

Sauti za Wananchi

Collecting national data using mobile phones



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Contents

ABBREVIATIONS.....	3
TABLES AND FIGURES.....	3
1. INTRODUCTION	4
2. METHODOLOGY.....	7
APPENDICES.....	42
APPENDIX 1: 2ND PILOT ENUMERATION AREAS	42
APPENDIX 2: LIST OF ORIGINALLY TARGETED EAS	43
APPENDIX 3: EA REPLACEMENTS.....	49
APPENDIX 4- OTHER FREQUENTLY ASKED QUESTIONS- COMMUNITY MEETINGS	51
APPENDIX 5- OTHER FREQUENTLY ASKED QUESTIONS- GROUP MEETINGS.....	53
APPENDIX 6- SAMPLE SIZE CALCULATION.....	54
APPENDIX 6- DATA WEIGHTING	55

Abbreviations

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

Tables and Figures

Table 1: Original Targeted Pilot 1 Enumeration Areas (shown up to division level only)	15
Table 2: Pilot EA Replacements	15
Table 3: Sample: Pilot Sample Achievement	16
Table 4: Reasons for non-response in the household survey	22
Table 5: Reasons for respondents' refusal	23
Table 6: Summary of EAs with high replacements	23
Table 7: Summary of Regions/EAs where community meetings were not held	26
Table 8: Other Challenges in conducting community Meetings	27
Table 9: Most frequently asked questions and issues raised during community meetings	27
Table 10: Table EAs where group meetings were not held	30
Table 11: Summary of meeting attendance by the selected participants	30
Table 12: Most frequently asked questions during group meetings	31
Table 13: Other challenges/ observations in conducting group meeting	31
Table 14: Summary of health facility interviews	32
Table 15: Other Challenges/Observations	32
Table 16: Summary of the outcome of the schools sample	34
Table 17: Summary of participants in Round one per EA	34
Table 18: EA Names with low participation	35
Table 19: Participation of the panel by language of interview	35
Table 20: Summary of Respondents who have dropped out by EA	37
Table 21: Reasons for dropping from the survey	37
Table 22: Summary of Respondents who have confirmed loss / breakdown of the phone	38
Table 23: Reasons for Nonresponse	39
Table 24: Sample communication during data collection using a WhatsApp group	40
Figure 1: Growth in mobile phone ownership at the household level (1998-2014)	5

1. Introduction

1.1 Rationale

In Kenya, 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: Kenya Demographic and Health Survey (KDHS), 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 6-12 months until analyses are done and a full report published. For example, the 2014 KDHS was a national sample survey that targeted 40,300 households designed to provide detailed information on aspects of health across Kenya and in each of the 47 counties. The KDHS is conducted every five years. The 2014 KDHS was the sixth survey of its kind to be conducted in Kenya, following those carried out in 1989, 1993, 1998, 2003, and 2008-09, and it is the first KDHS to provide information at the county level. Data collection was undertaken from May 2014 to October 2014. Summary findings were released in March 2015 and a full report and data in January 2016.

Data collection for the Kenya Integrated Household Budget survey (KIHBS) began on Thursday, 3rd September 2015 and will continue until the end of August 2016. It is expected to survey 24,000 households. This survey is meant to determine in detail, the information of Household consumption/expenditure patterns in order to compute poverty/welfare measures; update national accounts benchmarks (e.g. private consumption, informal sector, analysis of household sector); and form a basis for updating household expenditure weights to be used in the development of new Consumer Price Index (CPI) . It is also expected that the socio-economic indicators derived from the survey will be a milestone in planning and policy formulation. The survey will also provide statistics for monitoring and evaluating development initiatives and targeted interventions and that these indicators will complement the existing baseline information from 2009 Kenya Population and Housing Census (KPHC) and other surveys.

As a consequence, the data provides 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. If the Government of Kenya implements a different set of policies and programs and the frequency of household surveys is not increased, it could take many years until the effects of these interventions are known. In such an environment, myopic decision makers, or decision makers who are uncertain about the impact of their interventions, may decide not to change anything at all.

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 drought and food availability, people's opinions about governance, the quality of public service delivery, or citizens' ability to exercise agency.

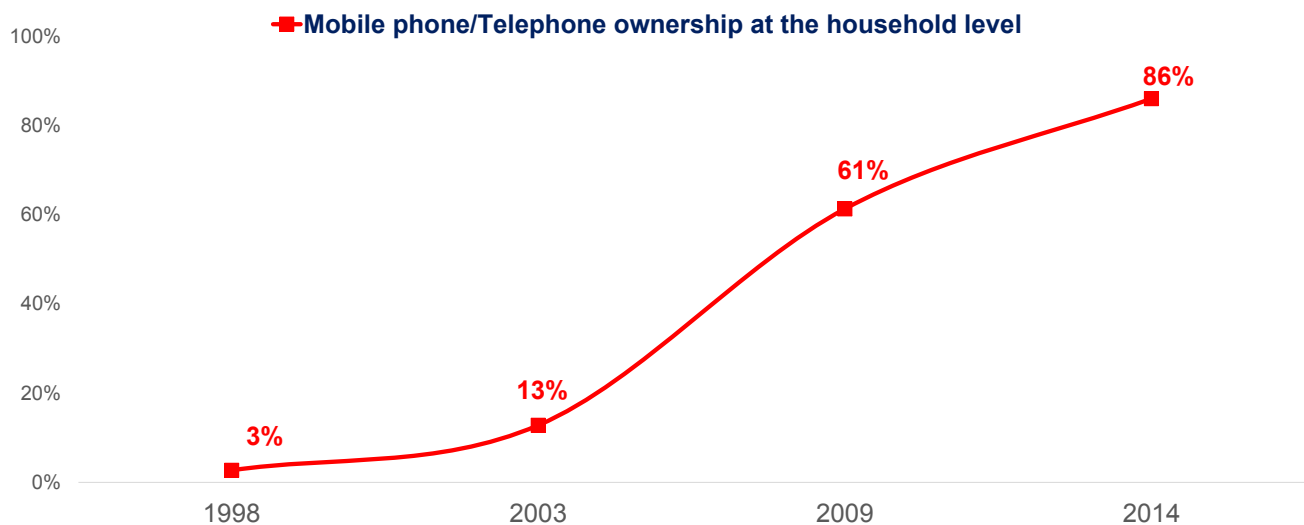
Such information could be useful to a diverse audience including policy makers and implementers, members of parliament, newspapers, analysts and donors, as well as *Twaweza*¹.

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*², 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.

1.2 Feasibility of mobile phone data collection

In the 1990s, very few people in Kenya 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 1998 to 2014.

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



Source of data: *Kenya Demographic Health Survey, 1998, 2003, 2009 and 2014/KNBS*

The explosive growth of mobile phone ownership and use is confirmed by the 2014 KDHS, which shows that 86% of households own mobile phones, and the 2015 Szw survey which found the same, (86%). The 2015 SzW data shows individual mobile phone ownership at 81%. Not only is the mobile phone ownership widespread (and expanding rapidly), phones are available at relatively low cost (from KShs 999 or about \$10) while mobile phone network covers most of the country.

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.

¹ 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.

² “Wananchi” means citizens in Kiswahili

Uwazi at Twaweza chose to pilot this approach in Dar es Salaam, and the success achieved through the pilot study known as Listing to Dar³ showed that high frequency data collection is possible. Given the success attained in Listing to Dar (LtD), Uwazi at Twaweza decided to scale up the pilot study to a nationally representative panel across East Africa.

Compared to a traditional pen-and-paper survey 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. 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 EA sample inclusion.

Furthermore, one of the key lessons learnt during the pilot study was that, while survey data indicate a swift increase in mobile phone ownership, it is not universal. A challenge for data collection using mobile phones is that about 14% of households in Kenya 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. 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.

