	3,266	33	495
North East	Adamawa	604	6	90
	Bauchi	591	6	90
	Borno	691	7	105
	Gombe	328	3	45
	Taraba	464	5	75
	Yobe	490	5	75
	Subtotal	3,168	32	480
	North West	Jigawa	810	8
Kaduna		661	7	105
Kano		1,260	13	195
Katsina		986	10	150
Kebbi		630	6	90
Sokoto		685	7	105
Zamfara		419	4	60
Subtotal		5,451	55	825
South East	Abia	487	5	75
	Anambra	544	5	75
	Ebonyi	384	4	60
	Enugu	478	5	75
	Imo	791	8	120
	Subtotal	2,684	27	405
South South	Akwa-ibom	885	9	135
	Bayelsa	231	2	30
	Cross River	448	4	60
	Delta	707	7	105
	Edo	516	5	75
	Rivers	623	6	90
	Subtotal	3,410	33	495
	South West	Ekiti	479	5
Lagos		123	2	30
Ogun		537	5	75
Ondo		533	5	75
Osun		850	9	135
Oyo		914	9	135
Subtotal		3,436	35	525
Total		21,415	215	3,225

The overall probability of selection for households is the product of the above probabilities of selection, i.e.

$$P_{hi} = P_{EA} \times P_{hh}$$

The design weight for households is the inverse of the overall probability, calculated as follows:

$$W_{hi} = \frac{1}{P_{hi}}$$

where W_{hi} = design weight for households in the i-th sample EA in stratum h.

The design weights for households were adjusted for nonresponse at the household level to produce adjusted household weights. Sampling weights for the multiple respondent data file were derived from adjusted household weights by applying to them non-response rates at the individual level. For the single respondent data file,

the same process was applied after taking into account the subsampling done within the household.

Finally, household and individual sampling weights were normalized separately at the national level so the weighted number of cases equals the total sample size. The normalized sampling weights were attached to the respective data files and used during analysis.

Sampling errors

The sample design for the smallholder survey is a complex sample design featuring clustering, stratification and unequal probabilities of selection. For key survey estimates, sampling errors taking into account the design features will be produced using either the SPSS Complex Sample module or STATA based on the Taylor series approximation method.