

# CGAP Smallholder Household Surveys

## User Guide to the Data Set for Cote d'Ivoire

November 2016







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## Background Information

### CGAP's work with smallholder households

CGAP's client orientation naturally leads to a greater focus on 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 services for these families represent an important priority for CGAP to explore. Given that smallholder households are not only agricultural producers but also consumers with diverse financial needs and varied sources of income, CGAP's work with smallholder families focuses on ensuring that the least-served smallholder segments (particularly noncommercial smallholders) have access to and actively use financial services tailored to the full array of their financial needs. This includes finance for both agricultural activities and other financial needs, such as off-farm enterprises and household priorities like school fees.

Smallholder families are not only agricultural producers, they are also consumers who have diverse financial needs. Most smallholder families typically earn income from a variety of nonagricultural sources, including sale of labor and off-farm enterprises. Consequently, as CGAP explores financial innovation for smallholder families, it proposes to adopt a holistic approach to understanding the wide array of challenging financial services needs of these farming households.

**Finance for agricultural activities.** Meeting the financial needs of smallholder agricultural activities is challenging. Agriculture is by nature 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 services providers face risk and liquidity management challenges because farmers in the same area generally borrow at the same time and often do the same activities; 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 agriculture 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 enterprises and other household priorities. While these needs are not unique to smallholder families, smallholders often are uniquely impacted by family reliance on agricultural activities. For example, in smallholder communities in parts of western Kenya, school fees are due soon after the maize crop is harvested, forcing 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 so they can pay 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 neatly within only one of the three segments identified. 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 service providers.

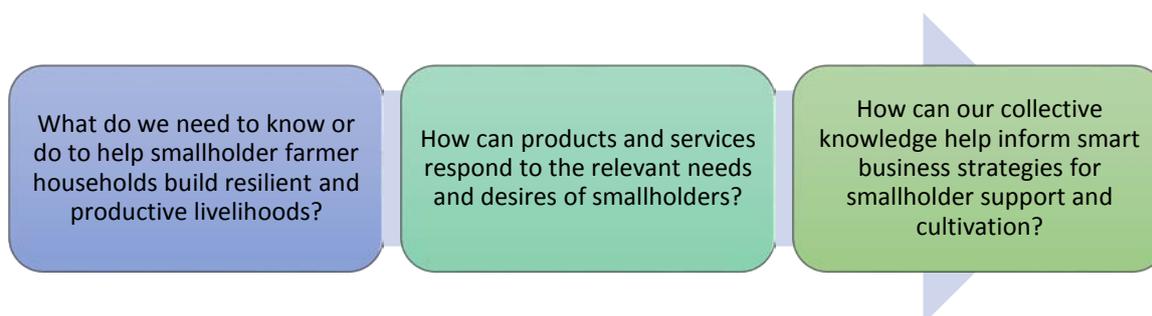
**Noncommercial smallholder families.** The approximately 300 million noncommercial smallholder families worldwide are generally considered subsistence farmers, and they are among the poorest households. They typically farm to contribute to their own sustenance and survival; farming is not a vocation or strategic business choice. Agricultural production is concentrated in staple crops (e.g., cereals, roots, and 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 are 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 in a market. However, lack of storage often forces 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, energy crops). Commercial smallholder households in loose value chains have limited access to inputs and 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.** The approximately 35 million commercial smallholder households in tight value chains, broadly speaking, have access to at least 2 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 service providers than do the other two segments.

The Consultative Group to Assist the Poor (CGAP) sought to explore the financial and agricultural lives of smallholder farmer households in Cote d’Ivoire and began a comprehensive attitudinal and behavioral research program in January 2016. The research project—comprising qualitative research in the form of focus groups, a survey with an accompanying household listing, and a segmentation—sought to answer three key questions (see Figure 1).

**Figure 1. Three key research questions**



## Definition and focus of the sample in the survey

The objectives of the Smallholder Household Survey in Cote d’Ivoire were 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 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 concluded that there is no clear agreement on the characteristics that define a smallholder (Aidenvironment and Ecole Polytechnique Fédérale de Lausanne, 2013). From both of these lines of investigation, a matrix was developed of each of the key criterium that could be used to distinguish smallholder households from other agricultural households (see Table 1).

**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, service 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 smallholder household survey in Cote d'Ivoire is a nationally representative survey with a target sample size of 3,000 smallholder households. The sample was designed to provide reliable survey estimates at the national level and for three zones (East Forest, West Forest, and Savane). The universe for the survey consists of smallholder households identified as per the criteria shown in Figure 2.

**Figure 2. Defining smallholder households**

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

## Sampling frame

In preparation for the 2014 population census, the country was divided into 22,600 census enumeration areas (EAs). For the ongoing 2015 agricultural census, the National Statistical Office (INS) identified 18,321 EAs that contain agricultural households.

The sampling frame for the smallholder survey is the list of these EAs containing agricultural households.

## Sample allocation and selection

To take nonresponse into account, the target sample size was increased to 3,333 households, assuming a nonresponse rate of 10 percent.

The total sample size was first allocated to the zones based on their population counts using the power allocation method. Within each zone, the resulting sample was then distributed to urban and rural areas in proportion to their population.

Given that EAs were the primary sampling units and 15 households were selected in each EA, 223 EAs were selected.

The sample for the smallholder survey is a stratified multistage sample. Stratification was achieved by separating each zone into urban and rural areas. The urban/rural classification is based on the 2014 population census. Therefore, six strata were created, and the sample was selected independently in each stratum.

In the first stage, EAs were selected as primary sampling units with probability proportional to size, the size being the population count in the EAs. A household listing operation was conducted in all selected EAs to identify smallholder households and to provide a frame for selecting smallholder households to be included in the sample. In the second stage, 15 smallholders were sampled in each EA with equal probability.

In each sampled household, the Household questionnaire was administered to the head of the household, the spouse, or any knowledgeable adult household member to collect information about household characteristics. The Multiple Respondent questionnaire was administered to all adult members in each

sampled household to collect information on their agricultural activities, financial behaviors, and mobile money use. In addition, in each sampled 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 3-26 March 2016 in all selected EAs. For this purpose, Intermedia 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 32 listing teams in Abidjan. Each listing team consisted of one supervisor, one lister, and one mapper recruited from Ipsos's pool of enumerators. The training involved both classroom sessions and field practice.

The household listing was done on smartphones, which required Ipsos to develop a script in Dooblo SurveyToGo software for the listing forms. The script was field tested and validated before it was used for the listing operation.

### Sampling weights

The sample for the smallholder household 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. 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 nonresponse rates at the individual level to them. 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 equaled the total sample size. The normalized sampling weights were attached to the different data files and were 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 will 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 [LSMS], FinScope, AgFiMS) and the 2013 CGAP global segmentation,<sup>1</sup> the methodology and survey instrument were designed to answer a number of questions about smallholder households in Cote d'Ivoire:<sup>2</sup>

- **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 comfort level with digital financial services and other channels and service 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 does each segment currently use and where are there opportunities to add value with new services and/or delivery channels?

The first months of the project included a series of deep-dives into the existing research on smallholders to determine what questions had already been asked, what the findings were, and how we should proceed to complement and expand on these findings to meet our objectives. Several sources were consulted in the process, including IFC, Dalberg, Finmark Trust, AgFiMS, FinScope, FAO, GIZ, IFAD, and the World Bank. The secondary research brought a series of questions that informed discussions with stakeholders.

Several additional stakeholders and organizations also contributed valuable insights and considerations into the design of the research project as key informants, and took part in an informal technical working group to review and guide the research. These key organizations included the Agricultural Council of Tanzania, Bank of Tanzania, the Bill & Melinda Gates Foundation, CARE, IFAD, One Acre Fund, and Vodacom, as well as World Bank Group colleagues and the LSMS team.

Secondary research and discussions with stakeholders identified a gap in information about the actual needs, desires, and perceptions of smallholder households. This research project also sought to connect the agricultural data to the financial data to dissect the interactions and intersections between the two.

After using 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.
- Accounting for stakeholder interests and feedback.