³ See detail at <http://listeningtodar.org>

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 was used to randomly select and enlist participating households and respondents; collect baseline household and individual data; and distribute mobile phones and solar chargers. Data collection in the Baseline Survey was done through a traditional household survey using face-to-face interviews based on the Computer Aided Personal Interviewing (CAPI) platform, through mobile phones. In the second phase, respondents are contacted on their mobile phone in monthly call rounds on topics covered during the baseline as well as current affairs. Data collection in the mobile phone survey will be done by call center agents using the so-called CATI (Computer Aided Telephonic Interviews).

2.2 Target population

The target population for Sauti za Wananchi was Kenyans aged 18 years and above. According to the 2009 Population and Housing Census by the Kenya National Bureau of Statistics, Kenya had a population number of 38,610,097; with 68% (26,122,722) living in the rural areas while 32% (12,487,375) in the urban areas. In terms of gender, there were 19,192,458 males and 19,417,639 females. The 2009 adult population is about 50% of the total population (19,462,360), and out of these, 37% (7,228,501) were in the rural areas while 63% (12,233,859) in the urban areas. In terms of gender, there were 9,476,129 (49%) male and 9,986,231 (51%) female adults. The total number of households enumerated was 8,767,954.^[1]

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 2009 Kenya 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 Kenya. 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 Kenya. 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

^[1] Kenya National Bureau of Statistics, <http://www.knbs.or.ke/>

matter of practice, we follow the approach set by the Kenya 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.

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 Kenya National Bureau of Statistics. Once the participating EAs were selected, the corresponding EA maps were obtained from KNBS. Since it was expected that some EAs would have to be replaced because of network coverage problems, a reserve EA sample was selected too.

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 done mainly because we intended to hand over mobile phones and chargers to the randomly selected households. In accordance with the standard (KNBS) 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. Uwazi at 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. This questionnaire was generally the first administered in an EA given that it served 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 (Enumeration Area).
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.	Household 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 was allowed to ask for assistance from any other household member who is well informed on the topic / status of the issue asked.
5.	Household Respondent 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 were property of Twaweza, were provided to the respondent to enable participation and 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 was return to the research firm.
6.	Citizen Monitor- Recruitment Questionnaire	This questionnaire was used to recruit the citizen monitor and was administered to potential CMs. It enabled the researchers to identify from amongst the eligible one candidate for this post.

7.	Citizen Monitor Agreement Form	This form was used to obtain formal consent of the head of Citizen Monitor. He/she retained a copy even as Twaweza kept the other.
8.	Health Facility Questionnaire	The health questionnaire was used to collect basic health facility data from the health facility that serves the community / EA. The main respondent for this instrument was the head of the health facility or the person in charge of the health facility at the time of data collection.
9.	School Questionnaire	The school questionnaire was used to collect basic school data from the school that serves the community / EA. The main respondent for this instrument was the head of the school or the person in charge of the school at the time of data collection.
10.	Popular Booklet	It was envisaged that in many EA's / communities visited the SzW survey would raise questions, not least with respect to the distribution of hardware but also with respect to mutual expectations. For this reason we designed a popular booklet (Cartoon story) that could explain the SzW approach and in the process introduce the survey.
11.	Respondent Uwezo & MUAC Flyers	The Uwezo flyer clearly elaborated to the respondents how they could administer the Uwezo Test (a literacy and numeracy Assessment) to their children. Similarly, the MUAC (Middle Upper Arm Circumference) flyer explains how the MUAC measurement could be administered.

2.5 Pre-Study Implementation Activities

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

2.5.1 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, the health facilities questionnaire, schools questionnaire and the citizen monitors questionnaire.
- **Phase 2:** the round 1 call household and round 1 call citizen monitor 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*- this questionnaire was translated into Kiswahili, Kikuyu, Kalenjin, Meru, Luo, Maasai, Somali and Turkana.
 - *Community Leaders, health facilities, citizen monitors and schools questionnaires*- the Kiswahili translations provided in these instruments were reviewed and updated for use during data collection.
- **Phase 2**
 - *Household call round questionnaire*- this questionnaire was translated into Kiswahili, Borana, Luhya (Bukusu, Wanga), Embu, Kamba, Kikuyu, Kipsigis, Kisii, Luo, Maasai, Meru, Nandi, Ntaachoni, Pokot, Samburu, Somali, Turkana and Turgen
 - *Citizen monitors call round questionnaire*- Kiswahili, Somali and Luo.

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.

2.6 Instruments and Methodology Testing

The following activities were carried out to test both the instruments (phase 1 and 2) as well as the implementation methodology (phase 1 only).

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:

- 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 (Kiswahili only at this juncture)
- Testing completeness of the questions and pre-codes
- Testing the skip routine and interviewer instructions
- Assessing challenges that interviewers were likely to face in the field
- Assessing the appropriateness and relevance of the questions
- Assessing interviewee bias through deliberate falsification of data

ii. Team Recruitment and Training- a competent team of 10 supervisors and 2 field coordinators were recruited and trained for a period of 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 Uwezo and anthropometric components of the questionnaire.

iii. Data Collection- data collection for the pre-test was carried out on the 15th of October 2015. 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 50 years, 50+ years)
- Households with females of various age groups (18 to 30 years, 31 years to 50 years, 50+ years)
- Households belonging to various social economic classes (middle and upper social class- C1C2, low social class- C2D and bottom low- DE)
- 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)

- Women who had gotten children within the past 2 years.

The data collection exercise was carried out in four enumeration areas (EAs) in Nairobi and its environs, specifically in Dagoretti, Limuru, Ngong and Athi River Divisions. 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 cut down the contents of the household questionnaire since the administration length was too long (2 hours and 20 minutes on average)
- The need to carry out interviews during the weekends in urban settings (since finding respondents on a weekday proved to be a challenge as they were reported to be away at work).
- 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 work with guides for identifying the enumeration areas selected including identifying the boundaries- it was observed that the maps provided did not have clarity on the enumeration areas targeted and the team spent time looking for the areas
- 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 these were causing spill over effects from the Ipsos opinion polling surveys. It was also observed that there was the need for Twaweza to provide a clear guideline on why the survey was being carried out to avoid association of the survey with the Ipsos opinion polling surveys.
- 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 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 translations
- 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 32 personnel who were organized into 8 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 days 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 the 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 26th of October to the 28th of October 2015 and mirrored what would be implemented during the main baseline survey. 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. Eight 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.

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

Province Name	County Name	District Name	Division Name	Location Name	Sub-Location Name	EA Name	EA Type
							1=Rural
							2=Urban
Central	Kiambu	Gatundu	Chania	W/H	W/H	W/H	1
Coast	Taita Taveta	Taita	Voi	W/H	W/H	W/H	1
Eastern	Machakos	Machakos	Kathiani	W/H	W/H	W/H	1
North Eastern	Garissa	Garissa	Central	W/H	W/H	W/H	2
Nyanza	Kisumu	Nyando	Muhoroni	W/H	W/H	W/H	2
Rift Valley	Kajiado	Kajiado North	Magadi	W/H	W/H	W/H	1
Western	Kakamega	Kakamega North	Kabras East	W/H	W/H	W/H	1

***W/H-Withheld to conceal MPPS respondents' identities**

iv. Pilot EA replacements- data collection was successfully carried out in 6 of the 8 originally targeted EAs. However, two EAs had to be replaced before data collection could be carried out;

- The EA in Muhoroni division where prior permission from the management was required before data collection could be carried out; attempts to seek permission failed. This EA was successfully replaced with another in the same district.
- The EA in Magadi division also needed replacement as it turned out to be a no network EA. An attempt was made to replace it the first time in the same district failed as this EA also turned out to be a gated community where residents were unwilling to be contacted/participate in the survey. A second attempt was made to replace it and this second attempt was successful and data collection activities carried out.

The table below provides Pilot EAs and the replacement attempts made during the pilot activity. All replacement EAs were done by Twaweza.

