

# Sauti za Wananchi

Collecting national data using mobile phones



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## Abbreviations

<b>CAPI</b>	-	Computer Aided Personal Interviewing
<b>CATI</b>	-	Computer Aided Telephonic Interviewing
<b>EA</b>	-	Enumeration Area
<b>MPPS</b>	-	Mobile Phone Panel Survey
<b>MUAC</b>	-	Middle Upper Arm Circumference
<b>SzW</b>	-	Sauti Za Wananchi

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# 1. Introduction

## 1.1 Rationale

In Uganda, timely information on the realities, experiences, perspectives, attitudes and welfare of citizens is limited. What is available are reports from a number of large scale household surveys which collect information on a range of topics: the economy: Economic survey, health: Uganda Demographic and Health Survey (UDHS), and those from a few private research firms on politics, accountability, and people's perspectives. Most of the large scale surveys are implemented after an extensive planning cycle. A typical survey takes a year in preparation, at least a few months in data collection and then another four to twelve months until analyses are done and a full report published.

As a consequence, the data provide excellent descriptive statistics, but they are never very well-timed for evaluation of policies. This limits the ability to monitor change and reduces citizens' ability to hold authorities to account. It also limits the incentives for authorities to adjust their actions in light of survey findings. For instance the National Service delivery surveys have been conducted four times in Uganda and released reports in 2000, 2004, 2008 and 2015. If the the Government of Uganda implements a different set of policies and programs and the frequency of National Service Delivery surveys is not increased, it could take many years until the effects of the different interventions are known. This situation leaves decision makers with little information on the performance of different interventions and these may decide not to change anything at all due to uncertainty.

These aspects of the existing data landscape leave two gaps, as there is a desire to:

- i. Ensure that more data is in the public domain; and
- ii. Regularly have information on time-sensitive issues, such as, livelihood and food availability, people's opinions about governance, the quality of public service delivery, or citizens' ability to exercise agency.

Such information could be useful to a diverse audience including policy makers and implementers, members of parliament, newspapers, analysts and donors, as well as *Twaweza*<sup>1</sup>.

This paper outlines an approach to data gathering that combines the strength of household surveys (representativeness) with possibilities offered by mobile phones (low cost, high-frequency feedback). This approach, called *Sauti za Wananchi*<sup>2</sup>, aims to collect data at a fraction of the cost of ordinary household surveys, in a way that is more frequent and more responsive to changing data needs.

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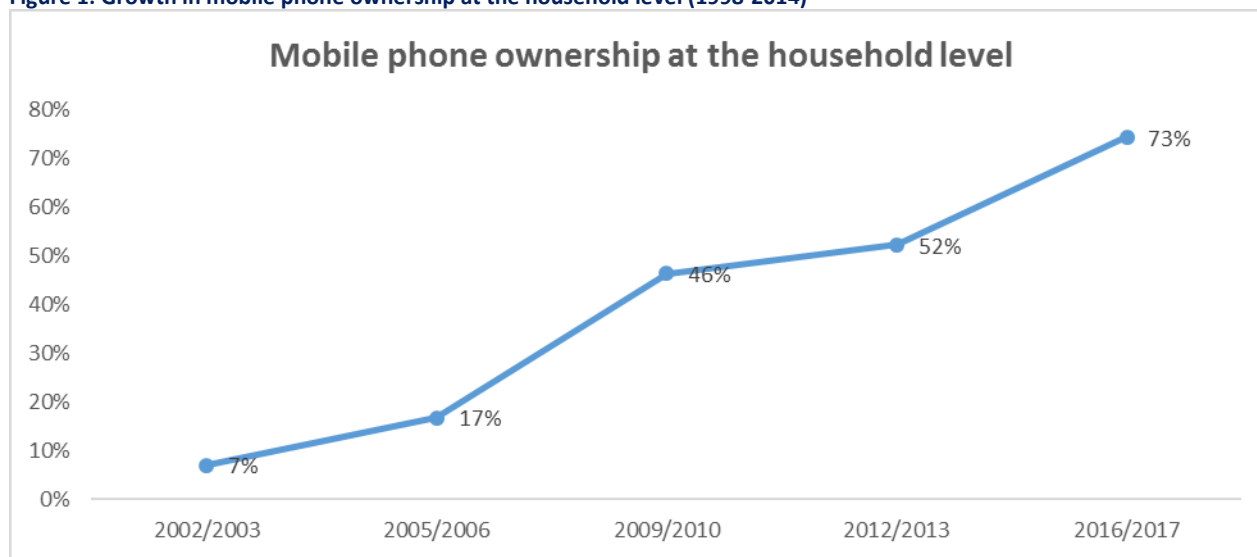
<sup>1</sup> Twaweza identifies information as key to making change happen: "When exposed to ferment of information and ideas, and practical tools or pathways in which to turn these ideas into actions, citizens can become drivers of their own development and act as co-creators of democracy" Twaweza 2008: p.18 – italics in the original.

<sup>2</sup> "Wananchi" means citizens in Kiswahili

## 1.2 Feasibility of mobile phone data collection

In the 1990s, very few people in Uganda used mobile phones, but over time ownership and use of mobile phones has grown rapidly. Figure 1 illustrates the growth in mobile phone ownership at the household level from 2003 to 2017.

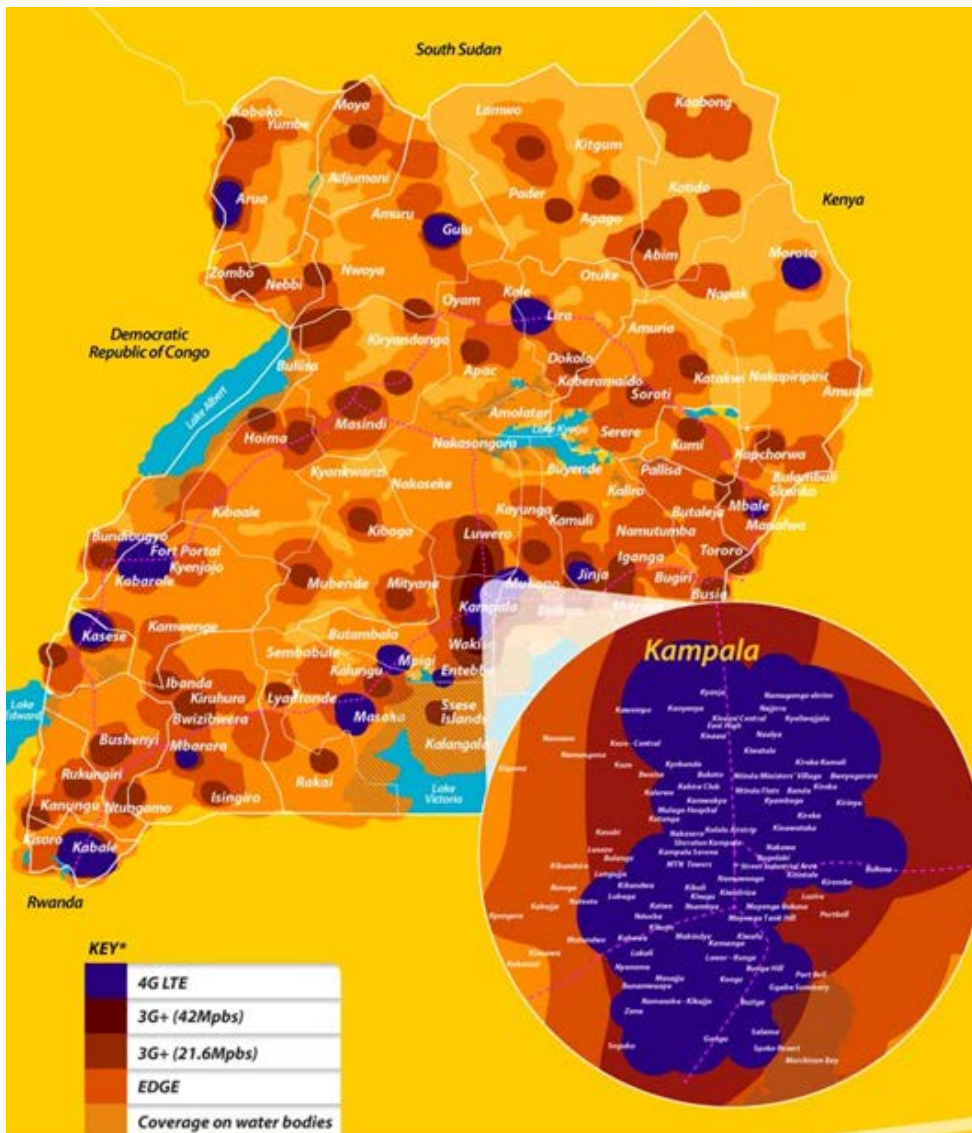
**Figure 1: Growth in mobile phone ownership at the household level (1998-2014)**



**Source of data: Uganda National Household Survey, 2002/03, 2005/06, 2009/10, 2012/13, 2016/17**

The explosive growth of mobile phone ownership and use is confirmed by the 2017 UNHS, which shows that 73% of households own mobile phones, and the 2017 Szw survey which found that 69% of the households prior to inclusion on the panel had mobile phones. The 2017 Szw data shows individual mobile phone ownership at 59%. Not only is the mobile phone ownership widespread (and expanding rapidly), phones are available at relatively low cost (from Ugx 30,000 or about \$8.2) and mobile phone network covers most of the country. The network with the widest geographical coverage<sup>3</sup>, MTN covers more than 70% of the geography of Uganda.

<sup>3</sup> See detail at <http://www.techjaja.com>



Source: MTN 2017

The expansion of access to mobile phones and potential to use them to reach the majority of population creates new opportunities for data collection. Through the use of mobile phones, it is now imaginable to collect nationally representative data at the cost of a short phone call to a reasonably sized household panel.

Twaweza started by piloting this approach in Dar es Salaam, and the success achieved through the pilot study known as Listening to Dar<sup>4</sup> showed that high frequency data collection is possible. Given the success attained in Listening to Dar (LtD), Twaweza decided to scale up the pilot study to a nationally representative panel across East Africa.

Compared to a traditional pen-and-paper surveys, there is a non-standard limitation on the sample population: only households that can be interviewed over the phone can be part of a mobile phone panel, i.e.

<sup>4</sup> See detail at <http://listeningtodar.org>

mobile phone network coverage needs to be in place. While this was not an issue in Dar es Salaam this became a necessary first check for Enumeration Area (EA) sample inclusion.

Furthermore, one of the key lessons learnt during the pilot study was that, while survey data indicates a swift increase in mobile phone ownership, it is not universal. A challenge for data collection using mobile phones is that about 26% of households in Uganda do not own mobile phones. A further challenge that could affect the response rates of in a mobile phone survey is charging of mobile phones, particularly in remote areas. The access to electricity is low in Uganda. Only 22% of the households in Uganda use grid electricity for lighting while 18% use solar energy<sup>5</sup>. To address these issues the Sauti za Wananchi baseline survey ensured that all respondents recruited for the survey have access to a mobile phone. All selected households were offered a simple mobile phone to enable them to participate in the survey. Moreover, all participating households were offered a solar charger.