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<sup>1</sup> See Christen and Anderson (2013).

<sup>2</sup> CGAP retained the services of InterMedia to manage the survey in partnership with Ipsos Cote d'Ivoire. Additional national surveys and segmentations of the smallholder sector, led by CGAP, were conducted in Mozambique, Uganda, Tanzania, and Bangladesh.

- 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 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.

**Table 2. 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		

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 in the household (see Table 3).

The Household questionnaire collected information on the following:

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

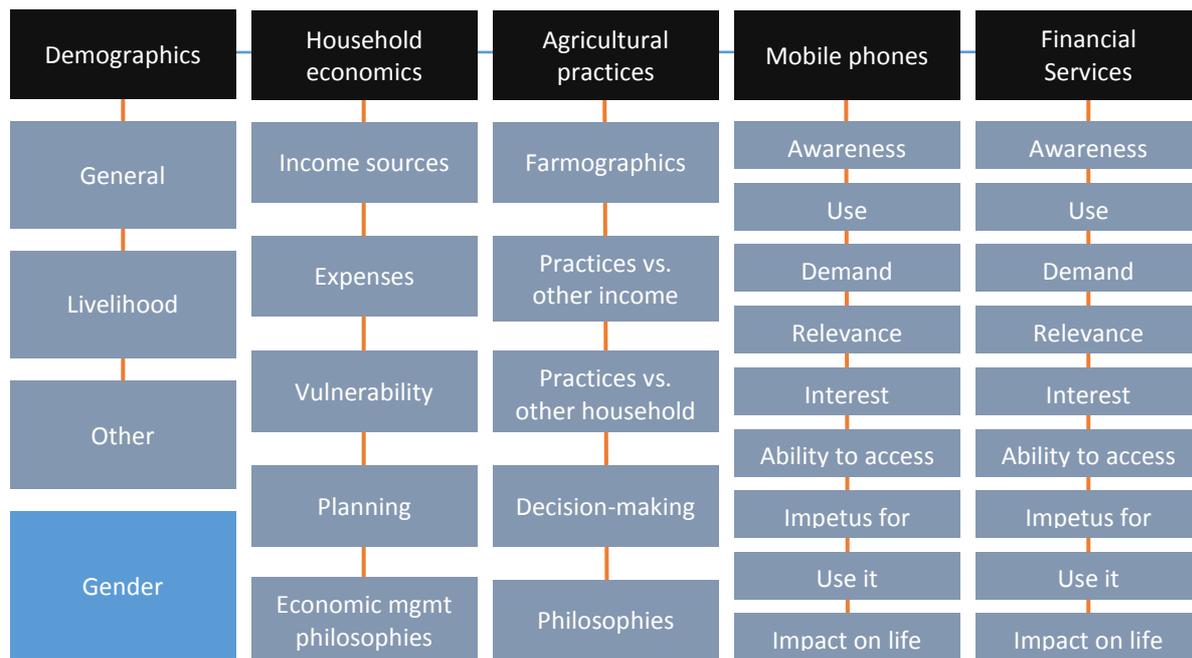
- Mobile phones—attitudes toward phones, use, access, ownership, desire, and importance.
- Financial services—attitudes toward financial products and services such as banking and mobile money, including ownership, use, access, and importance.

After the questionnaires were pretested, debriefing sessions were held with the pretest field staff, and the questionnaires were modified based on the observations from the pretest. The finalized questionnaires were used to develop a script for data collection on smart phones. The script was tested and validated before it was used in the field. See Figures 3 and 4.

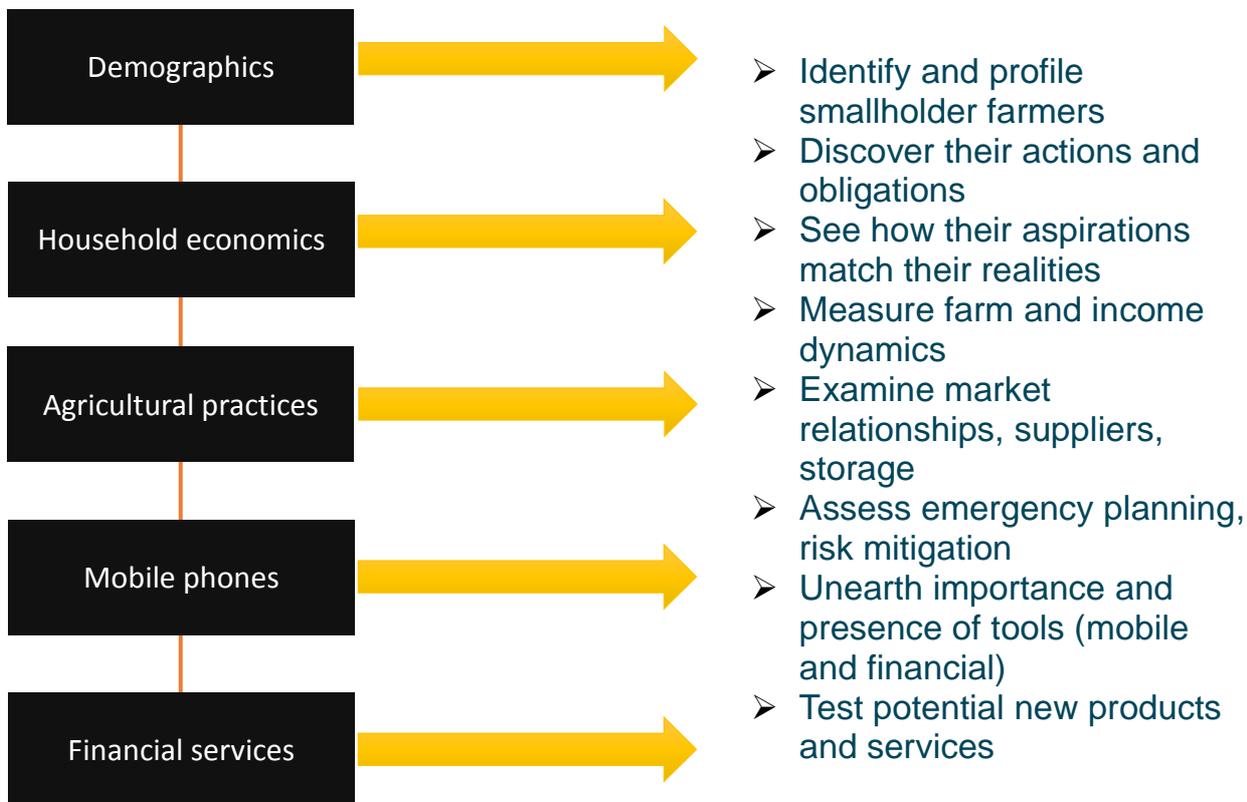
**Table 3. Design of smallholder questionnaires**

	Household survey questionnaire	Multiple Respondent survey questionnaire	Single Respondent survey questionnaire
Target respondent(s)	Head of the household, their spouse, or a knowledgeable adult	All household members age 15 and over contributed to the household income or participated in its agricultural activities	One randomly selected adult in the household
Topics covered	<ul style="list-style-type: none"> <li>• Basic information on all household members</li> <li>• Information about household assets and dwelling characteristics</li> </ul>	<ul style="list-style-type: none"> <li>• Demographics</li> <li>• Agricultural activities</li> <li>• Household economics</li> </ul>	<ul style="list-style-type: none"> <li>• Agricultural activities</li> <li>• Household economics</li> <li>• Mobile phones</li> <li>• Formal and informal financial tools</li> </ul>

**Figure 3. Questionnaire framework**



**Figure 4. How to leverage the questionnaire framework**



## Fieldwork

### Training

Ipsos Cote d'Ivoire, InterMedia's local field partner, recruited interviewers and supervisors for the main fieldwork, taking into account their language skills. After field staff were recruited, a centralized training session was conducted in Abidjan from 31 March to 7 April 2016. Five independent field quality control (QC) staff directly hired by InterMedia also attended the training. 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.