Table 2: Pilot EA Replacements

Original EA Name	Issues Arising	Replacement EA 1	Outcome	Replacement EA 2	Outcome
W/H	Network EA-Successful				
W/H	Network EA-Successful				
W/H	Network EA-Successful				
W/H	Network EA-Successful				

W/H	Uncooperative	W/H	Network EA-successful		
W/H	No Network EA	W/H	Uncooperative-gated community	W/H	Network EA-Successful
W/H	Network EA-Successful				
W/H	Network EA-Successful				

**W/H-Withheld to conceal MPPS respondents' identities*

- v. *Targeted and achieved pilot Sample:* the sample per EA at pilot stage was 4 households in each EA. A total of 32 household respondents, 8 citizen monitors, 8 health facilities, 8 schools and 8 community leaders were targeted in the pilot activity. As shown in the table below, a total of 36 household respondents and 9 community leaders were achieved (over-achieved samples) - these included respondents interviewed in an EA in Magadi division which was later replaced as it was a no network EA. The citizen monitors' sample was also successfully achieved. In the schools category however, this sample was not achieved in selected EA since data collection was carried out after schools had closed for the year. Interviews were also not carried out in health facilities' category in two EAs since the targeted facilities demanded for a letter signed by the Ministry of Health. Interviews were successfully carried out in the other EAs in this category by the teams working with the local administration to persuade the facility administrators to participate in the interviews.

Table 3: Sample: Pilot Sample Achievement

Final EA Name	Households	Schools ⁴	Citizen Monitors	Health Facilities	Community Leaders
W/H	4	1	1	1	1
W/H	4	1	1	0	1
W/H	4	1	1	1	1
W/H	4	1	1	1	1
W/H	4	1	1	1	1
W/H	4	0	1	0	1
W/H	4	1	1	1	1
W/H	4	1	1	1	1
W/H	4	0	0	0	1

- vi. *Linking with CATI-* household respondents and citizen monitors successfully interviewed during this phase (Pilot 1) were linked with CATI. Respondents from the EA in Magadi division were however not linked since this was a no network EA which was later replaced. The key objectives of linking included:

⁴ In each school, a head teacher and two teachers were interviewed

- To test the practicability of the linking process to inform the planning processes of linking during the main survey
- To have a pilot panel who would be used to test instruments for use during the follow 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 Twaweza to provide maps that had detailed information on the targeted EAs including clearly marked landmarks for ease of identification although the maps would only be obtained from KNBS.
- 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 Kenya Bureau of Statistics Cluster guides to assist in locating the EAs as well as the boundaries since they are the custodians of the maps provided
- 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 (such as gathering information about the EA- location, size, contacts of the local administration, probable meetings places etc. carrying rain kits for data collection not to be hampered by weather conditions etc.)
- 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 activated before being issued to the respondents

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 in 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 (who comprised of the team that had participated in the pre-test and pilot activities as well as a few additional team members newly recruited to boost this team).
 - Emphasizing on 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 team comprised of 85 personnel who were organized into 21 teams (with each team being made up of 1 supervisor and 3 interviewers). The selected baseline team underwent a 5 days 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 a one day data collection exercise aimed at exposing the new team members to the data collection process. In addition to the carrying out the main training (comprising of both the interviewers and supervisors), a separate session was held for the supervisors on the fifth 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.
 - iii. Data collection-** a second pilot (pilot 2) exercise was carried out from on the sixth day of the main training session (on the 7th of November 2015). 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 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 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 22 enumeration areas in Nairobi and its environs (that had not been targeted during the pre-test and 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 8th of November 2015 where the team discussed their experiences. The key take-out from this activity included:

- The need for the team to seek permission to access an EA during a week day where data collection was planned to take place on a weekend- data collection could for instance not be carried out in the Polytechnic EA since the local administration was not available on weekends.
- The need to ensure that information on security issues in an EA was sought beforehand especially in EAs with slum dwellings- 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 elders engaged in the identification of the boundaries were familiar with the EA- in one of the EAs for instance, the village elder was newly appointed and was not very conversant with the area. The team sought the help of the former village elder who happened to live within the same EA.

Following the debrief session, the teams travelled to the regions on the 9th of November 2015 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 12th November and was completed on 24th December 2015.

Phase 2:

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 and Citizen Monitors call rounds:

a) Household Call Round- 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 on 8th December 2015 and comprised of providing the team with an overview of the SzW Program as well as taking them through the survey methodology- including a rigorous review of 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 training sessions were facilitated by Twaweza and the Ipsos lead teams.
- ii. **Pilot Activity-** a pilot activity was carried out on the 8th and 9th of December 2015 which comprised of administering the provided questionnaire to the pilot panel recruited during the Pilot Activity of Phase 1 of the study. 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 where the key take-out was the need to allocate ample time for tracing as respondents were not readily available due to the festive season. Amendments were also made on the questionnaire as appropriate and signed-off by Twaweza (including the scripted version) in preparation of the data collection activities. Data collection for the first call round with the households' panel took place between 14th December 2015 and 6th January 2016.

b) Citizen Monitors Call Round- the following was carried out in preparation of the Citizen Monitors call round:

- i. **Team Recruitment and Training-** An experienced team of 7 persons (1 supervisor and 6 interviewers) were recruited and taken through a 1 day training session by the Ipsos lead team. This team was conversant with the various languages needed for carrying out the telephonic interviews. The training session was held on 28th December 2015 and comprised of providing the team with an overview of the SzW Program as well as taking them through the survey methodology- including a rigorous review of 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 citizen monitors call round instrument including dummy runs.
- ii. **Pilot Activity-** a pilot activity was carried out on the 28th and 29th of December 2015 which comprised of administering the provided questionnaire to the pilot panel recruited during the Pilot Activity of Phase 1 of the study. 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 where the key take-out was the need to allocate ample time for tracing as respondents were not readily available due to the festive season. Amendments were also made on the questionnaire as appropriate and signed-off by Twaweza (including the scripted version) in preparation of the data collection activities. Data collection for the first call round with the citizen monitors' panel took place between 30th December, 2015 and 6th January, 2016

2.7 Study Implementation Activities

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

Implementation during Phase 1

Data Collection Period

Following a successful preparatory phase, the baseline data collection exercise commenced on the 12th of November 2015 and was completed on the 24th of December 2015. One EA in Nairobi however remained pending until the first week of January 2016 as data collection could not be carried out due to various reasons discussed later in this report.

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

Five 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)
- Health facilities (200- 1 health facility in each enumeration area reported to be commonly visited by the residents)
- 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 different 4 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. 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 household 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 28 originally selected EAs were replaced, representing 14% replacement rate against an expected 20 EAs.

Reasons for replacement were as follows:

- unavailability of mobile network connectivity (19 EAs),
- hostility/security concerns (6 EAs),
- vacant EAs (migrating communities-1 EA) and
- inaccessibility due to the erratic weather conditions (flooding-2 EAs).

Although only 28 originally selected EAs were replaced, a total of 40 EAs were visited because 8 EAs could not be replaced on first attempt. Five were replaced after two attempts, 2 after the third attempt, and 1 after 4 attempts. The most affected regions were Eastern (Marsabit, Isiolo and Kitui), North Eastern (Mandera), Nyanza (Nyamira) and Rift Valley (Kajiado and Kericho).

Household Response Rate

A total of 2,399 households sample (main & reserve) were interviewed against expected sample of 2,400. One reserve was not interviewed (one EA in Namanga because it had only 13 households and 2 declined to be interviewed. To achieve this sample, a total of 2,586 households were visited, this means that 187 households had to be substituted as described in table 4. This represents a response rate of 93%. Table 4 in the next page summarizes why 187 households did not participate in the survey. Refusal by respondent or head of household was the main reason for no response. The study had only 3 days in the EA and was carried out over December. This also increased the number of respondents who could not be interviewed because they were away. Another reason why respondents were away is because of their busy schedule where they could not be traced at home especially in urban areas. This was a major challenge in Nairobi EAs. Fortunately, it was possible to make many call backs over 6 weeks of data collection period to avoid high replacements. Mental incapacitation includes cases of selected respondents who were alcoholic. These were hard to interview during the day. The interviewers sought to make call backs very early in the morning before they went out to drink. But some cases were not possible.