## 2. Methodology

### 2.1 Overview

The Sauti za Wananchi survey is divided into 2 major phases:

1. Baseline Survey (Face-to-Face) using CAPI
2. Mobile Phone Panel Survey (MPPS) using CATI

The baseline survey: - this is a national representative survey done at the household level through face-to-face interviews using Computer Aided Personal Interviewing (CAPI) platform (electronic data collection with phones/tablets). In this phase, we randomly select and enlist participating households and respondents; collect baseline household and individual data; and distribute mobile phones and solar chargers.

In the second phase (MPPS- CATI), once we indentify the respondents (thorough the baseline survey), we enroll (they become “our panel”) them for an extensive period not exceeding 3 years. The respondents are contacted on their mobile phone at least once every month and interviewed on similar topics covered during the baseline as well as current affairs. Data collection in the mobile phone survey are done by call center agents using CATI program (Computer Aided Telephonic Interviews).

### 2.2 Target population

The target population for Sauti za Wananchi was Ugandans aged 18 years and above. According to the 2014 Population and Housing Census by the Uganda National Bureau of Statistics, Uganda had a total population of 34,634,650; with 76% (26,196,641) living in the rural areas while 24% (8,438,009) in the urban areas. In terms of gender, there were 16,897,849 males and 17,736,801 females. The 2014 adult population is about 45% of the total population (15,597,619), and out of these, 72% (11,248,647) were in the rural areas while 28% (4,348,972) in the urban areas. In terms of gender, there were 7,218,526 (46%) male and 8,379,093 (54%) female adults. The total number of households enumerated was 79,303.<sup>[1]</sup>

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<sup>5</sup> Uganda National Household Survey 2016/17, <http://www.ubos.org>

<sup>[1]</sup> Uganda National Bureau of Statistics, <http://www.ubos.org>

## 2.3 Sampling

A multi-stage stratified sampling approach was used to achieve a representative sample of the total population of 18 years and older. The sample frame is based on the 2014 Uganda Population and Housing Census. The various stages of the selection of the sample are discussed below.

### 2.3.1 Sample size

The baseline sample was designed as a representative cross-section of all **adult** citizens in Uganda. The goal is to give every adult citizen an equal and known chance of selection for interview. This objective was reached by (a) strictly applying random selection at every stage of sampling and (b) applying sampling with probability proportionate to population size at the Enumeration Area (EA) sampling stage. Sauti za Wananchi used a sample of 2,000 households in 200 enumeration areas (EAs) which provided estimates at standard precision levels (EAs were our Primary Sampling Units or PSUs). Sample size calculations provided in annex 1 show that with 10 households per EA, a sample of about 150 EAs would be sufficient for a confidence interval of +/- 5 percentage points. A population of 2,000 households in 200 EAs was chosen, both to allow for sub-group analysis and to safeguard precision given that attrition is expected in a phone panel survey.

The sample universe for the Sauti za Wananchi included all adult citizens in Uganda. That is, we excluded as individual main respondent anyone who has not attained the age of 18 years on the day of the survey. As a matter of practice, we follow the approach set by the Uganda National Bureau of Statistics regarding inclusion of households/individuals residing in institutionalized settings, such as students in dormitories and persons in prisons, army barracks or nursing homes etc.

### 2.3.2 Sample Selection

The Sauti za Wananchi Sampling took place in three stages: in the **first stage** EAs were sampled randomly from specified EA strata; in the **second stage** households were sampled randomly from EA household lists; and in the **third stage** one adult household member was selected as respondent randomly from the adult household roster.

#### Stage 1: Stratification and EA sampling

The aim was to create a sample enabling us to provide precise estimates in two domains: rural and urban. Sample stratification took place according to location (rural/urban). Since we had good reasons to believe many SzW outcomes of interest will be correlated with rural-urban location (e.g. welfare measures, public service delivery indicators) it was statistically sound to stratify on this dimension. The proportion of the sample in each stratum was the same as the stratum proportion in the national population as indicated by census data. Since the number of EAs to be sampled from each stratum was proportional to the stratum population size we expected proportional representation of the population in the sample. EAs were selected using probability proportionate to population size (PPPS) using the EA population numbers provided by the Uganda National Bureau of Statistics. Once the participating EAs were selected, the corresponding EA maps were obtained from Uganda National Bureau of Statistics. Since it was expected that some EAs would have to be replaced because of network coverage problems, or inaccessibility etc., in such anticipated casez, reserve EAs were similarly selected.



## Stage 2: Household sampling

Upon arrival in the selected EAs, a full listing exercise was conducted using the EA maps. This listing exercise gave each household an equal chance of participating in the survey. Once the EA household list was completed, 10 Main Households were randomly selected from the list. The random selection was done in the presence of village or street leaders. This was mainly done because we intended to hand over mobile phones and chargers to the randomly selected households. In accordance with the standard (UBOS) practice, we defined a household as individuals living under the same roof and eating from the same cooking pot. By this definition, a household did not include persons who are currently living elsewhere for purposes of studies or work. Nor did a household include domestic workers or temporary visitors (even if they eat from the same pot or slept there on the previous night). In multi-household dwelling structures (like blocks of flats, compounds with multiple spouses, or backyard dwellings for renters, relatives, or household workers), each household was treated as a separate sampling unit. Given that attrition is expected in phone panel surveys, we randomly selected two households from a list of the households in the EA that already owned a mobile phone. The idea is to replace households dropping out of the survey using this set of reserve households.

## Stage 3: Individual respondent sampling

When we selected a participating household, we went to the household and sought the consent of the head of households. In the consent form we explained the nature of the project and the approach we used to randomly select his or her household as a participating household. Further to that we explained to the head of household that an adult would be randomly selected from the household to participate in Sauti za Wananchi. Once the head of household had consented to a household member participating in the survey, we used a Kish grid (random number table) to randomly select eligible household members. For practical reasons, we selected our respondent from among persons in the household who will be available for the baseline interview and who are expected to be available for a phone interview. We excluded, at the selection stage, individuals who are likely to move from the household to a place that does not have mobile phone network coverage (e.g. remote farm stations).

## 2.4 Development and testing of survey tools

### 2.4.1 Design of survey instruments

Given that Sauti za Wananchi is a longitudinal mobile phone survey, the number of survey instruments required was larger than what is used in a traditional survey design. Twaweza designed the survey instruments. In several meetings during the initial weeks of the project, the understanding of the methodology was sharpened and resulted in a list of instruments required for the fieldwork. Table 1 below presents the survey instruments used in Sauti za Wananchi and the function of each.

**Table 1: Sauti za Wananchi Survey Instruments**

No.	Survey Instrument	Functions of the Survey Instrument
1.	Community Leader Questionnaire	The community questionnaire was used to collect basic community data from the community leaders to enable us to profile the EA. This questionnaire was generally the first administered in an EA given that it serves to establish whether the EA had adequate network coverage.

2.	Household Listing Form	This form was used in the listing of all the households in the EA
3.	Head of Household Consent Form	This form was used to obtain formal consent of the head of household. He/she retained a copy even as Twaweza kept the other.
4.	Respondent Consent Form	This form was used to obtain formal consent of the respondent. He/she retained a copy even as Twaweza kept the other.
5.	Respondent Agreement Form	This is a form that clearly defines the role and ownership of the mobile phone and solar chargers provided to the SzW respondents. The key highlight of this form is that the phone and the solar charger are properties of Twaweza, and are provided to the respondent to enable participation and that they would only belong to the respondent at the end of the survey. Just like the HH consent form this form was filled and signed in duplicate; one form was left with the SzW respondent and the second form returned to Twaweza.
6.	Household (HH) Questionnaire	The HH questionnaire was used to collect household information as well as individual experiences from the respondent. For those HH related questions that the respondent was not well informed about, he or she could ask for assistance from any other household member who was well informed on the topic/status of the issue asked.
7.	Citizen Monitor Consent Form	This form was used to obtain formal consent of the citizen monitor. He/she retained a copy even as Twaweza kept the other.
8.	Citizen Monitor-Recruitment Questionnaire	This questionnaire was used to recruit the citizen monitor and was administered to potential CMs. This enabled the researchers to identify from amongst the eligible, one candidate for this post.
9.	Citizen Monitor Agreement Form	This is a form that clearly defined the role and ownership of the mobile phone and solar chargers provided to the SzW respondents. The key highlight of this form was that the phone and the solar charger are properties of Twaweza, and are provided to the citizen monitor to enable participation, and that they would only belong to the respondent at the end of the survey. Just like the respondent agreement form, this form was filled and signed in duplicate; one form was left with the SzW respondent (citizen monitor) and the second form returned to the research firm.
10.	School Questionnaire	The school questionnaire was used to collect basic school data from the school that serves the community/EA. The main respondent targeted for this instrument was the head of the school or the person in charge of the school at the time of data collection.
11.	Popular Booklet	It was envisaged that in many EAs/communities that would be visited during the SzW survey, there would be many questions, not least with respect to the distribution of hardware but also with respect to mutual expectations. For this reason, a popular booklet was designed (Cartoon story) that would explain the SzW approach and in the process introduce the survey.

### 3. Data collection

#### 3.1 Pre-Study Implementation Activities

Prior to the implementation of the main surveys during phase 1 and phase 2, the following activities were carried out in preparation of the main data collection processes.

### *3.1.1 Instruments Review, Translation and Scripting*

#### ***Instruments Provision and Review***

The data collection instruments for phase 1 and phase 2 were provided by Twaweza for review and translation by the Ipsos team. These included the following:

- **Phase 1:** the household questionnaire, the community leaders' questionnaire, schools questionnaire and the citizen monitors questionnaire.
- **Phase 2:** the round 1 call household questionnaires.

The provided instruments were reviewed by the Ipsos team and recommended changes provided to Twaweza for consideration. Changes for adoption provided by Twaweza were incorporated into the instruments and preparations made for translating and scripting the updated versions.

#### ***Instruments Translation***

Instruments for phase 1 and phase 2 were translated into various local languages for administration. The objective of translating the instruments was to ensure that language barrier issues were minimized during data collection. Each language translated was reviewed independently by a second person conversant with the same language and discrepancies resolved together with the translator. The instruments were translated into the following languages:

- **Phase 1:**
  - *Household questionnaire, community questionnaire, and school questionnaire*- this questionnaire were translated into Acholi, Ateso, Karamajong, Langi, Lugbara, Lugisu, Rukiga, Runyankole, Runyoro-Rotooro, and Luganda
- **Phase 2:**
  - *Household call round questionnaire* - this questionnaire was translated into Acholi, Ateso, Karamajong, Langi, Lugbara, Lugisu, Rukiga, Runyankole, Runyoro-Rotooro, and Luganda.

In addition to the translations being reviewed independently and discrepancies being resolved, all the translations were reviewed again during the training sessions where teams reviewed these according to their language competencies. Changes noted were marked for adoption at each stage. Translations were also checked again during the pilot phases and all recommended changes marked for adoption before the tools were used at the next stage in the implementation process. The final updated translations were then loaded into the English versions of the scripts (electronic versions of the instruments) for use during data collection.

#### ***Instruments Scripting***

All the approved instruments were scripted (programmed into electronic formats) for use during data collection. A Computer Aided Personal Interviewing (CAPI) platform (through mobile phones) was used during phase 1 of data collection while the Dimensions platform was used during phase 2 of data collection

(telephonic interviewing). At the end of each preparatory activity in each phase, the scripts were updated to match the paper copies of all the survey instruments as approved by Twaweza. All the electronic versions/scripts were also shared with Twaweza for review and approval before they could be used for data collection.