### Dates

Data collection took place from 15 April to 13 May 2016, and the survey was implemented by Ipsos Cote d'Ivoire.

### Deviations in the sample design

After the EAs were selected and the EA maps were printed, it was necessary to reduce the number of EAs to be listed to 212 for budgetary reasons. Therefore, 212 EAs were randomly selected among the previously 223 sampled EAs and were finally included in the survey sample.

The smallholder survey in Cote d'Ivoire is the fifth survey in the series, following surveys in Mozambique, Uganda, Tanzania, and Bangladesh. Fieldwork in the first two countries experienced many failed call backs where identified eligible households and household members could not be interviewed during the time allocated to fieldwork in each country. As a result, the final sample size fell slightly short of the target. For this reason, in Cote d'Ivoire the number of households selected in each EA was increased from 15 to 17 following the household listing operation in all sampled EAs.

### Response rates

Tables 4, 5, and 6 show household and household member response rates for the Cote d'Ivoire smallholder household survey. Of the 3,415 households selected for the survey, 3,109 were found to be occupied during data collection. Of these, 3,019 were successfully interviewed, yielding a household response rate of 97.1 percent.

**Table 4. Response rate for the Household questionnaire**

	East Forest	West Forest	Savane	Rural	Urban	Total
<b>Households selected</b>	1,041	1,332	1,042	2,886	529	3,415
<b>Households occupied</b>	962	1,217	930	2,641	468	3,109
<b>Households interviewed</b>	932	1,180	907	2,574	445	3,019
<b>Household response rate (%)</b>	96.9	97.0	97.5	97.5	95.1	97.1

In the interviewed households, 6,659 eligible household members were identified for the Multiple Respondent questionnaire. Interviews were completed with 5,706 eligible household members, yielding a response rate of 85.7 percent for the Multiple Respondent questionnaire.

**Table 5. Response rate for the Multiple Respondent questionnaire**

	East Forest	West Forest	Savane	Rural	Urban	Total
<b>Eligible household members</b>	1,750	2,695	2,214	5,795	864	6,659
<b>Eligible household members interviewed</b>	1,604	2,196	1,906	4,948	758	5,706
<b>Response rate (%)</b>	91.7	81.5	86.1	85.4	87.7	85.7

Among the 3,019 eligible household members selected for the Single Respondent questionnaire, 2,949 were successfully interviewed, yielding a response rate of 97.7 percent.

**Table 6. Response rate for the Single Respondent questionnaire**

	East Forest	West Forest	Savane	Rural	Urban	Total
<b>Eligible household members</b>	932	1,180	907	2,574	445	3,019
<b>Eligible household members interviewed</b>	910	1,149	890	2,510	439	2,949
<b>Response rate (%)</b>	97.6	97.4	98.1	97.5	98.7	97.7

## Methods of data collection

Twenty-one interview teams collected data for the survey on smart phones. Each team consisted of one supervisor and 3-4 interviewers.

## Quality checks

Ipsos Cote d'Ivoire recruited field teams that included interviewers and supervisors. Three staff members from Intermedia's local field partner coordinated and supervised fieldwork activities along with the independent QC team hired by Intermedia to oversee the overall quality function of data collection. The QC team stayed with the survey teams during fieldwork to closely supervise and monitor them.

The final data files were checked for inconsistencies and errors by InterMedia, and corrections were made as necessary and where possible

## Dataset

### Location and access

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

## References

Aidenvironment and Ecole Polytechnique Fédérale de Lausanne. 2013. "Defining Smallholders: Suggestions for a RSB Smallholder Definitions." Roundtable on Sustainable Biomaterials, October.

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Annex 1. Listing documents

**MANUAL FOR  
MAPPING AND HOUSEHOLD LISTING**

**November 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 comprising 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, or temple), and streets or roads that help 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 or 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 who are considered 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 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.

For the overall majority of cases, defining or identifying a household is straightforward, but this is by no means an easy task all the time. 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. Each team consists of two persons: one works as the mapper while the other works as the lister. Supervisors will oversee 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 and listing forms) are obtained before going to the field.
- Plan and organize fieldwork logistics (e.g., arrange transport, identify and contact 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 listing forms and 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 systematically.
- Complete all listing forms including the Segmentation Form if required.
- Transfer all completed forms to the supervisor or to the central office.
- When possible, mark the structure number on the door frame of the structures within the clusters.
- Report problems encountered in the field to the supervisor and follow his or 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 maps of each cluster, and the listing all households found in each cluster. In some cases, segmentation is required; this is described later in this manual.

### **Step 1: Locating the Cluster**

The supervisor will give the listing team a base map containing the cluster assigned to the team. On arrival in a cluster, the team should first tour the cluster to identify its boundaries. This should be done with the help of 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**

Mapping the cluster and listing the households should be done systematically so that there are no omissions or duplications. The cluster should be divided into parts, if possible; a part can be a block of structures. The team should finish each block before moving to the adjacent one. Within each block, the team should 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, the team should start from the center and move clockwise around it.

#### ***Sketch map***

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. Mark 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 use (e.g., school, shop, or factory).
2. Number all structures sequentially 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 landmarks, public buildings (e.g., park, school, or temple), and streets or roads to the sketch map. Sometimes it is useful to add landmarks that are found outside the cluster boundaries to the sketch map, if these landmarks are helpful in identifying other structures inside the cluster.
4. With permission, use a marker to write the number that has been assigned to the structure on the sketch map on the door or frame of the entrance to the structure. Note that this is the

serial number of the structure that will be assigned on the household listing form. To distinguish the CGAP number from other numbers that may already exist on the door or frame of the structure, write CGAP in front of the structure number (e.g., CGAP/60 for structure number 60).

5. Ensure that all the structures within the cluster boundaries are included. An example of a sketch map can be found in the Examples section at the end of this manual.

The listing team should be careful to find hidden structures. In some areas, structures are built so haphazardly that they can be easily 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 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 region name, locality name, 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 the first two columns blank; these are reserved for office use.
4. *Column (1) [Serial number of structure]:* For each structure record 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 would help to find it again.
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 church). All structures must be listed, including vacant structures and structures under construction, as well as structures where household members refuse to cooperate 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 be 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 be only one head per household.
9. *Column (6) [Status of dwelling]:* Circle 1 if occupied. If a dwelling is unoccupied, observations or information from neighbors will advise the appropriate code to circle. Under special circumstances where an unoccupied dwelling cannot be classified as Vacant 2 or with the household Temporarily Absent 3, and Other 6 should be circled and accompanied by the specifics of the situation in Column 7.

10. *Column (7) [Observations]*: Record any special information about the household or structure (e.g., nonresidential structure, under construction, or household refusal). Then go to the second page.

### **Second page**

1. *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.
2. *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.
3. *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 be either owned or rented. This includes any water, such as rivers, lakes, and ponds that they operate. If the respondent says No then go to QQ3.
4. *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. This includes any water, such as rivers, lakes, and ponds that they operate. The land operated by the household can be either owned or rented. Record 00 if none. If the land size is unknown, try to estimate and record that number or record DK for Don't Know.
5. *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, then go to QQ5.
6. *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.
7. *Column (QQ4A) [How many of the following animals does this household have: cattle, milk cows, buffalo, or bulls?]*: Ask this question and record the number of cattle, milk cows, buffalo, or bulls in Column A. If the answer is None, then record 00 in the space provided. If the number of cattle, milk cows, buffalo, or bulls is unknown, try to estimate and record that number or record DK for Don't Know.
8. *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.
9. *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.
10. *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.
11. *Column (QQ4E) [How many of the following animals does this household have: chickens or ducks?]*: Ask this question and record the number of chickens or ducks in Column E. If the answer is None, then record 00 in the space provided. If the number of chickens or ducks is

unknown, try to estimate and record that number or record DK for Don't Know. Then continue to the third page.

### **Third page**

1. *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.
2. *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.
3. *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.
4. *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.
5. *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.
6. *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 may need segmentation, the listing team should first tour the EA and do a quick count to get the estimated number of households in the EA. As a standard, each EA with 300 or more households should be subdivided into an appropriate number of segments. If possible, the segments should be roughly of equal size and ideally around 100–200 households each. However, it is *critical* to adopt segment boundaries that are easily identifiable. This condition must take precedence over secondary considerations of roughly same size.