Table 4: Reasons for non-response in the household survey

Reasons for Non response (Base : 187)	No. of cases	%
Respondent refusal	90	48%
Head of household declined to give consent	27	14%
Respondent not available after 3 call backs	15	8%
Selected respondent was ill to participate in the study	14	7%
Respondent away for holiday	11	6%
Selected respondent mentally ill/ intellectually disabled	10	5%
Household had foreigners only	8	4%

Household had no network	5	3%
No adult in the household	3	2%
Closed household after 3 call backs	3	2%
Communication barrier- respondent was too old and senile	2	1%
Selected respondent is deaf and dumb	1	1%

Source: Information captured on listing form summary form

To assess the refusal, we also analyzed at what stage the respondent declined to participate in the study. Majority of the refusals were at the early stages of the survey after introduction. Refusals after completing the survey is an indication of attrition, 12 main participants withdrew after completing the survey.

Table 5: Reasons for respondents' refusal

	No. of cases
Respondent refused after introduction to the survey	55
Respondent withdrew after completing the survey	12
Respondent refused (not specified at what stage)	11
Respondent refused after reading the consent form	9
Respondent refused by head of household	2
Respondent refused after reading the agreement form)	1
Total	90

High replacement in an EA would be a proxy for a problematic EA with high potential of attrition. The report also sought to analyze the EAs which had more than 2 replacements. Out of the 200 EAs 19 EAs had more than 2 replacements (of households).

Table 6- Summary of EAs with high replacements

EA Serial	EA Name	Region(Team)	Number of replacement done
109	W/H	Nyanza	6
137	W/H	Rift valley	6
112	W/H	Nyanza	6
145	W/H	Rift valley	5
200	W/H	Western	5
8	W/H	Nairobi	4
36	W/H	Coast	4
72	W/H	Eastern	4
77	W/H	Eastern	4
79	W/H	Eastern	4
172	W/H	Rift valley	4
81	W/H	Eastern	3
82	W/H	Eastern	3
107	W/H	Nyanza	3

119	W/H	Nyanza	3
148	W/H	Rift valley	3
171	W/H	Rift valley	3
180	W/H	Rift valley	3
189	W/H	Western	3
Total			76

**W/H-Withheld to conceal MPPS respondents' identities*

2.8 The Data Collection Experience

The following was observed/ experienced during data collection processes:

2.8.1 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. Access was granted without any hindrances in most cases and the data collection activities carried out. Major challenges faced during access of the EAs included:

- *Hostility/ insecurity concerns* in six EAs in the North Eastern, Rift Valley and Nyanza regions: in the six EAs in those regions, the team was met with hostility/security concerns and could not go on with data collection. These EAs were replaced.
- *Flooding in Rift Valley and Coast regions*: Data collection was conducted during El-nino rains which greatly affected the arid and semi-arid areas. Two EAs were inaccessible due to a heavy downpour that completely cut them off from connecting roads. The teams could therefore not access them despite waiting for several days for the water to subside. These EAs were replaced.
- *High profile EAs*-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 Nairobi EA for instance, several attempts (seven attempts over a period of time) to access the EA were made before interviews could be successfully carried out.

2.8.2 The Listing Exercise

The listing exercise was carried out in all network EAs and the first EA established as a no network EA in each location. Major challenges faced during the listing exercise included:

- *Erratic weather conditions*- the data collection process was carried out during El-Nino causing an unusually heavy downpour during this season. The team was adequately prepared with rain kits and improvised the means of transport when the hired transport could not navigate the terrain. Data collection was however still hampered for periods of time when the rains were too heavy.



Impassible terrain through the hired transport prompting the team to seek other means of accessing the EAs

- *Topography*- the landscape of some the EAs was such that they were inaccessible using the hired transport (hilly terrain). In one EA in Western region for instance, the terrain was very hilly which made the listing exercise take longer than anticipated.



Team pushing the hired transport up the hill

- *Massive population growth*- in some EAs, the teams found that there has been massive population growth since the last national census. This made the listing exercise hectic as all households had to be listed before selection of participating households. In one EA in Nairobi, for instance, massive population growth was observed: over 500 households were listed, this EA is has grown being a slum dwelling. In another EA, 754 households were listed while in another, 439 households were listed. This led to the listing exercise taking longer than anticipated.
- *Declining populations*- one EA had abnormally low numbers of households. The EA had only 13 households and the listing exercise was completed in less than 30 minutes. The low number of respondents was attributed to people migrating in search of better opportunities. Another EA in Nairobi also had an abnormally low number of households (55). The low number of households was attributed to massive demolition of households with plans to put up other more upgraded households in the near future. This led to the listing exercise taking a shorter period of time than anticipated and also caused conflicts during the households' selection since every household wanted to be selected.
- *Lack of respondents in the households and hesitation of divulging information*- the lack of respondents in the households was especially witnessed in the urban EAs where the occupants were reported as either being at work or having travelled. This caused a challenge when filling in the listing forms especially in cases where the neighbours were unwilling to divulge information about the locked households. A number of gaps were therefore left in cases where respondents were not found after

- the third call back.
- *High profile EAs*- challenges were experienced during the listing exercise in the urban EAs- especially in the Lenana EA- where a high number of foreigners were found residing in the area. In addition, the limited number of Kenyan citizens residing in the area was also hesitant to participate in the listing exercise and a number of refusals were therefore reported. A total of 36 households were listed in this EA.

2.8.3 Community Leaders' Interviews

Community leaders were the first point of entry in an EA. Interviews were conducted upon entry in the EA. The area sub chief or the village elder 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 sub-chiefs were relatively new and had little information about the EA. Therefore, village elders were more relevant for the survey.

Interviews were conducted in 199 EAs. One EA (in Nairobi) did not have a community leader interview. This was the EA that secured entry after data collection was completed. The target person kept on pushing the interviews. He wanted to be paid to participate in the interview. Other than that, there was no major challenge with this component of the study. However, the team observed that in urban areas, the leader did not have information on names of all institutions where the schools were many.

2.8.4 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. The community members were invited to the meeting during listing. Interviewers left behind flyers with more details of the meeting. In most cases meetings were held on first day in the EA.

Community meetings were held in **192 EAs**. The main reason for not holding the meetings in the **8 EAs** was lack of quorum. It was observed that conducting a community meeting in major cities is a big challenge. The community members are engaged at work and report home late in the evening or at night. Over the weekends they are very busy with social life. Those that are left behind are children and house servants who have no permission to attend such events. In addition, there is an individual approach to issues rather than a community approach. Therefore, they lack a culture of attending meetings. In these EAs the team had to go to where the people were working such as shopping centers and address the community in small groups. In Nairobi the team also gave the Sauti Booklets during listing to ensure households got information about the survey.

Table 7: Summary of Regions/EAs where community meetings were not held

EA	Region
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W/H	Nairobi
W/H	Nairobi
W/H	Nairobi
W/H	Nairobi
W/H	Coast
W/H	Coast
W/H	Coast
W/H	Coast

**W/H-Withheld to conceal MPPS respondents' identities*

In EAs where mobilization was a challenge, the team used local leaders to facilitate. In the event that there were other meetings going on e.g. distribution of nets, the team piggybacked on such events with the help of the local leaders. On Sundays, invitation through the church was also done. There was higher turnout in rural areas compared to urban areas. Attendance to the meeting was not only by the members of the EA but it also drew participation in neighbouring EAs in some areas. **The Sauti za Wananchi booklet proved to be very resourceful during the meeting.**

Table 8: Other Challenges in conducting community Meetings

Observation/ Challenge faced	How the challenge /observation was handled
Meeting venue during the rainy season	Data collection was conducted in the rainy season. Meetings were postponed if an appropriate venue could not be accessed.
Fear of local leaders	When local leaders especially a government official was available community members would fear asking questions. When supervisors noted this , they would excuse the local leader and continue with the meeting
Association of the study with illuminati	This was addressed through giving project details. However it was noted that there are EAs where the community were not fully convinced and kept on dropping even after holding two community meeting and two group meetings
Local leaders who could incite the community against the survey	In two EAs local leaders were distractors more than facilitators. After the meeting having not received any direct benefit from the survey, they would incite the community against the study despite the fact that they had supported the survey during community meetings.