### 3.2 Instruments and Methodology Testing

The following activities were carried out to test both the instruments as well as the implementation methodology.

#### *Phase 1:*

The following activities were carried out during phase 1 to test both the instruments as well as the study implementation methodology:

**a) Pre-Test Activity-** this was the first preparatory activity for the baseline phase. The following applied during this phase:

*i. Objectives-* the key objective of the pre-test activity was to test the content of the household questionnaire (and not the methodology of implementation). Specifically, the following key items were tested during this exercise:

- The questionnaire length
- If the questionnaire was understood by respondents
- Whether the questions contained terminologies that were not understood by interviewers or respondents
- The flow of the questionnaire
- Translations of the questionnaire (Luganda only at this juncture)
- Completeness of the questions and pre-codes
- The skip routine and interviewer instructions
- Challenges that interviewers were likely to face in the field
- The appropriateness and relevance of the questions
- Interviewee bias through deliberate falsification of data
- Testing for redundant questions

*ii. Team Recruitment and Training-* a competent team of 10 supervisors and 2 field coordinators were recruited and trained for one day. Prior to attending the training session, the team was provided with a copy of the household questionnaire to go through and administer among each other. This ensured that they were already familiar with the questionnaire content before attending the training session. The training session was facilitated by the Ipsos project managers. The Twaweza project team also participated in the training and took the team through the anthropometric components of the questionnaire.

*iii. Data Collection-* data collection for the pre-test was carried out on the 1st of July 2017. Since the key objective of the pre-test activity was to test the content of the household

questionnaire, the methodology of sampling and data collection was not followed. Convenient sampling was applied to ensure the household could respond to as many sections of the questionnaire as possible. Therefore, there was deliberate effort to include respondents in the following categories;

- Households with males of various age groups (18 to 30 years, 31 years to 45 years, 46+ years).
- Households with females of various age groups (18 to 30 years, 31 years to 45 years, 46+ years).
- Households belonging to various social economic classes (wealth quintiles Q1-poorest, Q2,Q3, Q4, Q5-richest)
- Households with children in primary schools and or secondary schools.
- Households with respondents with no education, with primary education only and with secondary and advanced education.
- Households with young children (below 5 years).
- Respondents with different education attainment levels.
- Women who had gotten children within the past 2 years.

The data collection exercise was carried out in one enumeration area (EA) in Wakiso and its environs. The enumeration area selected had a cross section of respondents with different characteristics. A de-brief exercise with the team followed the data collection exercise where the team discussed their experiences. The key take-out from this activity included:

- The need to work with guides in identifying the enumeration areas selected including identifying the boundaries. It was observed that there was a difference in labelling between the map availed by UBOS and the one the area chairman had, so the team spent time looking for the areas.
- The need to cut down the contents of the household questionnaire since the administration length was too long (2 hours on average).
- The importance of the Local Council I chairman or committee member at entry to EA and listing exercise. The respondents mentioned that they accepted to participate in the interview because they knew that their local leader was aware of the exercise that we were carrying out.
- The need to carry out call backs for completing interviews especially in households with children-the Uwezo and anthropometric measure components could not be carried out during the day on a weekday as children were reported to be in school.
- The need to rely on recall where information from the immunization cards was needed. It was observed that the immunization card was not readily available and asking the interviewee to look for it was disrupting the interview's prime time. The interviewer would then ask for the card for verification after completing the interview.
- The need to exclude political opinion polling questions from the household questionnaire as some respondents were uncomfortable responding to those questions.

- The need to re-train interviewers on the feedback to provide to caregivers on the anthropometric measures component outcome since they were not clear on what the colours on the Middle-Upper Arm Circumference (MAUC) tape meant.
- The need to sanitize the MUAC tape prior to taking the measurements. The team noticed that using the same MUAC tape on different children was not hygienic hence it was proposed that during the pilot and baseline the team need to be given sanitizers to wipe the MUAC tape after each evaluation.
- The need to clearly define some items like the respondent's documents. Most respondents were under the assumption that a voter's card is the same as the national ID. This was largely due to the fact that people were allowed to vote using National ID even without a voter's card.
- The need to have the interviewers thoroughly explain to the respondents the benefits of the survey prior to beginning the interview. One of the challenges that the interviewers faced was the respondents requesting for money after the interview. Three (3) respondents requested for an incentive, out of which 2 refused to participate totally without an incentive while one agreed after they were told the benefits of the survey.

The outcome from the pre-test activity was used to revise the household questionnaire as well as informing the planning and training content of the pilot activity.

**b) Pilot 1 Activity:** Carrying out a pilot activity was the second stage of the baseline implementation process. The following applied during this stage:

*i. Objectives-* the key focus of the pilot activity was to not only test the instruments to be used for data collection but also to test the implementation methodology. The following was tested during this activity:

- Establishing the number of days required to complete the data collection exercise in one EA.
- Establishing the practicability of linking respondents with CATI.
- Testing the listing exercise.
- Testing the approach of inviting participants for the community meeting and conducting the meeting.
- Testing the approach of recruiting the Citizen Monitor.
- Testing the strategies put in place to manage attrition.
  - Distribution of mobile phones and sim cards as a tool of data collection.
  - Use of solar chargers to facilitate phones being on air.
  - Putting respondents in pairs and in groups.
  - Selection of group leaders.
- Testing the effectiveness of the team structure that would be used in main survey
- Testing the tools and translation

- Establishing any field challenges likely to be experienced during the baseline survey that needed to be addressed during training.
- ii. Team Recruitment and Training-* The pilot team was drawn from experienced supervisors and interviewers from Ipsos and among these were the supervisors who had participated in the pre-test exercise. The team comprised of 24 personnel who were organized into 6 teams (with each team being made up of 1 supervisor and 3 interviewers). The team structure mirrored the intended main survey structure. The selected pilot team underwent a 3 day classroom training whose content comprised of a thorough review of the survey methodology as well as review of all the survey instruments (including dummy runs for each instrument). This training was led by trainers from both Twaweza and Ipsos. The classroom training was followed by the data collection exercise.
- iii. Data Collection-* data collection for the pilot activity was carried out from the 14th of July to the 18th of July 2017 and mirrored what would be implemented during the main baseline survey. Each team took about 2-2.5 days to complete the activities in one EA. Key activities carried out during the pilot exercise comprised of reporting to the local authorities before starting survey work at the EA, using provided maps to identify the EAs, working with the village elders to identify the boundaries, listing all households in the EA before randomly selecting households to participate, administering the community leader questionnaire and holding the community meetings with the EA residents, identifying citizen monitors and administering the citizen monitor recruitment questionnaire, administering household questionnaires at the randomly selected households and distributing phones and sim cards (main households in network available EAs), holding group meetings with respondents from selected main households and distributing solar chargers as well as administering the health and school questionnaires in health facilities and schools reported as being the most frequently visited by residents of the selected EAs. Six enumeration areas (EAs) across the country were targeted for data collection during the pilot activity as shown in the table below. These enumeration areas were provided by Twaweza through UBOS.

**Table 1: Original Targeted Pilot 1 Enumeration Areas (shown up to subcounty level only)**

Region	District	Subcounty	Setting
East	Jinja	Central Division	Urban
Central	Kampala	Nakawa	Urban
West	Buliisa	Butiaba	Rural
South West	Kanungu	Kayonza	Rural
West Nile	Koboko	Lobule	Rural
Karamoja	Kaabong	Napere karenga	Rural

- iv. Pilot EA replacements-* data collection was successfully carried out in 5 of the 6 originally targeted EAs. However, one EA had to be replaced before data collection could be carried out;
- The EA in Lobule subcounty was replaced because the team was informed by the

district officials that the selected enumeration area was a refugee settlement. This excluded the enumeration area since the survey respondents are supposed to be Ugandans. This enumeration area was replaced within the same region and the data collection activity proceeded. The EA in Lobule was replaced with another EA that was randomly selected in the West Nile region in Ajia subcounty.

The table below provides Pilot EAs that were visited and the replacement that was done for the EA in Lubule subcounty. The replacement was done by Twaweza.

**Table 2: Original pilot Eas and issues arising**

District	Subcounty name	Issues Arising	Outcome
Jinja	Central Division	Network EA- Successful	
Kampala	Nakawa	Network EA- Successful	
Buliisa	Butiaba	Network EA- Successful	
Kanungu	Kayonza	Network EA- Successful	
Kaabong	Napore karenga	Network EA- Successful	
Koboko	Lobule	Refugee settlement	Network EA selecte to replace - successful

- v. *Targeted and achieved pilot Sample:* the sample per EA at pilot stage was 5 households in each EA. A total of 30 household respondents, 6 citizen monitors, 6 schools and 6 community leaders were targeted in the pilot activity. Interviews were successfully carried out in all the enumeration areas as envisaged.

**Table 3: Sample: Pilot Sample Achievement**

District	Subcounty name	Households	Schools <sup>6</sup>	Citizen Monitors	Community Leaders
Jinja	Central Division	4	1	1	1
Kampala	Nakawa	4	1	1	1
Buliisa	Butiaba	4	1	1	1
Kanungu	Kayonza	4	1	1	1
Kaabong	Napore karenga	4	1	1	1
Arua	Ajia	4	1	1	1

- vi. *Linking with CATI:* household respondents and citizen monitors successfully interviewed during this phase (Pilot 1) were linked with CATI. The key objectives of linking included:
- To test the practicability of the linking process to inform the planning processes of linking during the main survey.

<sup>6</sup> In each school, a head teacher and two teachers were interviewed



- To have a pilot panel who would be used to test instruments for use during the following survey (phase 2).

Following the data collection process, a de-brief session with the data collection team followed where the team discussed their experiences. The key take-out from this activity from the debrief session included:

- The need for UBOS to relook at the list of enumeration areas provided and ensure that there were no refugee settlement areas. Additionally, have enough replacement enumeration areas in case replacements are to be done to avoid losing time.
- The need for incorporating map reading in the main training before rolling out the baseline survey data collection activity.
- The need to work with the LC1 chairman or committee to identify the boundaries of the enumeration area using the maps provided by UBOS. The need for the team to test the network even as they identify the enumeration area boundaries.
- The need to conduct the community leader interview before the other activities to get to understand the dynamics of the enumeration area. This would help in planning the rest of the activities to be done within the enumeration area.
- The need for the listing exercise to begin as early as possible and extend to evenings to increase chances of finding respondents in their houses.
- The need for prior planning before embarking in the data collection exercise to ensure a smooth execution process. This involves planning the route maps to ensure systematic movement within the region.
- The need to have the Sauti booklets for issuing during community meetings to provide the residents with more details about the survey and its intentions.
- The need to ensure that the data collection team grasps details on the key objectives of the survey in order to ensure that accurate information is disseminated to the locals during community and group meetings.
- The need for the team to ensure that call backs are made at different timings of the day and different days (when the team is in an EA) to increase chances of finding respondents in the households.
- The need to involve the local administration during the data collection process to ensure buy-in and cooperation from the communities
- The need for the data collection team to be sensitive to cultural nuances when collecting data to minimize refusals/hostility from the communities (during formation of pairs in group meetings for instance).
- The need to be sensitive during the administration of the anthropometric measure component in the household questionnaire: use of alcohol swabs for cleaning the MUAC tapes was recommended to reassure the caregivers of the hygiene of the process.
- The need to ensure that solar chargers provided were compatible with the provided phones and also that the phones provided were in good working condition.
- The need to ensure that the provided sim-cards were registered and activated before being issued to the respondents.