Each team should carry several 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. Draw a location map of the entire EA as described above.
2. Using clear boundaries such as roads or rivers, divide the EA into segments of roughly equal size in terms of the number of households.
3. Show the boundaries of the newly created segments on the location map of the EA.
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 meets 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 fewer than: 50 heads of cattle; or 100 goats/sheep/pigs; or 1,000 chickens or ducks		

**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 of the three additional criteria.

**Step 3:** After sequentially numbering 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, also record in the template the percentage that the selected segment represents in the EA that was segmented in 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.

## Mapping and Household Listing Forms



# LOCATION MAP FORM

*Cote d'Ivoire*

LOCATION MAP	
	CGAP Cluster number:    ___ ___ ___

# SKETCH MAP FORM

Cote d'Ivoire

SKETCH MAP	
	CGAP Cluster number:    — — —

**IDENTIFICATION**

Region name: _____		Locality name: _____		CGAP Cluster number: _____		
Mapper's name: _____		Mapper's ID: _____	Lister's name: _____		Lister's ID: _____	Page #: _____ of _____

<i>Leave blank</i>		Serial number of structure	Address or Description of Structure	Residence? Y / N		Serial number of household in structure	Name of head of household <i>Record the name at the time of listing</i>	Status of dwelling				Observations
Eligible (mark with X)	Household number			<i>If no, record observations or proceed to next structure</i>				1a Occupied, person present 1b Occupied, no one present 1c Occupied, but uncooperative / refused 2 Vacant 3 Temporarily absent 6 Other (Specify)				
		1	2	3	4	5	6				7	
				Y	N			1	2	3	6	
				Y	N			1	2	3	6	
				Y	N			1	2	3	6	
				Y	N			1	2	3	6	
				Y	N			1	2	3	6	
				Y	N			1	2	3	6	
				Y	N			1	2	3	6	
				Y	N			1	2	3	6	
				Y	N			1	2	3	6	
				Y	N			1	2	3	6	

				Y	N			1	2	3	6	
--	--	--	--	---	---	--	--	---	---	---	---	--

HOUSEHOLD LISTING FORM (CONTINUED): *Cote d'Ivoire*

IDENTIFICATION				
Region name: _____		Locality name: _____		CGAP Cluster number: _____
Mapper's name: _____		Mapper's ID: _____	Lister's name: _____	Lister's ID: _____ Page #: _____ of _____

Serial number of structure	Serial number of household in structure	QQ1. Does any member of this household operate any land that can be used for agriculture?		QQ2. How much agricultural land do members of this household operate?	QQ3. Does this household have any livestock, herds, other farm animals, or poultry?		QQ4. How many of the following animals does this household have?				
		<i>If no, go to QQ3.</i>		<i>If none, record "00". If unknown, estimate or record "DK".</i>	<i>If no, go to QQ5.</i>		<i>If none, record "00". If unknown, try to estimate or record "DK".</i>				
<i>From previous page</i>	<i>From previous page</i>						Cattle, milk cows, buffalo or bulls?	Goats?	Sheep?	Pigs?	Chickens or ducks?
1	4	QQ1		QQ2	QQ3		QQ4A	QQ4B	QQ4C	QQ4D	QQ4E
		Y	N		Y	N					
		Y	N		Y	N					
		Y	N		Y	N					
		Y	N		Y	N					
		Y	N		Y	N					
		Y	N		Y	N					
		Y	N		Y	N					
		Y	N		Y	N					

**IDENTIFICATION**

Region name: _____		Locality name: _____		CGAP Cluster number: _____		
Mapper's name: _____		Mapper's ID: _____	Lister's name: _____		Lister's ID: _____	Page #: _____ of _____

Serial number of structure	Serial number of household in structure	QQ5. Does agriculture represent an important contribution to your household livelihood – yes or no?		QQ6. Does agriculture represent an important contribution to your household income – yes or no?		QQ7. Does agriculture represent an important contribution to your household consumption – yes or no?		Comments about agricultural activity <i>(e.g. land is rented off)</i>
<i>From previous page</i>	<i>From previous page</i>	QQ5		QQ6		QQ7		8
1	4	Y	N	Y	N	Y	N	
		Y	N	Y	N	Y	N	
		Y	N	Y	N	Y	N	
		Y	N	Y	N	Y	N	
		Y	N	Y	N	Y	N	
		Y	N	Y	N	Y	N	
		Y	N	Y	N	Y	N	
		Y	N	Y	N	Y	N	
		Y	N	Y	N	Y	N	
		Y	N	Y	N	Y	N	

## SEGMENTATION FORM

*Cote d'Ivoire*

IDENTIFICATION	
Enumeration Area number: _____	REGION NAME: _____
CGAP Cluster number: _____	Locality name: _____
Mapper's name and ID number: Name: _____ ID: ____	Lister's name and ID number: 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

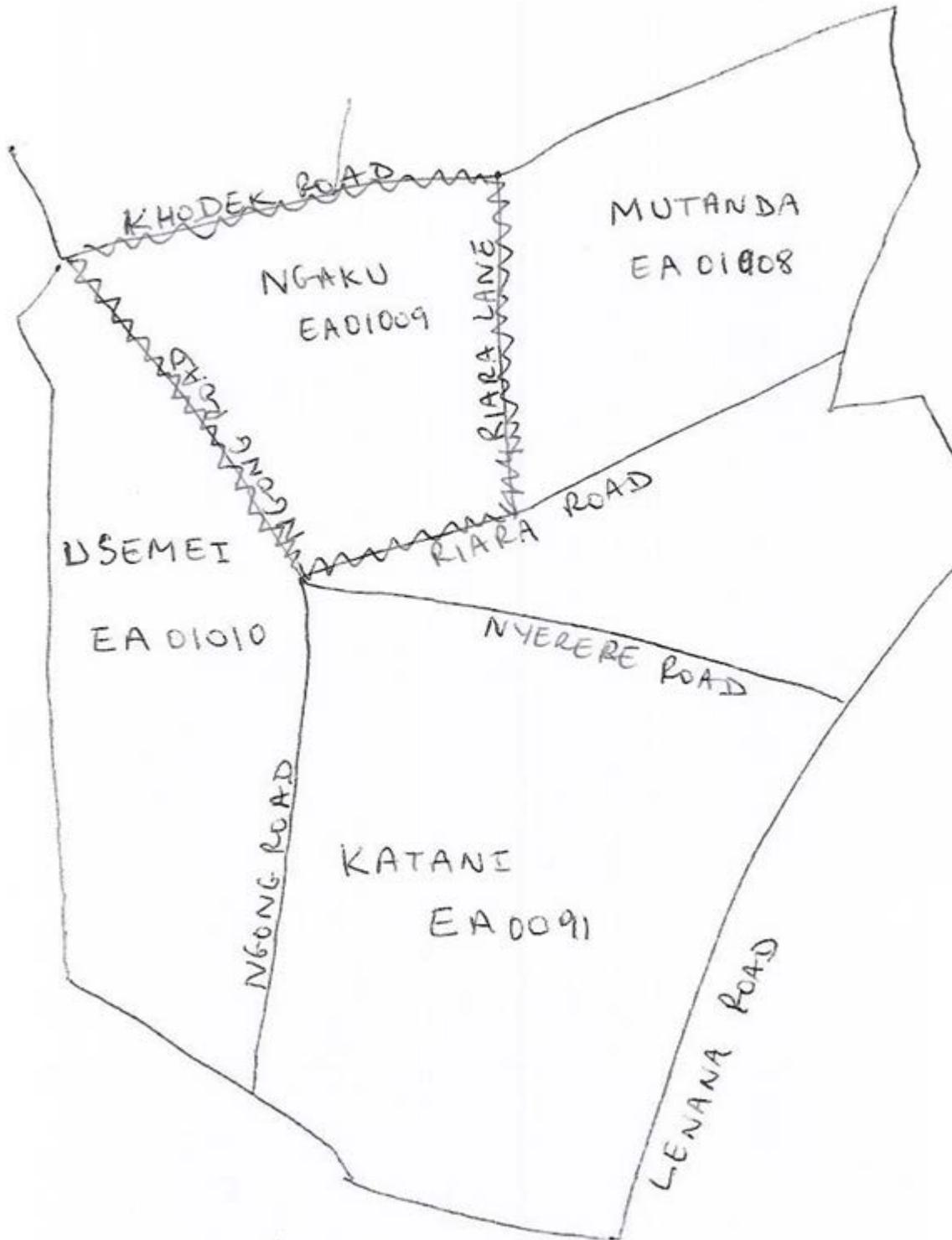
Segment selected:	_____
-------------------	-------