A lot of the questions that were being asked by the community members had already been addressed in the booklet. Table 9 below summarizes the most frequently asked questions during these meetings. Other questions raised have been outlined in Appendix 4.

Table 9: Most frequently asked questions and issues raised during community meetings

	Frequently Asked Questions	Frequency
1	How will we benefit from this survey?	35
2	Which criteria were used in selecting EAs in Kenya, households and respondent/legibility for participating in the study?	35
3	Is Twaweza capable of making changes on the challenges/problems we are currently facing	21
4	Suppose the respondent relocate to another area or part of the country does he or she returns the phone, solar charger and the line registered by his/her name?	13
5	When did the program begin as they had never heard of it?	11
6	Are participants going to be named while reporting?	8
7	Why are you doing a program without having prior communication, as how can people access you in case of anything?	8

8	They feared that we might be illuminati's, why were we issuing some gadgets for free?	8
9	Is the program only taking place in their area or allover Kenya?	7
10	How long would it to take for them to start seeing changes happening to their community?	6
11	Why wasn't the community let to select by themselves the 10 main respondents and a citizen monitor because they are the ones who are well conversant with the members of the community?	5
12	If there is a form of identification to be issued to identify them in the community as Sauti za Wananchi panel participants?	5
13	Who is Twaweza and what do they do? What is Ipsos?	5
14	Is the project sponsored by the government of Kenya or is it aware of this survey?	6

2.8.5 Household Interviews

Households' Selection

Following a successful listing exercise, two sampling frames were 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 random number generator, 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 households. 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.

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).

2.8.6 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 panellists 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).

2.8.7 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 age and education was not always possible because of the following reasons:

- In some EAs it was not possible to get a person who was available to be a Citizen Monitor who has reached secondary school. Those that are educated move out of the village. This was the experience mainly in North and lower Easter and Rift valley. This criteria was compromised and the team sought for those with some literacy. However, in 4 EAs Citizen Monitors who were willing to work had no formal schooling.
- On age it was noted that those who fell within this category were very busy with other activities. Those that could work were not respectable by the society because of alcohol problem especially in Central. Therefore, the Citizen Monitors in Central ended up being of advanced age.
- Ability to engage in the survey and ability to command respect in the society became very critical in identifying a Citizen monitor. Therefore, if one qualified but showed less interest or the nature of their activities could not allow them to participate, it became difficult to recruit them.

In areas where there was no eligible person within the EA boundaries and there was an appropriate person close to the EA who fitted the criteria, this was preferred. This was the case where the EAs were very small. However, EA boundaries were followed in most rural areas because of distance between the Citizen Monitor and the respondents. In addition, the village politics were important in determining if the CM will be respected. An outsider did not command respect and influence in such communities.

2.8.8 Holding Group Meetings

After data collection in the EA, the study targeted to conduct a group meeting with the main participants in the EA. 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 EAs except 7 EAs listed in the table below managed to hold a group meeting with participants. The main reason for not conducting group meetings in these EAs was lack of quorum. In addition, interviews in Nairobi were done over a period of time because of call backs which were only feasible over the weekends. By the time the interviews were completed, most respondents were not available. Individual debrief was conducted.

Table 10: Table EAs where group meetings were not held

Serial	Region	EA Name
42	Rift Valley	W/H
68	Rift Valley	W/H
46	Rift Valley	W/H
116	Nairobi	W/H
65	Central	W/H
97	Rift Valley	W/H
12	central	W/H

**W/H-Withheld to conceal MPPS respondents' identities*

Although group meetings were conducted, attendance varied. Not all meetings were able to congregate all the selected participants. Table 11 below summarizes how the participants attended the group meeting. Those with low turnout were mainly in urban areas where the team resorted to individual debrief of those who did not attend as much as time allowed.

Table 11: Summary of meeting attendance by the selected participants

Number of main participant who attended the group meeting	Number of EAs
All the 10 participants	64
8-9 participants	69
6-7 participants	28
4-5 participants	21
1-3 participants	12
No meeting	7
Total EAs	200

Turn out for group meetings in urban EAs especially in Nairobi and Mombasa were 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 solar charger.

Most frequently asked questions during group meetings

The supervisors gave the members an opportunity to ask questions. Most of the questions raised were those that had been covered by the consent form, agreement form and Sauti za Wananchi Booklet. There was clear indication that internalisation of information during interview was not comprehensive. It helped a lot when supervisors took the participants through the Booklet. Table 12 below outlines a list of questions that were most frequent. Refer to appendix 5 for an additional list of all questions that came up during the group meetings. Supervisors were able to handle the questions competently using the training materials and additional communication materials issued to teams.

Table 12: Most frequently asked questions during group meetings

	Question	No. of EAs where the question came up
1	What happens when the phone/solar charger gets lost/spoilt?	31
2	Will we have direct benefit as the participants?	29
3	What happens when one changes the area of residence?	11
4	Any risk in participating and how can they be concealed?	10
5	Will we return our phones or chargers after 2 1/2 years?	9
6	What happens if the charger is left in the rain?	8
7	How will they help/benefit the community after the study?	8
8	What happens when one cannot be found at the time of calling?	7
9	Will we be giving our opinion or community opinion?	7
10	How did you identify our village?	6
11	Who are legible to participate in the survey?	5
12	At what time will they be calling?	5
13	What happens when one decides to drop out before the end of the survey?	5

Table 13: Other challenges/ observations in conducting group meeting

Observations/ challenges	How it was addressed in field	Proposal for future studies/ Action needed
Different schedules of participants leading to some participants delaying others. This prolonged the meeting	Supervisor reassured the respondents who came early. Interviewers had to pick respondents from their homes	
Failure of Citizen Monitor to attend the group meeting- 7EAs	The supervisors had to look for the Citizen monitor thereafter and give the names of main participants	Follow up of the Citizen Monitor to ensure he knows all the group members
Managing group meetings where the phones or sim cards had not been issued/delayed	Supervisors reassured the respondents	Revisit the EA and issue the resources
Venue of group meetings especially in the urban areas	Most venues were for hire or at a cost The study was conducted during rainy season and needed a shelterd venue Supervisors made arrangements for affordable venues	Future studies should consider a cost to cater for group meeting in major urban areas
Need for confidentiality of those that were selected to participate	It was observed that the selected participants did not want to be identified by the community for two reasons. <ul style="list-style-type: none"> One was the security of the solar chargers and the phones 	

	<ul style="list-style-type: none"> • They did not want the community to track them after the results of the survey were released • Group venues were selected with confidentiality factor in mind 	
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2.9. Health Facility Interviews

In each EA, the study targeted the nearest public health facility where most people in the EA seek health services. The baseline achieved 134 successful interviews, a response rate of 67%. Table 16 below summarizes reasons why the 66 were not achieved. Lack of authorization letter was the main barrier to achieving a higher response rate. Although the health function has been devolved, the hospital administrators still asked for an authorization letter from the Ministry of Health.

Table 14: Summary of health facility interviews

Outcome	No. of health facilities
Successful interviews	134
Requested MOH letter	61
Refused to participate	4
EA shares the same health facility with another EA	1
Total target health facilities	200

2.9.1 Challenges encountered in conducting Health facility Interviews

Lack of an authorisation letter was the major challenge with this target group. Data collection commenced before Twaweza could secure the letter. Twaweza provided an authorization letter three weeks after data collection had started. However, this letter was not easily acceptable by some health facilities.

Strategies used by data collection team to address the authorization challenges

All teams tried to secure authorization from the County Level. This was time consuming and derailing the activities. In most cases the supervisors would engage persuasion skills to secure appointments. County letters were secured in Machakos County and Embu County.