- The need to ensure that the team composition is carefully done to reflect the languages spoken within a specific region. This was especially critical in the areas around the borders of the country.

The outcome of the pilot activity was used to inform the main baseline training activity as well as inform the planning processes of the data collection process that would follow the main training.

**c) *Main Team Training Activity-*** The last stage in preparation of the main data collection process involved carrying out a comprehensive training program for the team that would be engaged in the baseline data collection. The following applied at this stage:

**i. *Objectives-*** The following was the focus of this training activity:

- Providing a detailed grounding of the survey methodology and expectations to the baseline team (which comprised of the team that had participated in the pre-test and pilot activities as well as additional team members newly recruited to boost this team).
- Emphasizing key areas established as knowledge gaps during the pre-test and pilot activities.

**ii. *Team Recruitment and Training-*** as indicated, the baseline team was drawn from experienced supervisors and interviewers from Ipsos and among these was the team that had participated in the pre-test and pilot activities. The selected baseline team underwent a 5 day classroom training. This training was led by trainers from both Twaweza and Ipsos. The training was conducted from 25th July to 2nd August 2017. The quality control, data validation and CATI teams also attended the training to enhance their understanding of the survey. A total of 134 research assistants were trained. An additional 20 for the CATI team and 6 data validators were also trained for 3 days. Topics covered during training included: Research ethics, Introduction at Household Level, Entry to EA, Map Reading, Consenting Process, Network Testing, Listing Exercise, Selection of Main and Reserve Respondents, Replacement Protocol for Households and Respondents and How to Use the MUAC Tape among other topics. The trainees were allowed to break off early for two days so as to try out the household questionnaire with a member of their household and submit for review. The classroom training was followed by a one day data collection exercise aimed at exposing the team members to the data collection process. In addition to carrying out the main training ( comprising of both the interviewers and supervisors), a separate session was held for the supervisors on the sixth day of training where this team was taken through team leadership and management sessions as well as key expectations that they were required to meet during the implementation of the survey. Since the phase two team (CATI team) was also required to have a good understanding of the survey design, they also attended the first two days of the training.

**iii. *Data collection-*** a second pilot (pilot 2) exercise was carried out from on the sixth day of the main training session. The key objective of this second pilot as indicated was to provide the new members of the baseline data collection team with the opportunity to experience the data collection process. The entire team was involved in the data collection process where the new team members were paired with the experienced team from the pre-test and pilot

activities. Key activities carried out during the pilot exercise comprised of reporting to the local authorities before starting survey work in the EA, using provided maps to identify the EAs, working with the village elders to identify the boundaries, listing all households in the EA before randomly selecting households to participate and administering the household questionnaire at the randomly selected households. However, phones were not distributed during the second pilot. Data collection during this exercise was carried out in 11 enumeration areas in Kampala (that had not been targeted during the pilot activities and that were also not part of the main baseline sample). These were selected by Twaweza in collaboration with the Ipsos team.

A de-brief session with the team was held on the 3<sup>rd</sup> August 2017 where the team discussed their experiences. The key take-out from this activity included:

- The need to ensure that information on security issues in an EA was sought beforehand especially - the local administration in one EA for example advised the team not to move within the EA without the accompaniment of a village elder due to insecurity concerns.
- The need to ensure that the village leaders engaged in the identification of the boundaries were familiar with the EA. In many instances, the map that the village leader had was different from that provided from the national statistical body.

Following the debrief session, the first teams started working on 4<sup>th</sup> of August 2017 in two enumeration areas to allow the rest of the teams learn from their experience. Final communications were passed on to the rest of the teams before they travelled to different regions. The other teams travelled to the regions on the 7<sup>th</sup> and 8<sup>th</sup> of August 2017 in readiness of the commencement of the data collection process. The instruments, translations and scripts were updated accordingly and approved by Twaweza before the main data collection process could commence. Field work commenced on 8<sup>th</sup> August in other locations and was completed on 24<sup>th</sup> September 2017.

#### *d) Margin of Error*

With an achieved sample size of 2,400 (2,000 main household respondents and 400 reserve respondents), the margin-of-error attributed to sampling and other random effects of this poll's sample size is +/- 2 with a 95% confidence level. When only the 2,000 main household respondents are considered, the margin of error is +/- 2.2 with a 95% confidence level.

#### *Phase 2: Wave Zero*

The wave Zero is the phase where the respondents who had consented to participating in the survey as main respondents and citizen monitors were connected to the call centre. This was done to prepare the respondents for the call round phase. Preparations of the follow up survey began when data collection for the baseline was still ongoing. The following pre-study implementation activities were carried out in preparation of the Household call rounds:

**a) Connecting to CATI-** the following was carried out in preparation of the household call round:

- i. **Team Recruitment and Training-** An experienced team of 20 persons (1 supervisor and 19

interviewers) were recruited and taken through a 1 day training session by the Ipsos and Twaweza lead teams. This team was conversant with the various languages needed for carrying out the telephonic interviews. The training session was held during the training of the entire team that participated in the baseline between 25<sup>th</sup> and 2<sup>nd</sup> August 2017. The training included providing the team with an overview of the SzW Program as well as taking them through the survey methodology-including a rigorous review on how to respond to respondents' queries during the connecting process. The training sessions were facilitated by Twaweza and the Ipsos lead teams.

- ii. *Pilot and data collection*- a pilot activity was carried out during the pilot stage in the 6 enumeration areas where 5 respondents in each of the selected enumeration areas were given a phone. The key objectives of this pilot in connecting to the call centre was to establish what the survey team would experience when connecting the respondents to the call centre. Some of the lessons learnt was the need for constant coordination between the CATI team and the team of enumerators in the field since at times that CATI team had to wait late in the night to ensure the respondents are connected to the call centre. During the baseline all the 2000 household respondents and 200 citizen monitors were successfully connected to the call centre.

#### *b) Margin of Error*

With an achieved sample size of 2000 at the linking to CATI (out of the targeted 2,000 main household respondents), the margin-of-error attributed to sampling and other random effects of this poll's sample size is +/- 2.2 with a 95% confidence level.

### 3.3 Study Implementation Activities

The study implementation processes for both Phase 1 and 2 took the following shape:

#### *3.3.1 Implementation during Phase 1*

##### *Overview*

##### *Data Collection Period*

Following a successful preparatory phase, the baseline data collection exercise commenced on the 4<sup>th</sup> of August 2017 and was completed on the 24<sup>th</sup> of September 2017.

##### *Baseline Sampling Approach*

The sampling approach for this survey (target respondents' categories, sample to be achieved in each category and the sampling areas) is indicated below.

### *Target Respondents and Sample*

Four respondent categories were targeted in each enumeration area as indicated below- with the total sample to be achieved in each category also included.

- Community leaders (200- 1 community leader in each enumeration area).
- Citizen monitors (200- 1 citizen monitor in each enumeration area).
- Schools (200- 1 primary school in each enumeration area reported to be the main public school where majority of children in the enumeration area are enrolled).
- Households (2,400- 12 in each enumeration area-10 main households and 2 reserve households in each enumeration area).

### *Enumeration/Sampling Areas*

A total of 200 enumeration areas were targeted for data collection in this survey. These were provided by Twaweza.

### *EAs network testing and replacements*

**Network testing:** This study was conducted in EAs with mobile phone network. An EA was said to have network if it passed the network testing stage upon entry of EA. The test was carried out by dividing the EA into 4 estimated equal parts. In each quadrant, 4 different points were established and the team checked the strength of the network for the mobile provider with the strongest reception in the EA as reported by community leaders. Each point was considered to have network if the Twaweza phone had at least 3 bars. The EA was said to have network if each quadrant had at least 2 points out of the 4 with network. For EAs with no network, listing was carried out and 10 households selected. The supervisors communicated to the project manager who informed Twaweza in order to replace the EA.

**EA replacement:** EA replacement was controlled by Twaweza who verified that there was valid reason to replace the EA. A total of 15 originally selected EAs were replaced, representing 8% replacement rate against an expected 20 EAs.

Reasons for replacement were as follows:

- Unavailability of mobile network connectivity (8 EAs).
- Denied access to EA by the local leaders (7 EAs).

Although only 15 originally selected EAs were replaced. The EAs that were affected by denied access were mainly in the central region.

Replacement of EAs mainly occurred because of two reasons, "no network and denial of clearance.

**No network EAs** - A total of 8 of 200 EAs (**4%**) turned out to be no network and were replaced. In the EAs which turned out to be “no network”, 10 main interviews were done and a replacement EA was selected from the replacement EAs in the same regions. The replacement EA took on the unique EA number for the original.

### List of EAs without network

**Table 4: List of areas where EAs had no network coverage**

Status	Region	District	Subcounty
Original	Busoga	Luuka	Ikumbya
Original	West Nile	Omoro	Bobi
Original	Ankole	Isingiro	Birere
Original	Kigezi	Rubanda	Bufundi
Original	Karamoja	Napak	Iriiri
Original	Kigezi	Kabale	Buhara
Original	Ankole	Mitooma	Kiyanga
Original	Westnile	Nebbi	ERUSSI

**EA replacement due to denial of clearance** -6 out of 200 EAs (**3%**) were replaced due to the local administration declining to give the team permission to work even after sharing the research approvals. The team communicated and replacement EAs were selected from the replacement list provided by Twaweza.

**Table 5: List of EAs replaced due to denied access**

Status	Region	district	Subcounty
Denied clearance by local leader	West Nile	Adjumani	Itirikwa
Denied clearance by local leader	Central2	Luwero	Nyimbwa
Denied clearance by local leader	Central2	Luwero	Butuntumula
Denied clearance by local leader	Central2	Kayunga	Kangulumira
Denied clearance by local leader	Central2	Kayunga	Kayunga
Denied clearance by local leader	Bunyoro	Kibaale	Kyebando

**High profile EA local leader denied team access:** EA was a gated community which was a residence for diplomats.

**Table 6: High profile EA were access was denied**

Status	Region	District	Subcounty
Denied Access	Kampala	Kampala	Nakawa Division

### Household Response Rate

A total of 2,400 households sample (main and reserve) were interviewed as per the expected sample of 2,400. To achieve this sample, a total of 2,708 households were visited, this means that 308 households had to be

substituted as described. This represents a response rate of 89%. Table 4 shows the sub-regions where the refusals were registered. The study had only 3 days in the EA and was carried out between August and September 2017. The most common reasons for replacement during the survey were denial to participate by spouse, returning phones based on advice by spouse, other community members or religious leaders. In one EA, the religious leader of the respondent burnt a phone on grounds that the Sauti Za Wananchi initiative was illuminati, this was in Teso region in Abarilela subcounty.