# Examples

## Location and Sketch Map Forms

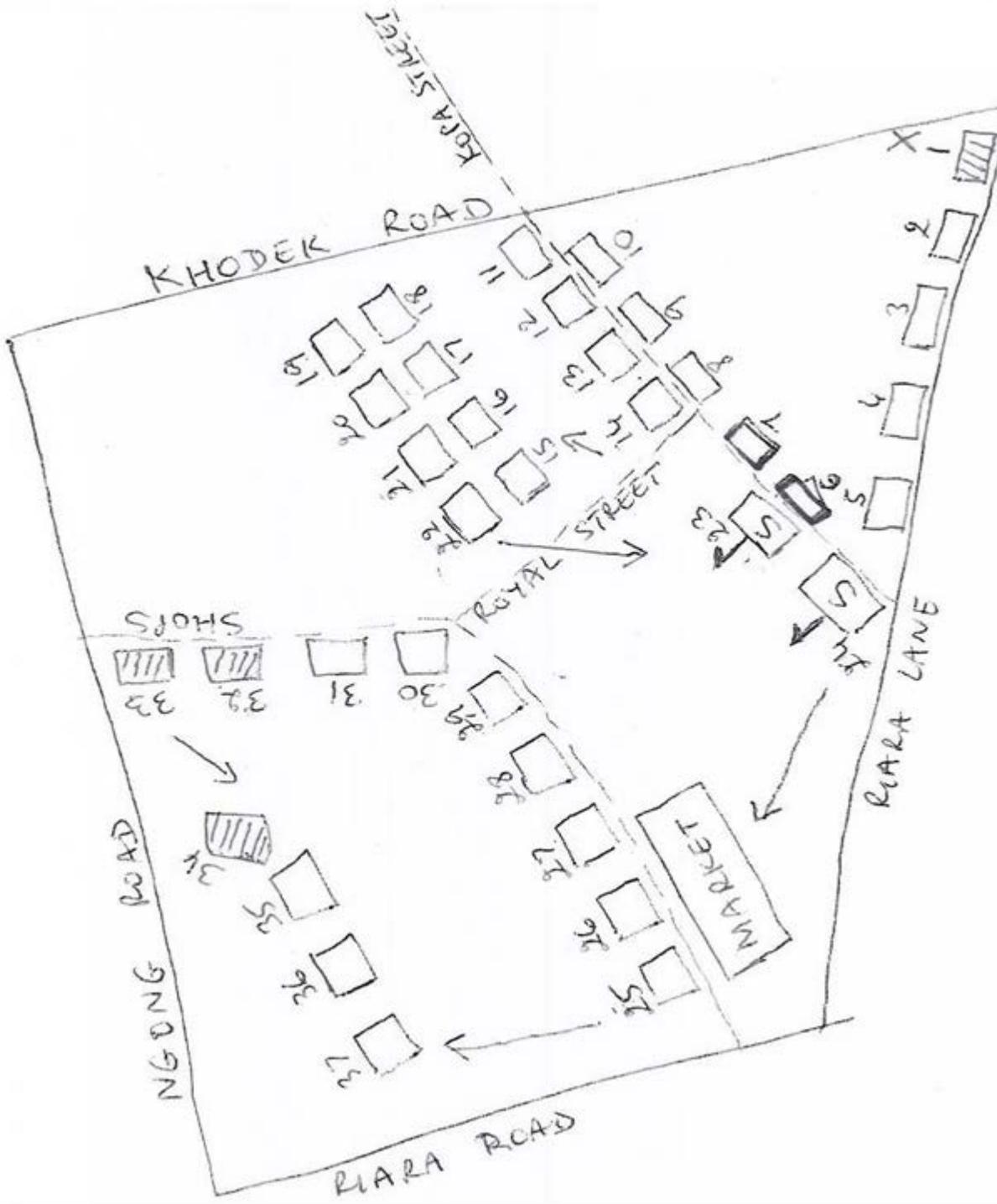
LOCATION MAP FORM EXAMPLE

CGAP Cluster number: 060



SKETCH MAP FORM EXAMPLE

CGAP Cluster number: 060



## Annex 2

### Questionnaires

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. Region Name _____
HH7. DISTRICT Name _____	HH7A. AREA OF RESIDENCE 1= URBAN 2= RURAL
<p>We are from <b>Ipsos</b>. 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?</p> <p><input type="checkbox"/> Yes, permission is given ⇒ Go to D0 to begin the interview.</p> <p><input type="checkbox"/> No, permission is not given ⇒ Circle 04 in HH8. Discuss this result with your supervisor.</p>	
<p>HH8. Result of household interview:</p> <p>Completed..... 01</p> <p>No household member or no competent respondent at home at time of visit..... 02</p> <p>Entire household absent for extended period of time ..... 03</p> <p>Refused..... 04</p> <p>Dwelling vacant / Address not a dwelling..... 05</p> <p>Dwelling destroyed ..... 06</p> <p>Dwelling not found..... 07</p> <p>Other (specify)_____ 96</p>	

After the household questionnaire has been completed, fill in the following information:	
HH9. Respondent to Household Questionnaire: Name _____	
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 Household member's Line Number	D1 Name	D2 What is (name)'s relationship to the head of household	D3 Is (name) 1=Male 2=Female	D4 What is (name)'s marital status	D5 Age (in years)	D6 Has (name) ever attended school?  1=Yes 2=No >> SKIP TO D10	D7 Is (name) currently attending school?  1=Full-time 2=Only part of the time 3=Not attending 98=Don't know	D8 What is the highest grade (name) has attended?	D9 Did (name) complete (grade from D8)?  1=Yes 2=No	Household member 15 and over		
										D10 Does (name) contribute to the household income?  1=Yes 2=No	D11 Does (name) participate in the household's agricultural activities?  1=Yes 2=No	D12 Eligible for individual household member questionnaire  1= Yes 2= No
01		<b>01</b>										
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:** 1= Primary 2= General secondary 3=Secondary Technical 4=Secondary Professional 5=Higher education 98=Don't Know (DK)

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. \_\_\_\_\_ (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	2
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 , a refrigerator or a motorcycle	3
We can afford to buy certain expensive goods such as a TV set or a refrigerator	4
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. \_\_\_\_\_ (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 6=Rights holders 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
Current account (non-savings)	
Mobile phone	
Mobile money account	
Insurance	
Savings account	
Loan	
Credit	

D24. How many mobile phones do members of your household own?

SINGLE ANSWER. \_\_\_\_\_ (98 for Don't know)

D25. How many cellular telephones does the household have in good working order?

SINGLE ANSWER.	
None	1
One	2
Two or more	3

D26. Are all household members ages 7 to 11 attending school this year?

SINGLE ANSWER.	
No	1
Yes	2
No one ages 7 to 11	3

D27. Can the male head/spouse read and write in French, Arabic, or a local language?

SINGLE ANSWER.	
No male head/spouse	1
No	2
Yes	3

D28. What is the main material of the floors?

SINGLE ANSWER.	
Earth, sand, wood, or planks	1
Cement	2
Tile or other	3

D29. What is the source of water for the household?