Table 15: Other Challenges/Observations

Observation/ Challenge faced	How the challenge /observation was handled	Implication on follow up rounds
Resistance to give details of other staff at the facility. This was observed where the most senior staff was not available and a junior staff was holding for him/her.	The supervisors reassured the respondents on the confidentiality of the data. However some were still adamant. In such a case, they entered N/A for name and 0700000000 for the contact number	It may be difficult to reach the person in charge for such cases during the call round. In future health rounds, we expect that those who were holding the office because the person in charge was on leave may fail to participate in call rounds because they will not be playing that role.
Titles of staff at the health facilities that could not be understood The tool had titles which seemed not to be clearly	The tool had an option of others specify. This was used to include Midwives and others that were not listed	This question needs to be recoded to use the most common titles that exist at health facilities using the data collected at baseline

<p>understood in the health facilities e.g.</p> <ul style="list-style-type: none"> • Assistant medical officer • Assistant clinical officer • Medical attendants • Others which were common were missing in the tool 		
<p>Refusal to disclose the names In Kitui (2 EAs); the incharge were willing to participate only if they were anonymous and they also refused to give contact details</p>	<p>In this case they entered N/A for name and 0700000000 for the contact number</p>	<p>It will be difficult to re-contact these two facilities in call rounds</p>
<p>Challenges in securing appointments within the period when team was in the EA</p>	<p>Supervisors contacted health facilities after ensuring that team is well settled for other activities in the EA. Some facilities were very busy and could not secure an appointment within 1 or 2 days. They preferred appointments in a week's time. Teams used persuasion on a basis that it is a short interview. Other facilities had a problem of rescheduling interviews. To achieve a successful interviews, some facilities were called back after the team had left the EA</p>	<p>Although the number of facilities are few, health facility rounds need to consider longer duration for data collection to factor in scheduling of appointments.</p>

2.10 Schools Interviews

Achieved Sample -Schools Interviews

The study design targeted one primary school in each EA. The head teacher 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 12th November 2015. Most primary schools were closed on 20th November. By the time the schools were closing only 61 schools had been contacted while 139 schools could not be contacted because they were closed as summarized in Table 18 in the next page.

Out of the 61 schools, 53 schools were successfully interviewed. Six schools declined to be interviewed. Data collection commenced before Twaweza secured this letter. The team used persuasion skills to secure interviews. The head teacher in one school declined to participate in this study. One school in Taita shared the same public school with the EA which had been targeted for pilot exercise. Therefore, the school could not be interviewed twice.

Table 16: Summary of the outcome of the schools sample

Outcome	No. of school
Successful interviews	53
Requested for MOE Letter	6
School contacted but refused to participate	1
The EA shared the school with a pilot EA	1
Schools were closed	139
Total number of schools targeted	200

Implementation during Phase 2: Follow-Up Survey

3. Preliminary Wave Zero

All the 2,000 respondents were linked to CATI successfully.

3.1 CATI Household Round One

Round one of CATI interviews was conducted towards the end of baseline data collection. In addition, to collecting data on devolution 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); 1,830 interviews were achieved representing a response rate of 92%. Table 20 below summarizes participation in round one across the EAs. In 92 EAs (46%) there was full participation of the panel. Despite the challenges experienced with the phone, it is only in 13 EAs (8%) where there were 3 or more people who did not participate.

Table 17: Summary of participants in Round one per EA

Number of participants who responded in Round in the EA	Number of EAs	% of the EAs (n=200)	Total interviews
10	93	46%	921
9	66	33%	594
8	29	15%	232
7	7	4%	49
6	5	3%	30
4	1	1%	4
	200	100%	1,830

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 that most effective tracing strategy. An exception is one EA in the Coast region where the CM refused to cooperate in tracing the respondents. Fortunately in this EA, it was easy to reach the

respondents directly thereby achieving 8 interviews. Another unique case of a Citizen Monitor is in Murang'a where the CM has expressed that he should not be contacted to trace the respondents in the next round because he will be moving out. Earlier he had complained of being overburdened with the role of tracing the respondents.

Table 18-EA Names with low participation

EA serial	EA	No. of participants	Comment
86	W/H	4	This is a problematic EA. It was visited 4 times during data collection to replace respondents who dropped out. 3 respondents dropped after the first linking, 2 after the second linking, 1 after the third linking while 6 respondents could not be reached after linking the fourth time. A total of 6 respondents dropped and were replaced. 3 Panelists dropped after the 1 st linking. 2 others dropped after the 2 nd Linking and 1 more dropped after Linking the 4 th /3 rd ? Time. All have been replaced. The Citizen Monitor dropped on 27th December. The 6 are not reachable.
155	W/H	6	Tracing could not be done effectively because the Citizen Monitor was not reachable. Other tracing strategies did not also work
184	W/H	6	The EA is divided into 2 by a hill. Two did not attend the meeting and are not known by other panelist and the Citizen Monitor. Their numbers were not going through. The remaining two travelled upcountry
106	W/H	7	The Citizen Monitor does not know the remaining 3 panelists One was confirmed to have sold the farm and moved out.
113	W/H	7	Citizen Monitor was not able to trace the 3. Other panelist claim they don't know them. Alternative numbers were not helpful in tracing
181	W/H	7	The remaining 3 work overnight hence difficult to trace.
199	W/H	7	The citizen Monitor was not reachable to trace the 3 remaining respondent. Other tracing strategies did not also work

**W/H-Withheld to conceal MPPS respondents' identities*

The panel is managed by language of interview. Those who can communicate in Kiswahili or English 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. Non-response is not a language issue. However, this analysis reveals that the nomadic populations are hard to reach. Based on experiences of callers they cannot easily be traced because of their movements. In addition these areas have poor network. Therefore, when they are outside the EA which was tested for network, it not easy to reach them.

Table 19: Participation of the panel by language of interview

Languages Linked	Total Per language Linked	Total Per language Achieved	Balance per Language	Balance per Language (%)
English	1,197	1,106	91	8%
Swahili	338	311	27	8%
Luo	95	83	12	13%
Somali	70	63	7	10%
Borana	38	32	6	16%
Nandi	28	23	5	18%
Pokot	12	7	5	42%

Turkana	10	5	5	50%
Kikuyu	61	58	3	5%
Kipsigis	43	41	2	5%
Masaai	8	6	2	25%
Samburu	18	16	2	11%
Kamba	24	23	1	4%
Kisii	24	23	1	4%
Luhya	22	21	1	5%
Bukusu	4	4	0	0%
Embu	3	3	0	0%
Meru	5	5	0	0%
Grand Total	2,000	1,830	170	

Table 20-Summary of Respondents who have dropped out by EA

EA Name	Number of drop out	Current Status
W/H	1	Dropped out and returned Phone, Sim Card and Solar Charger to the Citizen Monitor. Data collection team went back and replaced the respondents.
W/H	1	
W/H	1	
W/H	2	
W/H	1	
W/H	6	
W/H	1	Dropped out after completion of data collection and have not been replaced
W/H	1	
W/H	1	
W/H	1	
W/H	1	
W/H	1	
W/H	1	
TOTAL	19	

**W/H-Withheld to conceal MPPS respondents' identities*

Source: field report and calls by Citizen Monitor

Reason for dropping out

Table 24 below summarizes the reason given for dropping out from the survey during round 1, intervention used by callers and results

Table 21-Reasons for dropping from the survey

EA Name	Number of drop out(s)	Reason provided for dropping out	Intervention used by team	Results
W/H	1	The Panelist didn't want to talk to anyone from the office since the husband took the phone and threw it away. She was afraid that the husband and the mother-in-law would harass her again.	Sent the Citizen Monitor to Intervene	Dropped
W/H	1	She claims that we are illuminati and we should never call her again. She hasn't returned the Phone, Line and Solar charger to the Citizen Monitor.	Sent the Citizen Monitor to Intervene	Dropped
W/H	1	Reported to have dropped out by Citizen Monitor .Panelist's phone is off. Yet to find out		
W/H	1	Reported to have dropped out by Citizen Monitor .Panelist's phone is off. Yet to find out		
W/H	1	Reported to Citizen monitor that he fears that he may be arrested if he uses the phone. He felt that they are treated as a government spy.		
W/H	1	Cult allegations	Sent the Citizen Monitor to Intervene.	Dropped
W/H	1	Returned the phone. He said the questions are difficult to respond to.	Cannot be reached because that was the only phone	