**Table 7: Non response in the household survey by region**

Region	n = 308	%
Acholi	6	1.9%
Ankole	19	6.2%
Bugishu	39	12.7%
Bukedi	12	3.9%
Bunyoro	37	12.0%
Busoga	37	12.0%
Central1	39	12.6%
Central2	24	7.8%
Kampala	20	6.5%
Karamoja	5	1.6%
Kigezi	13	4.2%
Lango	7	2.3%
Teso	21	6.8%
Tooro	17	5.5%
West Nile	12	3.9%

**Source: Information captured on listing form summary**

### 3.4 The Data Collection Experience

The data collection was done in two phases (phase 1: Baseline and Phsae 2: Household call round). Through the phases the experience differed. The following was observed/experienced during data collection processes:

#### 3.4.1: Phase 1: Baseline at household, community and school:

##### 3.4.1.1 Accessing the EAs

When accessing the EAs, the team first reported to the local authorities to report their presence and seek permission to access the targeted EAs. Prior to commencement of fieldwork, the necessary approvals and authorizations were received from the relevant bodies such as, Mildmay Uganda Research Ethics Committee (MUREC), Ministry of Education and Sports (MOEST) and Uganda National Council for Science and Technology (UNCST). Teams were required to get clearance at the district level before proceeding to the EAs. At the district level, clearance was sought primarily from the RDC's office. In the event, he/she was not available,

clearance was sought from his/her deputy, DISO, CAO or DPC. Once teams obtained clearance from the district authorities, teams proceeded to the selected EA. In each EA, the teams went straight to LC1 to introduce themselves, present the authorization letters as well as to seek permission and assistance in rolling out Sauti za Wananchi survey. Access was granted without any hinderances in most cases and data collection activities carried out. Major challenges faced during access of the EAs included:

- *Locating EAs:* Locating some EAs was difficult since the spelling and pronunciations were different from what was known by the locals. In such cases, the teams were advised to confirm the actual locations of the EAs at district and sub-county prior to their visit, a list of all EAs was also provided to the team showing the region, district, division, parish and EA.
- *Accessing EAs:* Some EAs had unreliable transport system that resulted in loss of time. Teams had to use available transport means.
- *Denied permission by the local leader:* Some local leaders denied the team permission to work in the EAs even after showing them the research approvals. Some of the targeted EAs in the urban settings were gated communities with restricted access. They are residents to foreigners and high profile residents. This made their access problematic. In one Kampala EA for instance, several attempts to access the EA with no success. This EA was later replaced.

#### 3.4.1.2 The Listing Exercise

After identification of the boundaries, the team listed all the households in the enumeration area recording names of head of the households, number of people living in that household, nickname of the head of the household and whether any member in the household owned a phone or not. During the listing, all the structures were marked with chalk to ensure that no structure was skipped and to avoid duplication in listing. The listing exercise was carried out in all EAs visited – with or without network. Major challenges faced during the listing exercise included:

- *Urban EAs respondents not available during the weekdays:* In urban EAs, most respondents were never found at home during the weekdays, that forced the team to work late in the evening or over the weekends, this reduced the output, paused security threat to the team and had an impact on time and cost. To overcome this, the teams concentrated on rural and peri- urban EAs during the week and targeted the urban during the weekends.
- *Hesitation of divulging information:* Some respondents were not willing to give their real names or names of their family members for fear of victimization.
- *Local leaders not being familiar with the residents:* Some LC1 chairpersons in urban areas did not know the people in their EAs or had not been in the area long enough, in such instances, teams were forced to seek extra help from people who were conversant with the area, and this had had an impact on budget.
- *Topography:* The landscape of some the EAs was such that they were inaccessible using the hired transport (hilly terrain). In one EA in Eastern Uganda for instance, the terrain was very hilly which made the listing exercise take longer than anticipated.

#### 3.4.1.3 Community Leaders' Interviews



Community leaders were the first point of entry in an EA. Interviews were conducted upon entry in the EA. The LC 1 or village chairpersons were the respondents in the survey. The target was to interview the person who was most knowledgeable of the EA. In some cases, the supervisors observed that the chairpersons were relatively new and had little information about the EA. Therefore, village elders were more relevant for the survey. Interviews were conducted in 198 EAs. Two EAs have a community leader who was shared with another EA.

There were no major challenges experienced for this segment besides walking long distances at times to take GPS coordinates for major water sources in the EA. To avoid making the interview very lengthy, GPS coordinates recording was moved to the end of the script as opposed being taken in the middle of the interview.

#### *3.4.1.4 Community Meetings*

Upon entry of the EA, the team was required to conduct a community meeting to create publicity for the Sauti za Wananchi and give details about the project. The objective of the meeting was to ensure that the community is well informed about the project and manage hearsay which had been attributed to attrition of the panel in Tanzania and Kenya. Community members were invited to the meeting during listing. Interviewers left behind flyers with more details of the meeting and also shared the Sauti booklet. The potential citizen Monitor was also identified during the community meetings. In most cases meetings were held on the first day in the EA.

Community meetings were conducted at places where community meetings in the specific EAs would usually be held. These included mostly churches and Local Council I Chairman's residence. Attendance was good in most of the EAs though relatively low in urban areas. Occurrence of the meeting and attendance was at times disrupted by heavy rains. This delayed the pace of activities in the EA in such cases.

The most frequently question asked during the community meetings was related to tangible benefits of the survey to the local community members. In some EAs, community meetings had to be re-convened due to hostility from some community members including representative of the police and the religious leaders. This was after rumours that the team was planning to take the residents' land or were part of a cult recruiting people.

#### *3.4.1.5 Household Interviews*

##### *Households' Selection*

Following a successful listing exercise, two sampling frames would be developed. First was a sampling frame for all main households interviews that included all households in the EA. Based on this sampling frame, 10 main households were selected by first calculating a sampling interval. The sampling interval was calculated by dividing all households in the EA by 10. Only the integer was considered. Using a simple lottery sampling method, the first household on this sampling frame was established which was any household between 1 and the sampling interval. Ten main households were selected. The second sampling frame was only for households eligible to be reserve ones. These had to meet the following criteria:

- Household had network
- Household had somebody with a phone
- Household was not selected as main household

Similar approach to selecting main household was used to select 2 reserve households. In the event that the selected household was not able to participate (where for instance the occupants were not available after 3 call backs), the household was substituted using an 'up-down' method where the household listed immediately above or below it was selected as a substitute to the unavailable household. Consent was then sought from the head of the selected household and the participating respondent selected for interviewing.

For some EAs, selection was done together with the community members during the community meeting. This turned out to be an effective initiative to avoid community wrangles and misconceptions as to why some households were selected and some not. Community members would be used to select the random start and count the interval until the required 10 households were achieved.

Household replacement- In case a household was not successful, the immediate next household was considered and when the one in front was also not successful then the team moved back 1 household, the replacement was done only under the following circumstances:

- ✓ Total refusal from the household to participate in the survey, (denied consent).
- ✓ The household is for non-Ugandans.
- ✓ The selected person refused to participate despite consent from the Head of the household.
- ✓ After 3 unsuccessful calls to the household.
- ✓ Planning to relocate in the next 6 months.

### *Respondents' Selection and Interviewing*

Qualifying respondents to interview were aged 18 years and above. In each selected household, only one respondent was interviewed. The respondent to interview was automatically selected by the phone using an inbuilt random number system in the script.

In the event that the selected respondent was not available at the time of the visit, up to 3 call backs were made at different timings and days (when the team was visiting the area). In the event that the respondent was unavailable after 3 call backs, the household was replaced (respondents were not substituted within households).

#### *3.4.1.6 Distributing Phones, Sim-cards and Solar Chargers*

Phones, airtime and sim-cards were distributed at the households following successful completion of the interviews at the main households. After issuance of the phones, sim cards and airtime, the participants were invited to attend a group meeting where they would be introduced to the other panelists as well as receive a solar charger (issuance of the solar chargers during the group meetings was a strategy to encourage attendance during the group meetings). Phones and solar panels were distributed to 1,999 respondents, one respondent agreed to participate in the survey using his own phone. Sim cards were also given to all the respondents except those who preferred to use their own. Out of 2,000 respondents, 1638 were given sim cards while 362 used their own sim cards. The table below shows sim card distribution per service provider. At

the start of field work, the team faced a challenge of un-activated SIM Cards this was later resolved with the service provider.

#### *3.4.1.7 Citizen Monitor Interviews*

The process of identifying a potential citizen monitor started upon entry to the EA, during listing and during community meeting. Potential candidates were taken through the screener to see if they qualify. If no candidate qualified, the supervisor engaged the community leader to assist in identifying a potential candidate as per the criteria. Each EA had to have a citizen monitor identified according to the screener. However, applying the criteria especially on education was not always possible because in some EAs it was not possible to get a person who was available to be a Citizen Monitor who had attained secondary level education. Those that are educated move out of the village. This was the experience mainly in Karamonja. This criteria was compromised and the team sought for those with some literacy skills.

#### *3.4.1.8 Holding Group Meetings*

After data collection in the EA, group meetings were convened with the main respondents where they were introduced to the citizen monitor, it was at this point where the solar panels were distributed, demonstration on the use of solar charger done and respondents paired. The objectives of the group meeting were as follows:

- Explain to the selected participants their role and give more information about the panel.
- Introduce the Citizen Monitor to the selected participants.
- Introduce participants to each other.
- Address any fears and pending queries from the participants.
- Gauge the reaction of household members and community after conducting the interviews and placing phones Demonstrate use of the solar chargers.
- Identify partners and group leaders as attrition management strategy

Group meetings were conducted in convenient venues for respondents. All 200 EAs managed to hold a group meeting with participants.

Turn out for group meetings in urban EAs was low. To address the gap, the supervisors gave the CM the names of selected participants. In addition, where time allowed, the CM was introduced individually to all those respondents who did not turn up. The interviewers revisited the respondents who did not turn up to brief them and issue the solar charger.

#### *3.4.1.9 Schools Interviews*

### *Achieved Sample -Schools Interviews*

The study design targeted one primary school in each EA. The headteacher and two randomly selected teachers were to be interviewed. The target school was a public primary school where most children in the EA are enrolled. Fieldwork commenced on 4<sup>th</sup> August 2017. Most primary schools were closed on 21<sup>st</sup> August for the second term holidays. During the three weeks holiday, 61 schools were not visited, these were visited after the schools reopened in September.

Out of the 61 schools that were revisited, all were successfully interviewed. Six EAs were sharing schools that is, 3 schools were each shared by two EAs. One school in Kampala refused to participate even after seeing the letter from the Ministry of Education and Sports. This school denied the enumerators an interview and insisted on them bringing a letter from Kampala Capital City Authority (KCCA). Out of the 200 targeted school interviews, 196 interviews were achieved. This gave a total sample of 588 teachers.

### *Implementation during Phase 2: Follow-Up Survey (MPPS CATI)*

#### *3.4.2.2. Phase 2: Household call round*

A preliminary wave which was named wave Zero was conducted prior to the household call round. This was conducted to ensure that all the respondents are connected to the CATI centre and they were made aware of the interviews that would be conducted over the phone. In this wave, all the 2,000 respondents were linked to CATI successfully. During the wave zero, the team at the call centre confirmed the names of the respondents, the language they prefer to conduct the interview, the time they would prefer to be called and also got alternative phone numbers where the respondent can be reached in case their number is not available.