SINGLE ANSWER.	
Public standpipe or other	1
Surface water or HVA (improved village pump)	2
Well	3
Shared tap	4
Private tap	5
Water vendor	6

D30. What type of toilet arrangement does the household have?

SINGLE ANSWER.	
None	1
Pit latrine or flush	2

D31. Among the main cooking fuels that the household uses, which is the best, preferred or most convenient type?

SINGLE ANSWER.	
Does not cook	1
Collected firewood	2
Purchased firewood, petroleum, paraffin, kerosene, charcoal, electricity or other	3
Liquefied petroleum gas (LPG or LP gas)	4

D32. How many fans does the household have in good working order?

SINGLE ANSWER.	
None	1
One	2
Two or more	3

D33. Does the household have a radio, television, VCR/DVD player, or satellite dish in good working order?

SINGLE ANSWER.	
No / None	1
Only radio and/or television (without VCR/DVD and without satellite dish)	2
VCR/DVD and/or satellite dish (regardless of radio or television)	3

# **Smallholder Household Survey in Côte d'Ivoire**

## **Questionnaire for Multiple Household Members**



# MODULE ON AGRICULTURAL PRACTICES

A0. MATCH TO D11. Do you participate in the household's agricultural 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 land?

READ OUT. MULTIPLE ANSWER.	
Individual ownership with lease or certificate	1
Individual ownership under customary law	2
Communal (resources are shared)	3
State ownership	4
Plant-share/sharecropping	5
Other (specify) _____	6
Don't know	98

A2. How many hectares of 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 rent or borrow any agricultural land

A3. How many hectares of 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 or borrow 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>
Rice	1	1
Maize	2	2
Cocoa	3	3
Coffee	4	4
Sweet Potatoes	5	5
Cassava	6	6
Cashew nut	7	7
Plantain	8	8
Peanut	9	9
Mil	10	10
Oil Palm	11	11
Hevea	12	12
Okra	13	13
Chilies	14	14
Onions	15	15
Brinjal/Eggplant	16	16
Tomato	17	17
Cabbage	18	18
Pumpkin	19	19
Cucumber	20	20
Salad	21	21
Sesame/Til	22	22
Sugarcane	23	23
Mango	24	24
Papaya	25	25
Orange	26	26
Coconut	27	27
Banana	28	28
Pineapple	29	29
Guava	30	30
Cotton	31	31
Yam	32	32
Other 1 (specify) _____	33	33
Other 2 (specify) _____	34	34
Other 3 (specify) _____	35	35
None	36 -> SKIP TO A7	36

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>
	<i>Grow</i>	<i>Most important</i>
Rice	1	1
Maize	2	2
Cocoa	3	3
Coffee	4	4
Sweet potatoes	5	5
Cassava	6	6
Cashew nut	7	7
Plantain	8	8
Peanut	9	9
Mil	10	10
Oil Palm	11	11
Hevea	12	12
Okra	13	13
Chilies	14	14
Onions	15	15
Brinjal/Eggplant	16	16
Tomato	17	17
Cabbage	18	18
Pumpkin	19	19
Cucumber	20	20
Salad	21	21
Sesame/Til	22	22
Sugarcane	23	23
Mango	24	24
Papaya	25	25
Orange	26	26
Coconut	27	27
Banana	28	28
Pineapple	29	29
Guava	30	30
Cotton	31	31
Yam	32	32
Other 1 (specify) _____	33	33
Other 2 (specify) _____	34	34
Other 3 (specify) _____	35	35
None	36 -> SKIP TO A9	36

A9. Do you buy any of the following crops?

READ OUT. ALLOW FOR MULTIPLE ANSWERS.			
Rice	1	Cabbage	18
Maize	2	Pumpkin	19
Cocoa	3	Cucumber	20
Coffee	4	Salad	21
Sweet potatoe	5	Sesame/Til	22
Cassava	6	Sugarcane	23
Cashew nut	7	Mango	24
Plantain	8	Papaya	25
Peanut	9	Orange	26
Mil	10	Coconut	27
Oil Palm	11	Banana	28
Hevea	12	Pineapple	29
Okra	13	Guava	30
		Cotton	31
		Yam	32
Chilies	14	Other 1 (specify) _____	33
Onions	15	Other 2 (specify) _____	34
Brinjal/Eggplant	16	Other 3 (specify) _____	35
Tomato	17	None	36

A10. Do you have any livestock, herds, other farm animals, 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
Cattle – beef	
Cattle – dairy	
Buffalo	
Goats – meat	
Goats – dairy	
Sheep	
Chickens – broilers	
Chickens – layers	
Duck	
Pigeon	
Fish (number of ponds)	
Bees (number of hives or boxes)	
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>
Cattle – beef	1	1	1
Cattle – dairy	2	2	2
Buffalo	3	3	3
Goats – meat	4	4	4
Goats – dairy	5	5	5
Sheep	6	6	6
Chickens – broilers	7	7	7
Chickens – layers	8	8	8
Duck	9	9	9
Pigeon	10	10	10
Fish (number of ponds)	11	11	11
Bees (number of hives or boxes)	12	12	12
Other (specify) _____	13	13	13
None	14 -> SKIP TO A14	14	14

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.	
Co-operative	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 or MFI	3
Electronic funds transfer	4
Mobile money	5
Payment in-kind (crops, labor, etc.)	6
Prepaid debit card	7
Directly paid by MFI/bank from a loan	8
Providing by Cooperative or exporter and deducts during harvest	9
Other (specify) _____	10
I do not buy supplies	11 -> 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>
Rice	1	1
Maize	2	2
Cocoa	3	3
Coffee	4	4
Sweet potato	5	5
Cassava	6	6
Cashew nut	7	7
Plantain	8	8
Peanut	9	9
Mil	10	10
Oil Palm	11	11
Hevea	12	12
Okra	13	13
Chilies	14	14
Onions	15	15
Brinjal/Eggplant	16	16
Tomato	17	17
Cabbage	18	18
Pumpkin	19	19
Cucumber	20	20
Salad	21	21
Sesame/Til	22	22
Sugarcane	23	23
Mango	24	24
Papaya	25	25
Orange	26	26
Coconut	27	27

Banana	28	28
Pineapple	29	29
Guava	30	30
Cotton	31	31
Yam	32	32
Other 1 (specify) _____	33	33
Other 2 (specify) _____	34	34
Other 3 (specify) _____	35	35
None	36 -> SKIP TO A36	36
Don't know	-	98

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	5
Direct to a government agency	6
Middleman / Trading company	7
Agribusinesses	8
Other (specify) _____	9
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	
Farm side	5	
Other (specify) _____	6	
Don't know	98	SKIP TO A30

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

READ OUT. MULTIPLE ANSWERS.	
Cooperative member	1
I get the best price at this market	2
I do not have access to transport to other markets	3
Poor road conditions to other markets	4
I am not aware of prices at other markets	5
I don't produce enough to transport to a bigger market	6
Other (specify) _____	7
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
I do not know why	7
Other (specify) _____	8
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
In a bank or MFI account	3
Electronic funds transfer	4
Mobile money	5
Payment in-kind (crops, labor, etc.)	6
Prepaid debit card	7
Other (specify) _____	8

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>
Rice	1	1
Maize	2	2
Cocoa	3	3
Coffee	4	4
Sweet potato	5	5
Cassava	6	6
Cashew nut	7	7
Plantain	8	8
Peanut	9	9
Mil	10	10
Oil Palm	11	11
Hevea	12	12
Okra	13	13
Chilies	14	14
Onions	15	15
Brinjal/Eggplant	16	16
Tomato	17	17
Cabbage	18	18
Pumpkin	19	19
Cucumber	20	20
Salad	21	21
Sesame/Til	22	22
Sugarcane	23	23
Mango	24	24
Papaya	25	25
Orange	26	26
Coconut	27	27
Banana	28	28
Pineapple	29	29
Guava	30	30
Cotton	31	31
Yam	32	32
Other 1 (specify) _____	33	33
Other 2 (specify) _____	34	34
Other 3 (specify) _____	35	35
None	36 -> SKIP TO H1	36
Don't know	-	98

# 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.	H2A. <i>Month</i>	H2B. <i>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.	H9. <i>Most important</i>	H10. <i>Like getting the most</i>	H11. <i>Most reliable</i>
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, i.e., 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, i.e., 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?