W/H	1	Participated in Round 1 and requested that he should not be called again in future rounds for he does not want to participate.	Dropped after Round 1
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**W/H-Withheld to conceal MPPS respondents' identities*

Loss of Gadgets

Table 22-Summary of Respondents who have confirmed loss / breakdown of the phone

EA	How the phone was lost/spoilt
W/H	Phone dropped into the toilet. Reached through third party phone
W/H	Has sold the farm and moved out
W/H	Phone dropped in water and got spoilt
W/H	Sold the phone and moved away together with the husband
W/H	Sold the phone
W/H	Husband has taken over the phone from the wife. He works away from the homestead and comes late at night and leaves early in the morning
W/H	Respondent was a househelp. She left the phone with her employer. She has been traced through an alternative line which her former employer shared with the team
W/H	She is alcoholic. Lost the phone. She left the EA and the family has no trace. The family is also looking for her.
W/H	The phone and solar charger was confiscated by the mother-in-law and thrown away.

**W/H-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 Eastern and Rift Valley. This is complicated if the Citizen Monitor is not available.
- **Uncooperative Citizen Monitor.** This was reported in 3 EAs where the monitor did not want to trace the respondents.
- **Respondent who have moved out of the EA without any details of their location**

b) Movement during the festive season: Most people travelled over Christmas and New Year holidays, thus prolonging data collection period.

c) Poor network quality: Although network was tested at baseline which led to replacement of 20 EAs, it was noted that EAs in Rift Valley and North Eastern have poor quality network. Those that were highlighted to have this challenge include:

- *Muranga
- *Rift valley
- *Narok
- *Pokot
- *Turkana
- *Marsabit

**W/H-EA names withheld to conceal MPPS respondents' identities*

d) Interviewing respondents who are drunk: These respondents call and demand to be interviewed while they are drunk. Interviewers would call them very early in the morning before they go out to drink.

e) Association of the study with Illuminati. This was said to be reported in many EAs and interviewers would reassure the respondents.

f) Association of the study with al-Shabaab activities: This was reported in one EA where the community reported the activity as a security threat. The panelists were perceived to have been recruited as al-Shabaab agents. The police collected all the Twaweza phones in the EA and returned them after a few days. It was not clear what had been done to the phones as one respondent is claiming that the phones were blocked. Interviews were done using the alternative lines.

g) Interviewing the elderly and those that had little information on devolution: The interview was taking long and would have a lot of don't now as a response.

3.2 CATI Citizen Monitors Round One

The database had 200 Citizen Monitors. Out of the total sample we have achieved 195 interviews. The 5 EAs where Citizen Monitors who have not been interviewed are listed in table 23 below. The reasons for non-response have also been included. So far 1 citizen monitor has dropped. There is a possibility that another monitor may also drop out.

Table 23: Reasons for Nonresponse

EA Name	Reason for not being reachable
W/H	The Citizen Monitor travelled as per information obtained from panelist. The area where he went has no network
W/H	The Citizen Monitor has been confirmed as a drop out.
W/H	He was linked using Twaweza number which is off air. Traced through panelist who gave another number which is also not reachable
W/H	Has two lines which are off air. The other panelists cannot find him.
W/H	The number is going through but every time she is called she terminates the call and later switches off. Has traced her through the chief but she is still terminating the calls. The supervisor who recruited her has also tried calling her and these are indications of being uncooperative

**W/H-Withheld to conceal MPPS respondents' identities*

Citizen monitors were to a large extent without any challenge. All except three can communicate very clearly in Kiswahili. For the three monitors they can understand Kiswahili if an interviewer is slow but express themselves better in vernacular. They are interviewed by a person conversant with the language.

3.3 Quality Control

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

- **Recruitment and training of a highly qualified data collection team:** the team engaged during data collection for both Phase 1 and 2 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.
- **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. 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 and a Computer Aided Telephonic Interviewing (CATI- Dimensions) during Phase 2. The use of these platforms 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, a social media platform (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. Below is a sample of the communication that went on during fieldwork.

Table 24: Sample communication during data collection using a WhatsApp group

Daily communication with the team during fieldwork
20/11/2015 11:35:47: Hulda: @Team, please confirm that all the EAs you have visited so far are all complete. I need this information urgently. We have figures from CATI not adding up. Each EA should have a total of 11 linked cases, i.e. citizen monitor and 10 households.
20/11/2015 11:56:14: Johnstone: Kuyara EA linked 11, Aja tisa EA linked 11. All are linked with CATI.
20/11/2015 11:59:14: Erick: Tonga B.-11, Chabera marketB.-11, Kaloleni Estate 11. Kanyapong C-11.Both linked to CATI

20/11/2015 11:59:42: Solomon- Kindly also check all the phones and update us by 4 pm today in case of any issues.
20/11/2015 12:00:53: Joram: Kiganjo B, linked 11, Kahutha B, linked 11, Ngomongo block, linked 11
20/11/2015 12:37:37: Gerald: EA Section 2 11,EA Lower kabubu 11,EA Uchumi wendani 3
20/11/2015 12:42:30: Rosemary: EA Gikomba B 11, EA Ndabibit 11, EA New site I. 11, EA Line saba 11
20/11/2015 13:16:34: Malachi: EA NAMI 1A 11 Linked, EA Nyaburu mission 11 Linked, EA NYAMIOBO11 LINKED, BONDENIB 11 LINKED
20/11/2015 13:27:28: Muller: Thanks for confirming. Any supervisor whose team has not been linked please contact me

- *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.

3.4 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 major cities. Distribution of Sauti za Wananchi booklets at household level became more useful.
3. Solar chargers were accepted in urban areas as power banks. They were more appreciated than the phone where a respondent had another phone.
4. Sauti panel is extensively distributed reflecting the face of Kenya.
5. 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).
6. Health facility and schools require a thorough authorization process.
7. Unlike in Tanzania where this survey was first established, the refusal rate and hostility to the survey was relatively higher.

Appendices

Appendix 1: 2nd Pilot Enumeration Areas

Province	County name	District name	Division name	Location name	Sub Location name	EA Name	EA type 1=rural 2=urban
Nairobi	Nairobi	Nairobi West	Dagoretti	W/H	W/H	W/H	2
Nairobi	Nairobi	Nairobi West	Dagoretti	W/H	W/H	W/H	2
Nairobi	Nairobi	Nairobi West	Dagoretti	W/H	W/H	W/H	2
Nairobi	Nairobi	Nairobi West	Dagoretti	W/H	W/H	W/H	2
Nairobi	Nairobi	Nairobi West	Kibera	W/H	W/H	W/H	2
Nairobi	Nairobi	Nairobi East	Embakasi	W/H	W/H	W/H	2
Nairobi	Nairobi	Nairobi East	Embakasi	W/H	W/H	W/H	2
Nairobi	Nairobi	Nairobi East	Embakasi	W/H	W/H	W/H	2
Nairobi	Nairobi	Nairobi East	Makadara	W/H	W/H	W/H	2
Nairobi	Nairobi	Nairobi East	Makadara	W/H	W/H	W/H	2
Nairobi	Nairobi	Nairobi East	Makadara	W/H	W/H	W/H	2
Nairobi	Nairobi	Nairobi North	Central	W/H	W/H	W/H	2
Nairobi	Nairobi	Nairobi North	Kasarani	W/H	W/H	W/H	2
Nairobi	Nairobi	Nairobi North	Kasarani	W/H	W/H	W/H	2
Nairobi	Nairobi	Nairobi North	Kasarani	W/H	W/H	W/H	2
Nairobi	Nairobi	Nairobi North	Kasarani	W/H	W/H	W/H	2
Nairobi	Nairobi	Nairobi North	Kasarani	W/H	W/H	W/H	2
Nairobi	Nairobi	Nairobi North	Kasarani	W/H	W/H	W/H	2
Nairobi	Nairobi	Nairobi North	Pumwani	W/H	W/H	W/H	2
Nairobi	Nairobi	Nairobi North	Pumwani	W/H	W/H	W/H	2
Central	Kiambu	Kikuyu	Kabete	W/H	W/H	W/H	2
Central	Kiambu	Kikuyu	Kabete	W/H	W/H	W/H	2