The following was done prior to the household call round:

- i. Training: A specific training and a debrief session was conducted with the CATI team prior to the call interviews. This training re-emphasised the tracing methodologies that would be used to ensure a high response rate from the call rounds, as well as a question by question review of the household call round instrument including dummy runs. The process also included a review of the experiences during the connecting of the respondents to the call centre during the baseline survey wave zero.
- ii. Pilot: The tool was also piloted with the pilot respondents before it was administered to the main respondents. Key objectives of this pilot included, establishing the questionnaire length, testing if the questionnaire was understood by respondents, testing if the questions contained terminologies that were not understood by interviewers or respondents, testing the flow of the questionnaire, testing translations of the questionnaire, testing completeness of the questions and pre-codes- including determining pre-codes for the open-ended questions, testing the skip routine and interviewer instructions, assessing challenges that interviewers were likely to face during data collection- including tracing strategies and assessing the

appropriateness and relevance of the questions. Following the pilot activity, a debrief session was held with the team and the tracing strategies were re-emphasized.

- iii. Margin of error: With an achieved sample size of 1,945 (out of the targeted 2,000 main household respondents), the margin-of-error attributed to sampling and other random effects of this poll's sample size is +/- 2.2 with a 95% confidence level.

### 3.4.2.1.1 CATI Household Round One

Round one of CATI interviews were conducted 2 weeks after the end of data collection for the baseline. These were carried out in October for a period of approximately two weeks and half since some respondents had to be traced. In addition, to collecting data on livelihoods from the panel, round one was also supposed to assess the stability of the panel, test the tracing strategies and establish any outstanding issues.

#### Participation of the Panel in CATI Round one

Overall, by the close of data collection of Round one (1); 1,945 interviews were achieved representing a response rate of 97%. Table 20 below summarizes participation in round one across the EAs. In 149 EAs (75%) there was full participation of the panel. It is only in 2 EAs (1%) where there were 4 or more people who did not participate.

**Table 8: Summary of participants in Round one per EA**

Number of participants who responded in Round 1 in the EA	Number of EAs	% of the EAs (n=200)	Total interviews
10	149	75%	1,490
9	40	20%	360
8	9	5%	72
7	2	1%	14
5	2	1%	10
	<b>200</b>	<b>100%</b>	<b>1,945</b>

A review of the specific EAs where there was low participation reveals that the Citizen Monitor was not active. Use of the Citizen Monitor was the most effective tracing strategy. An exception is one EA in the Teso region where the CM could not be reached to help in tracing the respondents. Fortunately in this EA, it was easy to reach the respondents directly thereby achieving 7 interviews. In the other EAs with hilly terrains, the respondents were not easy to trace by the citizen monitor.

**Table 9-EA Names with low participation**

EA serial	No. of participants	Comment
185	5	Very rural EA with HHs distant from each other. Citizen monitor and other group members find it difficult to trace each other.
41	7	Citizen monitor failed to reach them. Other panelists failed as well
97	7	The citizen Monitor was not reachable to trace the 3 remaining respondents. Other group

		members could not reach them either.
<b>173</b>	7	Hilly area and HHs distant from each other hence not easy to trace each other

The panel is managed by language of interview. Those who can communicate in English or Swahili are put in this category irrespective of whether they speak other languages. Vernacular languages are only reserved for those who cannot communicate in either of these two languages. Although there were some respondents in the baseline that mentioned they wanted to do the interview in Swahili, during the Round one calls, they all responded to the interview in English.

**Table 10: Participation of the panel by language of interview**

Languages linked	Total Per language Linked (During the Baseline Survey)	Total Per Language Achieved	Balance	Balance (%)
Acholi/Luo	119	185	-66	-55%
Ateso/Jap	156	143	13	8%
English	60	49	11	19%
Akaramajong	92	90	2	2%
Langi	140	161	-21	-15%
Luganda/Lusonga	612	584	28	5%
Lugbara	186	122	64	34%
Lugisu/Lugwere/lunyole/samia	120	118	2	2%
Rukiga/Rufumbira	138	120	18	13%
Runyankole	188	181	7	4%
Runyoro/Rutooro/Rukonjo	189	192	-3	-2%
	2,000	1945	55	3%

### Reason for dropping out

Table 11 below summarizes the reason given for dropping out from the survey during round 1, intervention used by callers and results.

**Table 11-Summary of Respondents who have dropped out by EA**

EA NO/Name (*W/H)	Number dropped out	comment
<b>058</b>	<b>1</b>	Dropped because she left the village and her phones are off so we are un able to reach her. Her father says that she will be back after a month but will still be on and off.
<b>177</b>	<b>1</b>	Dropped because the respondent died and the phone was stolen.
<b>194</b>	<b>1</b>	Dropped: she divorced and the husband decided to sell the phone. The citizen monitor intervned and managed to get the phone back.

<b>088</b>	<b>1</b>	Dropped: was not interested and gave everything to the chairman. He shifted to another town with all his family. He was replaced by the reserve.
<b>176</b>	<b>1</b>	Dropped: was not interested in giving feedback every month.
<b>098</b>	<b>2</b>	Dropped because her husband did not allow her to use the phone yet we have to talk to her every month.
<b>198</b>		Dropped because he was told we are 'illuminati'
<b>063</b>	<b>1</b>	Dropped: was not interested and was replaced.
<b>001</b>	<b>1</b>	Dropped because her husband stopped her from being part of the panel.
<b>135</b>	<b>1</b>	Dropped because the father took away the phone from her and wants to be interviewed instead of the recruited respondent. The citizen monitor intervened and respondent was replaced.
<b>172</b>	<b>1</b>	The respondent disappeared from the village according to the citizen monitor.
<b>074</b>	<b>1</b>	Respondent left the panel due change of environment (left the village) and returned the phone to the citizen monitor.
<b>196</b>	<b>1</b>	Dropped out due to divorce because she left the village and no one knows where she went, she cannot be traced since the numbers are off.
<b>092</b>	<b>1</b>	Dropped because she says that she has a problem with talking for long over the phone so she will not be able to manage. She is always helped to operate the phone so when they are not around she can not participate.
<b>081</b>	<b>1</b>	Not interested in the program.
<b>120</b>	<b>1</b>	Dropped because he sold the phone and there is no way we can reach him, however the case has been reported to police and once it is sorted, the citizen monitor will be updated on the phone recovery.
<b>171</b>	<b>1</b>	He disappeared from the enumeration area after selling the phone.
<b>103</b>	<b>1</b>	Dropped: he refused to talk to us saying those are too many questions.
<b>160</b>	<b>1</b>	Dropped because he is too busy. If we accept to call him at 11 pm, then it would be okay. He already handed over the phone and the solar charger to the citizen monitor.
<b>096</b>	<b>1</b>	Dropped because she was threatened that we are 'illuminati'
<b>098</b>	<b>1</b>	She gave back the phone to the citizen monitor because she travels frequently and the citizen monitor confirmed that he received everything'

*WA withheld to conceal MPPS respondents' identities*

## Challenges encountered in Round 1

### a) Challenges in tracing

- **Sparsely distributed household:** Tracing is a challenge where the household are far apart especially in hilly areas. This is complicated if the Citizen Monitor is not available.
- **Uncooperative Citizen Monitor.** This was reported in some EAs where the monitor continuously promised to follow up and trace unreachable panelists.
- **Respondent who have moved out of the EA without any details of their location**
- **Association of the study with Illuminati.** This was said to be reported in many EAs and interviewers would reassure the respondents.

### 3.5 Quality Control

During the implementation of this study, stringent quality control measures were put in place to assure quality outputs. The following was applied during the different phases of the baseline:

#### Phase 1: Baseline

- **Recruitment and training of a highly qualified data collection team:** the team engaged during data collection for both Phase 1 had at least a post-secondary qualification, had at least 2 years hands-on experience in research, had experience working in the proposed roles in previous studies and had been involved in the implementation of similar studies in the past. The recruited team was taken through rigorous training sessions including dummy runs and pilot sessions with real respondents to equip and prepare them for the data collection process. Furthermore, the team members were able to speak at least two local languages.
- **Accompaniments and back checks-** interviewers were accompanied by supervisors during phase 1 of the study (10% of all interviews carried out) where challenges experienced in data collection especially during the initial stages of the process were flagged and the team debriefed. In addition to accompaniments, the supervisors also carried out back-checks of interviews that had taken place in their absence (10% of all interviews carried out). Arising issues were flagged and the entire team debriefed (through supervisors who cascaded the information to the interviewers).
- **Spot checks-** spots checks were also carried out by the study's technical team which comprised of Ipsos' study lead team members and Twaweza staff. During the spot checks, the team was especially keen on problematic EAs, where for instance the team was struggling to gain access to an EA, gaining consent from respondents among other challenges. Arising issues were flagged and the entire team debriefed (through supervisors who cascaded the information to the interviewers).
- **Use of technology-** in order to further enhance data quality in a cost-efficient way, data collection in this study was carried out using a Computer Aided Personal Interviewing platform (CAPI) during Phase 1. The use of this platform enhanced data quality by for instance having inbuilt skip routines in the study instruments which minimized human errors and monitoring interviewer movement through satellite tracking capabilities (GPS- Phase 1). In addition, an internet communication application (app): WhatsApp was used to communicate with the team and keep track of the issues arising in the field. This assured a faster communication process of basic instructions to the team. Where particular team members were unclear on the feedback posted in the platform, they were urged to follow up with a phone call to the project managers for more clarification.
- **Daily debrief sessions-** daily debrief sessions were carried out by the supervisors of each team at either the end of each day or at the beginning of each day before data collection commenced. The supervisor



sought to understand key issues arising for each day and how this was hampering data collection. Any issue that the supervisor was unable to resolve was flagged to the project managers and a solution provided.

#### Phase 2: Household call round

*Recruitment and training of a highly qualified data collection team:* the team engaged during data collection for Phase 2 similar to the phase 1 team possessed/possesses at least a post-secondary qualification, at least 2 years hands-on experience in research, had experience working in the proposed roles in previous studies and has been involved in the implementation of similar studies in the past especially those carried out over the phone. The recruited team is taken through rigorous training sessions before the start of the call round including dummy runs and pilot sessions with real respondents to equip and prepare them for the data collection process.

- **Back checks-** The supervisor carried out backchecks of the interviews that had taken place. This was done through randomly selecting 10% of all the interviews carried out and verifying the feedback that was given by the respondents. Additionally the time log of the interviews is reviewed to ensure consistency with the anticipated interview length.
- **Spot checks-** This is done through listening in to the calls that are being conducted. This is done to verify that that interviewer is administering the questions appropriately. This is also further done through listening in on recordings of the completed interviews to ensure that all questions are asked as per the questionnaire instructions. Arising issues are flagged and the entire team debriefed.
- **Use of technology-** in order to further enhance data quality in a cost-efficient way, data collection in this study was and is carried out using a Computer Aided Telephonic Interviewing (CATI-Dimensions) during Phase 2. The use of this platform enhances data quality for instance by having inbuilt skip routines in the study instruments which minimize human errors.
- **Daily debrief sessions-** daily debrief sessions were carried out by the supervisors of each team at either the end of each day or at the beginning of each day before data collection commenced. The supervisor sought to understand key issues arising for each day and how this was hampering data collection. Any issue that the supervisor was unable to resolve was flagged to the project managers and a solution provided.

### 3.6 Reporting Key Lessons Learnt

#### *Key Lessons Learnt*

1. Sauti za Wananchi booklets were very resourceful in generating awareness of the survey.
2. Community meetings are a challenge in urban centres.
3. In order to effectively use the maps provided by the statistics body, it is important to involve locals who are well conversant with the EAs. The maps are refreshed and the local authorities helped the team to identify the new boundaries.
4. During the household listing process, moving with community leaders made the listing exercise easier and faster since most households accepted to participate and provided accurate information about

their households, listing in urban EAs should be targeted on weekends or in the evenings since on weekdays, people were at work and mostly house helps were not willing or were under instructions not to divulge and information.