READ OUT. SINGLE ANSWER.	1=Daily 2=Weekly 3=Monthly 4=Annually 5=After a certain period of time 6=According to the harvest 98=Don't know
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	2
Provide a service to farmers or processors of farming products (e.g., renting ploughs, tractors, other equipment)	3
Rent land to farmers for farming purposes	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 support or other help from family or friends	2	SKIP TO H12
Other donor/NGO benefits	3	SKIP TO H14
Occasional paid assignments, labor for hire	4	
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/MFI account	1	SKIP TO H14
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 (pre-paid card, credit card)	8	
Western Union/ Money Gram	9	
Other (specify) _____	10	
Don't know	98	

H12. You said you receive a remittance or monetary support from family or friends. How do you usually get this remittance?

READ OUT. MULTIPLE ANSWERS.	
Direct deposit to a bank/MFI 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 (pre-paid 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 motorcycle, 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		
Certificate of identity		
Passport		
Driver's license		
School-issued ID		
Voters card		
Ration card		
Employee ID (For Government / Civil Servants)		
Military ID		
Birth Certificate		
Bank/MFI Passbook		
Other (Specify) _____		

# **Smallholder Household Survey in Côte d'Ivoire**

## **Questionnaire for Individual Household Member**

This questionnaire is administered to **ONLY ONE** household members 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 is randomly selected among all eligible household members identified in the household questionnaire.

<b>Single-respondent questionnaire</b>	
<b>I1.</b> CGAP cluster number: _____	<b>I2.</b> Household number: _____
<b>I3.</b> Household member’s name: Name _____	<b>I4.</b> Household member’s line number: _____
<b>I5.</b> Interviewer’s name and number: Name _____	<b>I6.</b> Supervisor’s name and number: Name _____
<b>I7.</b> Day / Month / Year of interview: _____ / _____ / 2016	<b>I8.</b> REGION Name _____
<b>I9.</b> DISTRICT Name _____	<b>I9A.</b> AREA OF RESIDNCE 1=Urban 2=Rural
<p>Repeat greeting if not already read to this household member:</p> <p>We are from <b>Ipsos</b>. 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 45 minutes. All the information we obtain will remain strictly confidential and anonymous. May I start now?</p> <p><input type="checkbox"/> Yes, permission is given ⇒ Go to A99 to begin the interview.</p> <p><input type="checkbox"/> No, permission is not given ⇒ Circle 03 in I10. Discuss this result with your supervisor.</p>	
<p><b>I10.</b> Result of household member ‘s interview:</p> <p>Completed..... 01</p> <p>Not at home at time ..... 02</p> <p>Refused..... 03</p> <p>Partly completed ..... 04</p> <p>Incapacitated..... 05</p> <p>Other (<i>specify</i>) _____ 96</p>	

# 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. \_\_\_\_\_ (98 for Don't know)

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	
Saving and credit group	4	
Women's group or association	5	
Processors group	6	
Cooperative/Producers' group	7	
Farm implement group	8	
Water users group	9	
Livestock group	10	
Other (specify) _____	11	

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
Other (specify) _____	13
None	14
Don't know	98

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

READ OUT. SINGLE ANSWER PER ROW.	1=Daily 2=Weekly 3=Monthly 4=More than monthly 5=Never 98=Don't know
Cell phone / SMS	
Radio	
Television	
Internet or social media	
Newspapers / magazines	
Friends or family members	
Religious leaders	
Community members	
Rural development agents / NGOs/ Projects	
School teachers	
Government officials / Agricultural extension officer	
Input (such as seeds, fertilizer, or pesticides) suppliers	
Merchants	
Government extension workers	
Intermediaries / Middlemen	
Cooperative	
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. <i>Importance</i>	A48. <i>Currently keep</i>	A49. <i>Want</i>
SINGLE ANSWER.	1=Very important 2=Somewhat important 3=Not important 98=Don't know	1=Yes 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.	
Rice	1
Maize	2
Cocoa	3
Coffee	4
Sweet potato	5
Cassava	6
Cashew nut	7
Plantain	8
Peanut	9
Mil	10
Oil Palm	11
Hevea	12
Okra	13
Chilies	14
Onions	15
Brinjal/Eggplant	16
Tomato	17
Cabbage	18
Pumpkin	19
Cucumber	20
Salad	21
Sesame/Til	22
Sugarcane	23
Mango	24
Papaya	25
Orange	26
Coconut	27
Banana	28
Pineapple	29
Guava	30
Cotton	31

Yam	32
Other 1 (specify) _____	33
Other 2 (specify) _____	34
Other 3 (specify) _____	35
None	36

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.		SKIP TO A58
I am waiting for the price to get better	1	
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		
Withdrawn land, due to the informal property		
Political unrest or war		
Don't know		

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=Did not need to do anything special 9=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	8
Lead farmer	2	Other community group	9
Other community leader	3	Friends and family	10
Farmers' association or co-op	4	Spouse	11
Extension agents	5	Don't know who to go to	12
Financial institution like a bank or microfinance	6	Don't have anyone to go to	13
Middle men	7	Don't ask for advice	14

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. <i>Save for</i>	H18. <i>Do the most</i>
	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 funeral expenses		6
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>
READ OUT. SINGLE ANSWER PER ROW.	1=Very important 2=Somewhat important 3=Not important 98=Don't know	
Save money at a financial institution		1
Save money with an informal group like a village-level savings group		2
Save money at home		3
Save money on a mobile phone		4
Save with a collector (collection of savings of door - to-way daily or weekly and transferred at the end of the month)		5
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**?

READ OUT. SINGLE ANSWER.	H21. <i>Invest in</i>	H22. <i>Do the most</i>
	1=Very important 2=Somewhat important 3=Not important 98=Don't know	
Invest money in a farm		1
Invest money in a home/home improvement		2
Invest money in a future educational opportunity		3
Invest money in a business (non-farm)		4
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	
Microfinance institution	
Cooperative	
Savings and credit group	
Friends and family	
At home	
Collector	
On a mobile phone	
Other (specify) _____	

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

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
Knowing more about how to get a bank account	4
If fees or minimum deposit requirements were not an issue	5
Knowing that others in your community also used the bank	6
Knowing that people at the bank would be there to help you	7
Another reason (specify) _____	8
I do not want to save with a bank	9
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	

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

H27. Imagine that you have an emergency and you need to pay 44,000 francs. How possible is it that you could come up with 44,000 francs 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 44,000 francs 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
Other source (specify) _____	9
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	
A rental property or house	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
Other (specify) _____	7
None	8
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
Other (specify) _____	7
Don't know	98

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	

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	None	10
Loss of wage labor	5	Don't know	98
Wedding or marriage	6		

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. <i>In the past 30 days</i>	H40. <i>In the past 90 days</i>
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)_____		

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 delivery method did you use most frequently for this activity (READ THE ACTIVITY MARKED IN H40, THEN READ OUT THE LIST OF METHODS)?

READ OUT THE LIST OF ACTIVITIES. SINGLE ANSWER PER ROW.	1=Direct deposit to a bank/MFI 2=Direct deposit to savings and credit group 3=Personal delivery by self 4=Courier delivery 5=Post office transfer 6=Bank and other Informal Services 7=Own m-money 8=Agent's m-money account 9=Other person's m-money account 10=Digital card 11=Western Union/ Money Gram 12=Door-to-door agents 13=Delivery through friend/relative 14=Other, specify
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)_____	

# 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
No specific reason	9
Cannot read/write - illiterate	10
Other (specify) _____	11
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.		
Orange		SKIP TO M14
MTN		
Moov		
Koz/Comium		
GreenN		
Café Mobile		
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
Having a mobile money account	4
Downloading / Watching / Listening to music, games, videos, ringtones	5
Browsing social media (Facebook, Twitter, Instagram, WhatsApp)	6
Getting information related to crop production and market price	7
Other (specify)	8
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?

<p>READ OUT. SINGLE ANSWER.</p>	<p>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</p>
<p>Made/received calls</p>	
<p>Sent/received text messages or photos</p>	
<p>Used/browsed the internet</p>	
<p>Downloaded music, video, games, or mobile phone application</p>	
<p>Made a financial transaction such as send/receive money, pay debt, or banking transaction with a mobile money account</p>	
<p>Used "Call Tunes" or other audio/video on-demand-from operator services</p>	
<p>Used Facebook, WhatsApp, Twitter, Instagram or another social networking site</p>	
<p>Took a color picture</p>	

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 such as savings, loan, insurance, money transfer, payment			
Other (specify) _____			

# 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 (non-savings)	
Mobile phone	
Mobile money account	
Insurance	
Savings account	
Loan	
Credit	

For the next few questions, I am going to ask you about banks such as Société Générale, Ecobank, CNCE (Caisse Nationale Des Caisses D'Epargne), SIB (Société Ivoirienne de Banque), BNI (Banque Nationale D'Investissement), and BIAO (Banque internationale pour l'Afrique occidentale)/NSIA (Nouvelle Société Interafricaine d'Assurance).

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 bank?

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
Other (specify) _____	7
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 a bank account?

ALLOW FOR MULTIPLE ANSWERS. \_\_\_\_\_ (98 for Don't know)

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
Other (specify) _____	10

F6. Do you use a bank 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. CODE INTO THE FOLLOWING CATEGORIES. 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, loans	1	
Only savings	2	
Only loans	3	SKIP TO F17
None of the above	4	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 a bank account or used a bank 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 a bank 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	3	
Institution's website	4	
Mobile app	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	
Through a mobile wallet by transferring money from my phone to my account	8	
Other (specify) _____	9	
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	3
Institution's website	4
Mobile app	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 or from my phone to my account	7
Other (specify) _____	8
Don't know	98

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

READ OUT. SINGLE ANSWER PER ROW.	1=Yes 2=No
Deposit money	
Withdraw money	
Received a loan	
Received payment	
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 a bank 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		
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 a bank 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, which are financial service providers that are less formal than banks, such as COOPEC (l'Union Nationale des Coopératives d'Épargne et de Crédit de Côte d'Ivoire), Première Agence de Microfinance, ADVANS, Microcred, Mucrefab, and FIDRA (Fonds International pour le Développement de la Retraite Active).

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
Post office		

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. <i>Have account</i>	F20. <i>Last used</i>
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		
Post office		

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 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	
Received a loan	
Received payment	
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) _____	

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
Other (specify) _____	8
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
Pay for school fees	10
Buy airtime	6
Can connect bank/MFI account to mobile wallet	7
Split payments between people	8
Other (specify) _____	9
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) _____
Orange Money			
MTN Mobile money			
Flooz			
CelPaid			
Qash services			
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
Orange Money			
MTN Mobile money			
Flooz			
CelPaid			
Qash service			
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?

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) _____
Orange Money	
MTN Mobile money	
Flooz	
CelPaid	
Qash service	
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 permission of my spouse or other family member	10	
Other (specify) _____	11	

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	
Received a loan	
Received payment	
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
Other (specify) _____	9
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.	
Orange Money	1
MTN Mobile money	2
Flooz	3
CelPaid	4
Qash service	5
Other (specify)	6

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, for example, 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 village-level savings group and 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. <i>Used</i>	F47. <i>Last used</i>
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
Village-level savings and loans group		
Other informal saving network or ROSCA		
A money guard/ someone in workplace or neighborhood that collects and keeps savings deposits on a regular basis		
Savings collectors		
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.		
Village-level savings and loans group	1	SKIP TO F52
Other informal saving network or ROSCA	2	
A money guard/ someone in workplace or neighborhood that collects and keeps savings deposits on a regular basis	3	
Savings collectors	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 MFI	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 from 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?

READ OUT. SINGLE ANSWER PER ROW.	1=Fully distrust 2=Somewhat distrust 3=Neither trust nor distrust 4=Somewhat trust 5=Fully trust 98=Don't know
Banks	
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.	<i>F54. Importance</i>	<i>F55. Attempted</i>	<i>F56. Would attempt</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
Bank			
Microfinance institution			
Savings collector			
Village-level savings and loans group			
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 or MFI account			
A loan that is accessed directly through a bank or MFI account			
A loan that is accessed through a mobile money account and linked to a bank or MFI 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 (i.e. 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			
Insurance for agricultural risks			
Life or health insurance for you or your family			
Loan for non-agricultural related activities			
Other (specify) _____			

## Annex 3. Report on Sampling Design

The smallholder household survey in Cote d'Ivoire is a nationally representative survey with a target sample size of 3,000 smallholder households. The sample was designed to provide reliable survey estimates at the national level and for 3 zones (East Forest, West Forest and Savane).

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

In preparation for the 2014 population census, the country was divided into 22,600 census enumeration areas (EAs). For the ongoing 2015 agricultural census, the National Statistical Office (INS) has identified 18,321 EAs that contain agricultural households.

The sampling frame for the smallholder survey is the list of these enumeration areas (EAs) containing agricultural households. The distribution of the population in these EAs is shown in table 1.

Table 1: Population in agricultural EAs

	Urban	Rural	Total
East Forest	175,754	737,410	913,164
West Forest	297,050	1,392,640	1,689,690
Savane	133,301	710,023	843,324
Total	606,105	2,840,073	3,446,178

Source : Institut National de la Statistique (INS)

Table 2: Population in agricultural EAs (%)

	Urban	Rural	Total
East Forest	19	81	26
West Forest	18	82	49
Savane	16	84	24
Total	18	82	100

## Sample allocation and selection

In order to take nonresponse into account, the target sample size was increased to 3,333 households assuming a nonresponse rate of 10%.

The total sample size was first allocated to the zones based on their population counts using the power allocation method. Within each zone, the resulting sample was then distributed to urban and rural areas in proportion to their population (Table 3).

Given that EAs were the primary sampling units and 15 households were selected in each EA, a total number of 223 EAs were selected (table 4).

Table 3: Sample allocation

	<b>Urban</b>	<b>Rural</b>	<b>Total</b>
East Forest	192	808	1,000
West Forest	234	1,099	1,333
Savane	158	842	1,000
Total	585	2,748	3,333

Table 4: Number of EAs to select (after rounding)

	<b>Urban</b>	<b>Rural</b>	<b>Total</b>
East Forest	13	54	67
West Forest	16	73	89
Savane	11	56	67
Total	40	183	223

The sample for the smallholder survey is a stratified multistage sample. Stratification was achieved by separating each zone into urban and rural areas. The urban/rural classification is based on the 2014 population census. Therefore, 6 strata were created and the sample was selected independently in each stratum.

In the first stage, EAs were selected as primary sampling units with probability proportional to size, the size being the population count in the EAs. A household listing operation was conducted in all selected EAs to identify smallholder households and to provide a frame for selecting 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, the household questionnaire was administered to the head of the household, the spouse or any knowledgeable adult household member to collect information about household characteristics. The 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.

The probability of selection of the EA is given by:

$$P_{1hi} = \frac{n_h \times M_{hi}}{M_h}$$

where

$P_{1hi}$  = First stage probability of selection for the i-th sample EA in stratum h

$n_h$  = number of EAs selected in stratum h

$M_{hi}$  = population count in the i-th sample EA in stratum h

$M_h$  = total population count for stratum h

The conditional probability of selection of households in the second stage of sampling is given by:

$$P_{2hi} = \frac{15}{L_{hi}}, \text{ where}$$

$L_{hi}$  is the number of smallholders listed in the i-th sample EA in stratum h

The overall probability of selection for households in the i-th sample EA in stratum h is the product of the above probabilities of selection, that is:

$$P_{overall(hi)} = \frac{n_h \times M_{hi}}{M_h} \times \frac{15}{L_{hi}}$$

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

$$W_{hi} = \frac{1}{P_{overall(hi)}}$$

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.