5. The team composition in a contry with mnore than 50 dialects, the team should be composed of multi- lingual speakers and should be deployed in areas where they are more familiar with both culture and local languages spoken.
6. Urban interviews should be targeted on weekends or late in the evening.
7. The gated communities within the sample should be identified in advance and authorization sought in advance from the management committees.
8. All people involved in a project such as this, should attend full training to enhance full understanding i.e. DP, CATI, QC and data validators.
9. Involvement of church leaders in surveys such as this, where phones are issued. It is important to involve the church leaders since in case of any rumour attributing the survey to illuminati, people first run to their church leaders.
10. An advance team made of leaders needs to move a head of the team to secure authorization from the relevant authorities and advice the team on the transport logistics of different EAs to save time and cost.
11. Listing in urban EAs should be targeted during weekends to avoid wastage of time and money.
12. The citizen monitor is the most effective attrition management strategy (they are able to persuade participants to continue being part of the panel since they are known to them).

## Appendices

### Appendix 1: List of visited sampled areas

S/NO	SUB REGION	DISTRICT	COUNTY	SUBCOUNTY	EA TYPE 1=RURAL 2=URBAN
1	Kampala	Kampala	Kcca	Kawempe Division	1
2	Central1	Wakiso	Nansana Municipality	Gombe Division	1
3	Kampala	Kampala	Kcca	Rubaga Division	1
4	Kampala	Kampala	Kcca	Rubaga Division	1
5	Kampala	Kampala	Kcca	Makindye Division	1
6	Kampala	Kampala	Kcca	Makindye Division	1
7	Kampala	Kampala	Kcca	Nakawa Division	1
8	Kampala	Kampala	Kcca	Kawempe Division	1
9	Kampala	Kampala	Kcca	Kawempe Division	1
10	Kampala	Kampala	Kcca	Kawempe Division	1
11	Kampala	Kampala	Kcca	Rubaga Division	1
12	Kampala	Kampala	Kcca	Rubaga Division	1
13	Kampala	Kampala	Kcca	Makindye Division	1
14	Central2	Kiboga	Kiboga	Kapeke	2
15	Central 2	Mubende	Kassanda	Nalutuntu	2
16	Central 2	Mityana	Mityana Municipality	Busimbi Division	1
17	Central1	Masaka	Bukoto	Buwunga	2
18	Central1	Mpigi	Mawokota	Muduuma	2
19	Central2	Mubende	Kasambya	Kibalinga	2
20	Central2	Mubende	Kassanda	Kiganda	2
21	Central2	Mubende	Kasambya	Kigando	2
22	Central2	Mukono	Nakifuma	Nabbaale	2
23	Central2	Mukono	Mukono	Nama	2
24	Central2	Mukono	Nakifuma	Nagojje	2
25	Central1	Rakai	Kooki	Ddwaniro	2
26	Central1	Rakai	Kakuuto	Kakuuto	2
27	Central1	Ssembabule	Mawogola	Lwebitakuli	2
28	Central 2	Buvuma	Buvuma Island	Busamuzi	2
29	Central1	Kalungu	Kalungu	Kalungu	2
30	Central1	Wakiso	Kyadondo	Kasangati Town Council	1
31	Central1	Wakiso	Kira Municipality	Namugongo Division	1
32	Central1	Wakiso	Nansana Municipality	Nabweru Division	1
33	Central1	Wakiso	Makindye Ssabagabo	Ndejje Division	1

			Municipality		
34	Central1	Wakiso	Makindye Ssabagabo Municipality	Bunamwaya Division	1
35	Central1	Wakiso	Kyadondo	Kasangati Town Council	1
36	Central1	Wakiso	Busiro	Wakiso Town Council	1
37	Central1	Wakiso	Kyadondo	Kasangati Town Council	1
38	Central2	Mityana	Mityana	Kalangaalo	2
39	Central2	Mityana	Mityana	Namungo	2
40	Central2	Buikwe	Buikwe	Ngogwe	2
41	Central2	Buikwe	Lugazi Municipality	Najjembe Division	1
42	Central1	Bukomansimbi	Bukomansimbi	Bigasa	2
43	Central2	Buvuma	Buvuma Island	Lyabaana	2
44	Central1	Kalungu	Kalungu	Lukaya Town Council	1
45	Central2	Kyankwanzi	Kiboga	Ntwetwe Town Council	1
46	Central1	Lwengo	Bukoto	Lwengo	2
47	Busoga	Bugiri	Bukooli North	Nabukalu	2
48	Busoga	Bugiri	Bugiri Municipality	Western Division	1
49	Bukedi	Busia	Samia-Bugwe	Masafu	2
50	Bukedi	Busia	Samia-Bugwe	Masinya	2
51	Busoga	Iganga	Kigulu	Nakalama	2
52	Busoga	Iganga	Kigulu	Namungalwe	1
53	Busoga	Jinja	Jinja Municipality	Mpumudde Division	1
54	Busoga	Jinja	Jinja Municipality	Masese Walukuba	1
55	Busoga	Jinja	Kagoma	Budondo	2
56	Busoga	Kamuli	Bugabula	Nabwigulu	2
57	Busoga	Kamuli	Bugabula	Namasagali	2
58	Teso	Katakwi	Usuk	Usuk	2
59	Teso	Kumi	Kumi Municipality	Southern Division	1
60	Teso	Kumi	Kumi Municipality	Southern Division	1
61	Bugishu	Mbale	Bungokho	Lukhonge	2
62	Bugishu	Mbale	Bungokho	Busano	2
63	Bugishu	Mbale	Bungokho	Bukasakya	2
64	Bugishu	Mbale	Bungokho	Namanyonyi	2
65	Bukedi	Pallisa	Agule	Kameke	2
66	Bukedi	Pallisa	Agule	Chelekura	2
67	Teso	Soroti	Soroti	Gweri	2
68	Teso	Soroti	Soroti	Katine	2
69	Bukedi	Tororo	Tororo Municipality	Eastern Division	1
70	Bukedi	Tororo	West Budama	Rubongi	2

71	Bukedi	Tororo	West Budama	Nagongera Town Council	1
72	Teso	Kaberamaido	Kalaki	Kakure	2
73	Teso	Kaberamaido	Kaberamaido	Kaberamaido	2
74	Busoga	Mayuge	Bunya	Baitambogwe	2
75	Busoga	Mayuge	Bunya	Bukabooli	2
76	Bugishu	Sironko	Budadiri	Budadiri Town Council	1
77	Bugishu	Sironko	Budadiri	Buwalasi	2
78	Teso	Amuria	Amuria	Abarilela	2
79	Teso	Amuria	Amuria	Akeriau	2
80	Bukedi	Budaka	Budaka	Naboa	2
81	Bugishu	Bududa	Manjiya	Bumasheti	2
82	Teso	Bukedea	Bukedea	Kachumbala	2
83	Bugishu	Bukwo	Kongasis	Tulel	2
84	Bukedi	Butaleja	Bunyole	Busolwe Town Council	1
85	Bukedi	Butaleja	Bunyole	Naweyo	2
86	Busoga	Kaliro	Bulamogi	Kaliro Town Council	1
87	Bugishu	Manafwa	Bubulo	Magale	1
88	Bugishu	Manafwa	Bubulo	Sibanga	2
89	Busoga	Namutumba	Busiki	Kibaale	2
90	Bugishu	Bulambuli	Bulambuli	Bwikhonge	2
91	Busoga	Buyende	Budiope	Kagulu	2
92	Bukedi	Kibuku	Kibuku	Kirika	2
93	Bukedi	Kibuku	Kibuku	Kadama	2
94	Busoga	Kamuli	Kamuli Municipality	Northern Division	1
95	Busoga	Namayingo	Bukooli	Mutumba	2
96	Teso	Ngora	Ngora	Kobwin	2
97	Teso	Serere	Serere	Kateta	2
98	Teso	Serere	Kasilo	Labori	2
99	West Nile	Zombo	Okoro	Zeu	2
100	Lango	Apac	Apac Municipality	Apac	1
101	Lango	Apac	Kwania	Nambieso	2
102	West Nile	Arua	Ayivu	Ayivuni	2
103	West Nile	Arua	Ayivu	Oluko	2
104	West Nile	Arua	Terego	Katrini	2
105	West Nile	Arua	Terego	Katrini	2
106	Acholi	Gulu	Aswa	Unyama	2
107	Acholi	Gulu	Gulu Municipality	Layibi Division	1
108	Acholi	Gulu	Aswa	Bungatira	2
109	Acholi	Kitgum	Chua	Omiya Anyima	2
110	Acholi	Kitgum	Chua	Lagoro	2

111	Karamoja	Kotido	Jie	Panyangara	2
112	Lango	Lira	Erute	Ngetta	2
113	Lango	Lira	Lira Municipality	Railway Division	1
114	Lango	Lira	Lira Municipality	Central Division	1
115	Karamoja	Moroto	Matheniko	Katikekile	2
116	West Nile	Moyo	West Moyo	Laropi	2
117	West Nile	Nebbi	Padyere	Parombo	2
118	West Nile	Nebbi	Jonam	Wadelai	2
119	Karamoja	Nakapiripirit	Chekwii	Moruita	2
120	Acholi	Pader	Aruu	Puranga	2
121	Acholi	Pader	Aruu	Latanya	2
122	West Nile	Yumbe	Aringa	Romogi	2
123	West Nile	Yumbe	Aringa	Odravu	2
124	Karamoja	Abim	Labwor	Morulem	2
125	Lango	Amolatar	Kioga	Awelo	2
126	Acholi	Amuru	Kilak	Attiak	2
127	Lango	Dokolo	Dokolo	Kangai	2
128	Karamoja	Kaabong	Dodoth	Lolelia	2
129	Karamoja	Kaabong	Dodoth	Lodiko	2
130	West Nile	Koboko	Koboko	Kuluba	2
131	West Nile	Maracha	Maracha	Oluffe	2
132	Lango	Oyam	Oyam	Minakulu	2
133	Lango	Oyam	Oyam	Aleka	2
134	Acholi	Agago	Agago	Kotomol	2
135	Acholi	Agago	Agago	Lamiyo	2
136	Lango	Alebtong	Moroto	Apala	2
137	Karamoja	Amudat	Pokot	Loroo	2
138	Lango	Kole	Kole	Akalo	2
139	Lango	Kole	Kole	Alito	2
140	Acholi	Lamwo	Lamwo	Palabek Gem	2
141	Karamoja	Napak	Bokora	Lotome	2
142	Karamoja	Napak	Bokora	Matany	2
143	Acholi	Nwoya	Nwoya	Koch-Goma	2
144	Lango	Otuke	Otuke	Olilim	2
145	West Nile	Zombo	Okoro	Paidha Town Council	1
146	West Nile	Arua	Ayivu	Ayivuni	2
147	Tooro	Bundibugyo	Bughendera	Ngamba	2
148	Ankole	Bushenyi	Igara	Kakanju	2
149	Bunyoro	Hoima	Bugahya	Kitoba	2
150	Bunyoro	Hoima	Hoima Municipality	Mparo Divison	1
151	Bunyoro	Hoima	Bugahya	Buseruka	2
152	Bunyoro	Hoima	Buhaguzi	Kabwoya	2

153	Kigezi	Kabale	Ndorwa	Rubaya	2
154	Kigezi	Kabale	Ndorwa	Kyanamira	2
155	Bunyoro	Masindi	Masindi Municipality	Nyangahya Division	1
156	Tooro	Kabarole	Burahya	Busoro	2
157	Tooro	Kabarole	Burahya	Busoro	2
158	Tooro	Kabarole	Bunyangabu	Buheesi Town Council	1
159	Tooro	Kasese	Kasese Municipality	Nyamwamba Division	1
160	Tooro	Kasese	Kasese Municipality	Nyamwamba Division	1
161	Tooro	Kasese	Kasese Municipality	Nyamwamba Division	1
162	Bunyoro	Kagadi	Buyaga	Muhorro Town Council	1
163	Kigezi	Kisoro	Bufumbira	Bukimbiri	2
164	Kigezi	Kisoro	Bufumbira	Kanaba	2
165	Kigezi	Kisoro	Bufumbira	Nyakinama	2
166	Bunyoro	Masindi	Bujenje	Budongo	2
167	Bunyoro	Masindi	Masindi Municipality	Central Division	1
168	Ankole	Mbarara	Kashari	Bukiro	2
169	Ankole	Mbarara	Rwampara	Rugando	2
170	Ankole	Mbarara	Kashari	Kagongi	2
171	Ankole	Ntungamo	Ruhaama	Kitwe Town Council	1
172	Ankole	Ntungamo	Ntungamo Municipality	Central Division	1
173	Kigezi	Rukungiri	Rujumbura	Bwambara	2
174	Kigezi	Rukungiri	Rujumbura	Bwambara	2
175	Kigezi	Rukungiri	Rubabo	Kebisoni	2
176	Tooro	Kamwenge	Kibale	Biguli	2
177	Tooro	Kamwenge	Kibale	Biguli	2
178	Kigezi	Kanungu	Kinkiizi	Kayonza	2
179	Kigezi	Kanungu	Kinkiizi	Kanungu Town Council	1
180	Tooro	Kyenjojo	Mwenge	Katooke Town Council	1
181	Tooro	Kyenjojo	Mwenge	Kisojo	2
182	Bunyoro	Buliisa	Buliisa	Kihungya	2
183	Ankole	Ibanda	Ibanda	Rukiri	2
184	Ankole	Ntungamo	Kajara	Bwongyera	2
185	Ankole	Isingiro	Isingiro	Kikagate	2
186	Ankole	Isingiro	Isingiro	Isingiro Town Council	1
187	Ankole	Kiruhura	Kazo	Rwemikoma	2
188	Ankole	Buhweju	Buhweju	Burere	2
189	Bunyoro	Kiryandongo	Kibanda	Mutunda	2

<b>190</b>	Tooro	Kyegegwa	Kyaka	Ruyonza	2
<b>191</b>	Tooro	Kyegegwa	Kyaka	Kakabara	2
<b>192</b>	Bunyoro	Hoima	Buhaguzi	Kabwoya	2
<b>193</b>	Ankole	Rubirizi	Katerera	Katanda	2
<b>194</b>	Ankole	Sheema	Sheema Municipality	Sheema Central Division	1
<b>195</b>	Bunyoro	Kagadi	Buyaga	Kagadi Town Council	1
<b>196</b>	Bunyoro	Kagadi	Buyaga	Kyenzige	2
<b>197</b>	Bunyoro	Kakumiro	Bugangaizi	Kikwaya	2
<b>198</b>	Bunyoro	Kakumiro	Bugangaizi	Kasambya	2
<b>199</b>	Kigezi	Rubanda	Rubanda	Bubaare	2
<b>200</b>	Kigezi	Kabale	Rukiga	Kashambya	2



## Appendix 2- Other Frequently Asked Questions/Issues-Community Meetings

Frequently Asked Questions
The citizen monitor worried, would he be paid or given some allowances whenever he carried activities for sauti za wananchi?
Would the responses of the 10 selected be a representation of opinions of an individual/community/specific areas?
Is there replacement if one loses the phone?
Have the ten houses already been chosen or do we choose them now?
What happens if a respondent is illiterate/doesn't know how to use a phone?
What happens if someone drops?
Why was the survey being carried out?
Will these 10 people selected get to know each other?
Will they return the phones after the survey?
Am I allowed to use the phone for other issues?
Was the community safe in participating in the survey?
Why will the selected persons have to participate for 2 1/2 years?
Which type of questions will be asked during the interviews?
Why count all houses while we only need ten?
How long would the survey take?
Can the panelist leave his or her phone behind when they travel for festive season?
Will the team visit again during the whole period of panelist participation?
What were the qualification requirements for the citizen monitor as they had nominated two people?
What happens if the respondent doesn't understand English and the person calling can't speak the vernacular?
Will the 10 respondents who will be selected get employed?
What happens if selected person is not around?
Can the phone be used by any other member of the family?
Will the citizen monitor be from the same EA?
Where are your offices located?
What happens in case one is called and his phone is off?
What happens if your household is selected and you don't want to participate?

## Appendix 3- Other Frequently Asked Questions/Issues-Group Meetings

Frequently Asked Questions
How are we going to know that the information we give is effective?
In this group, are we going to be meeting regularly?
How many other villages are participating?
What happens in case a phone is stolen?
Are the questions on the phone going to be as many/same as these ones for today?
Requested to be given T-shirts like other organisations
In the whole village why/how were 10 households selected to participate in the survey for 2 1/2 years?
Where is Ipsos/Twaweza offices located?
How do you use the solar panel?
Are you going to build for us hospital/roads/schools before or after end of 2 1/2 years?
Will the information we give leak to other people?
Why are the phones being provided?
For how long will the survey last?
How can 2,000 people give opinion on behalf of 40 million people?
Who is funding the project/who has brought these phones?
What will be our work?
At the end, how many times will the office call us?
Will Twaweza make sure that our problems are addressed in the course of 2 1/2 years/after we will participate?
Is the government aware of the survey?
Can any other person answer questions on behalf of the selected respondent?
Can we replace the sim cards if they get lost?
Will our details be held in privacy?
Is there a certain criteria for choosing who to participate?
Citizen Monitor: when will I start to be given assignments?
If a child is sick and taken to hospital, will you foot the bill?
Are we supposed to carry both phones?
Why ask information about our children?
Why are we being grouped?
How will Twaweza influence stakeholders e.g. government if you are not from government?
What if one respondent fails to answer questions well?

How can they know you are connected with other groups of Sauti za Wananchi throughout the country?
Why do I register the sim card and its already working?
What happens if you interchange the spaces for charging the phone?
What will we be given at the end of the survey?
What will happen after the interviews are done over the phone?
Can the solar charger be used to charge other type of phones except the one given?
How can we know that you are not devil worshippers?
Can we also report crime and accidents?
How long does it take to charge the solar?
Who sponsors this program?

## Appendix 4- Sample Size Calculation

We use clustered sampling of households. Assume a discrete indicator (e.g. a household with a mobile phone: yes/no), with a binomial distribution with a probability  $p$ .

To compute the number of clusters we use the formula:  $\text{var}(p) = p*(1-p) D / n$  where  $D$  is design effect.

Note that the design effect  $D = 1 + (b - 1)*\rho$  where  $b$  is nr of households interviewed per cluster and  $\rho$  is "rate of homogeneity". Value of  $\rho$  will be higher for variables that have high spatial correlation such as access to public infrastructure. High means 0.3 or 0.4; low is 0.1 or lower, eg for mortality, marital status, preferences.

Basis for the calculation is a set of parameters: 1) the required precision is a confidence interval (CI) of 0.05 that is plus/minus 5 percentage point; 2) 10 households interviewed per cluster; 3) rate of homogeneity of 0.3 or design effect of 3.7; 4)  $p$  set at 0.5, the value that maximizes variance. Solving for number of clusters:  $c = p*(1-p)*D / (\text{var}(p)*b) = 148$ .

		base case
Set nr of hh per cluster = $b =$	$b$	10
Assume $\rho = 0.3$ (high) =>	$\rho$	0.3
Design effect $D$ is then :	$D$	3.7
*set required CI (precision) at	percent interval	0.005
* confidence interval = $1.96*s.e.$ => required s.e. $\sim 0.05 / 2 =$	required s.e. (s)	0.025
i.e. required $\text{var}(p) =$	$\text{var}(p)$	0.000625
* set $p$ at max value		
$P$		0.5
$1-p$		0.5
*solve for nr of clusters $c:$ $c = p*(1-p)*D / (\text{var}(p)*b)$		148

## Appendix 5- Data Weighting

The below approach states how the Uganda weighted data was arrived at.

### Calculation of Sample Weights

Two main sampling weights were calculated for the Sauti za Wananchi survey: household weights and individual (for those areas from 2014 Uganda Census EAs database and the probabilities of selection of the households from each of the selected EAs. These weights were then adjusted for household non-response by multiplying them with the inverse of the household response rates. Given that Sauti za Wananchi sample was a two-stage stratified EA sample, sampling probabilities were calculated separately for each sampling stage and for each EA. We use the following notations

$P_{1hi}$ : first-stage sampling probability of the  $i$ th EA in stratum  $h$  from the Census EAs database

$P_{2hi}$ : second-stage sampling probability of households within the  $i$ th EA

Let  $a_h$  be the number of EAs selected in stratum  $h$ ,  $M_{hi}$  the measure of size (number of households) according to the 2014 census frame in the  $i$ th EA, and  $\sum M_{hi}$  the total measure of size (total number of households) in the stratum  $h$ . The probability of selecting the  $i$ th EA in the sample is calculated as follows:

$$P_{1hi} = \frac{a_h M_{hi}}{\sum M_{hi}}$$

Let  $L_{hi}$  be the number of households listed in the household listing operation in the EA  $i$  in stratum  $h$ , let  $g_{hi}$  be the number of households selected in the EA. The second stage's selection probability for each household in the EA is calculated as follows:

$$P_{2hi} = \frac{g_{hi}}{L_{hi}}$$

The overall selection probability of each household in EA  $i$  of stratum  $h$  in the SzW is therefore the production of the selection probabilities:

$$P_{hi} = P_{1hi} \times P_{2hi} = \frac{a_h M_{hi}}{\sum M_{hi}} \times \frac{g_{hi}}{L_{hi}}$$

The design weight for each household in EA  $i$  of stratum  $h$  is the inverse of its overall selection probability:

$$W_{hi} = 1 / P_{hi}$$

The individual weight of adults (Ali) in EA  $i$  is the household weight multiplied by the inverse of the individual response rate;

$$A_{hi} = W_{hi} \times \frac{E_{hi}}{I_{hi}}$$

Where,  $E_{hi}$  is the total eligible individuals (Adults 18+) found in the  $i$ th EA of stratum  $h$  and  $I_{hi}$  is the number of sampled individuals (Adults 18+) with a successful interview.

The individual weights were then adjusted to take care of gender proportions at each stratum (rural/urban of each subregion) as they were during the 2014 census. After adjusting for non-response and gender proportions, the sampling weights were normalized to get the final standard weights. The normalization process is done to obtain a total number of un-weighted cases equal to the total number of weighted cases at the national level, for the total number of households and Adults 18+.