**W/H-Withheld to conceal MPPS respondents' identities*

Appendix 2: List of Originally Targeted EAs

S/No	Province Name	County Name	District Name	Division Name	Location Name	Sub-Location Name	EA Name	EA Type 1=Rural 2=Urban
1	Nairobi	Nairobi	Nairobi West	Dagoretti	W/H	W/H	W/H	2
2	Nairobi	Nairobi	Nairobi East	Embakasi	W/H	W/H	W/H	2
3	Nairobi	Nairobi	Nairobi East	Embakasi	W/H	W/H	W/H	2
4	Nairobi	Nairobi	Nairobi East	Embakasi	W/H	W/H	W/H	2
5	Nairobi	Nairobi	Nairobi North	Central	W/H	W/H	W/H	2
6	Nairobi	Nairobi	Nairobi North	Kasarani	W/H	W/H	W/H	2
7	Nairobi	Nairobi	Nairobi North	Pumwani	W/H	W/H	W/H	2
8	Nairobi	Nairobi	Westlands	Westlands	W/H	W/H	W/H	2
9	Central	Nyandarua	Nyandarua North	Ndaragwa	W/H	W/H	W/H	1
10	Central	Nyandarua	Nyandarua North	Oi kalou	W/H	W/H	W/H	1
11	Central	Nyandarua	Nyandarua South	North Kinangop	W/H	W/H	W/H	1
12	Central	Nyandarua	Nyandarua North	Oi kalou	W/H	W/H	W/H	2
13	Central	Nyeri	Nyeri North	Kieni east	W/H	W/H	W/H	1
14	Central	Nyeri	Nyeri North	Mathira	W/H	W/H	W/H	1
15	Central	Nyeri	Nyeri South	Othaya	W/H	W/H	W/H	1
16	Central	Nyeri	Nyeri North	Kieni west	W/H	W/H	W/H	2
17	Central	Nyeri	Nyeri North	Kieni east	W/H	W/H	W/H	2
18	Central	Kirinyaga	Kirinyaga	Mwea	W/H	W/H	W/H	1
19	Central	Kirinyaga	Kirinyaga	Kirinyaga Central	W/H	W/H	W/H	1
20	Central	Kirinyaga	Kirinyaga	Gichugu	W/H	W/H	W/H	1
21	Central	Kirinyaga	Kirinyaga	Mwea	W/H	W/H	W/H	2
22	Central	Murang'a	Muranga North	Kiharu	W/H	W/H	W/H	1
23	Central	Murang'a	Muranga North	Kangema	W/H	W/H	W/H	1
24	Central	Murang'a	Muranga South	Kandara	W/H	W/H	W/H	1
25	Central	Murang'a	Muranga South	Maragua	W/H	W/H	W/H	1
26	Central	Murang'a	Muranga North	Kiharu	W/H	W/H	W/H	2
27	Central	Murang'a	Muranga South	Makuyu	W/H	W/H	W/H	2
28	Central	Kiambu	Lari	Lari	W/H	W/H	W/H	1
29	Central	Kiambu	Githunguri	Komothai	W/H	W/H	W/H	1
30	Central	Kiambu	Gatundu	Mangu	W/H	W/H	W/H	1
31	Central	Kiambu	Kiambu	Kiambaa	W/H	W/H	W/H	2
32	Central	Kiambu	Kikuyu	Kikuyu	W/H	W/H	W/H	2
33	Central	Kiambu	Thika West	Thika west	W/H	W/H	W/H	2

34	Central	Kiambu	Ruiru	Githurai	W/H	W/H	W/H	2
35	Coast	Mombasa	Mombasa	Island	W/H	W/H	W/H	2
36	Coast	Mombasa	Mombasa	Kisauni	W/H	W/H	W/H	2
37	Coast	Mombasa	Kilindini	Changamwe	W/H	W/H	W/H	2
38	Coast	Mombasa	Kilindini	Longo	W/H	W/H	W/H	2
39	Coast	Kwale	Kinango	Ndavaya	W/H	W/H	W/H	1
40	Coast	Kwale	Msambweni	Msambweni	W/H	W/H	W/H	1
41	Coast	Kwale	Msambweni	Diani	W/H	W/H	W/H	2
42	Coast	Kilifi	Kilifi	Kikambala	W/H	W/H	W/H	1
43	Coast	Kilifi	Kaloleni	Kaloleni	W/H	W/H	W/H	1
44	Coast	Kilifi	Malindi	Marafa	W/H	W/H	W/H	1
45	Coast	Kilifi	Kilifi	Bahari	W/H	W/H	W/H	2
46	Coast	Kilifi	Kaloleni	Mariakani	W/H	W/H	W/H	2
47	Coast	Tana river	Tana River	Bura	W/H	W/H	W/H	1
48	Coast	Tana river	Tana Delta	Garsen	W/H	W/H	W/H	1
49	Coast	Tana river	Tana River	Galole	W/H	W/H	W/H	2
50	Coast	Lamu	Lamu	Mpeketoni	W/H	W/H	W/H	1
51	Coast	Lamu	Lamu	Amu	W/H	W/H	W/H	2
52	Coast	Taita taveta	Taita	Voi	W/H	W/H	W/H	1
53	Coast	Taita taveta	Taita	Wundanyi	W/H	W/H	W/H	1
54	Coast	Taita taveta	Taita	Mwatate	W/H	W/H	W/H	2
55	Eastern	Marsabit	Chalbi	North Horr	W/H	W/H	W/H	1
56	Eastern	Marsabit	Moyale	Golbo	W/H	W/H	W/H	1
57	Eastern	Marsabit	Marsabit	Central	W/H	W/H	W/H	2
58	Eastern	Isiolo	Isiolo	Cherab	W/H	W/H	W/H	1
59	Eastern	Isiolo	Isiolo	Central	W/H	W/H	W/H	2
60	Eastern	Meru	Meru Central	Abothuguchi West	W/H	W/H	W/H	1
61	Eastern	Meru	Imenti North	Miriga-mieru West	W/H	W/H	W/H	1
62	Eastern	Meru	Igembe	Mutuati	W/H	W/H	W/H	1
63	Eastern	Meru	Tigania	Tigania East	W/H	W/H	W/H	1
64	Eastern	Meru	Igembe	Igembe Central	W/H	W/H	W/H	2
65	Eastern	Tharaka	Maara	Mwimbi	W/H	W/H	W/H	1
66	Eastern	Tharaka	Tharaka	Tharaka South	W/H	W/H	W/H	1
67	Eastern	Tharaka	Maara	Mwimbi	W/H	W/H	W/H	2
68	Eastern	Embu	Embu	Manyatta	W/H	W/H	W/H	1
69	Eastern	Embu	Embu	Runyenjes	W/H	W/H	W/H	1
70	Eastern	Embu	Mbeere	Makima	W/H	W/H	W/H	1
71	Eastern	Embu	Embu	Central	W/H	W/H	W/H	2
72	Eastern	Kitui	Kitui	Mutonguni	W/H	W/H	W/H	1
73	Eastern	Kitui	Mutomo	Mutha	W/H	W/H	W/H	1
74	Eastern	Kitui	Mwingi	Nuu	W/H	W/H	W/H	1

75	Eastern	Kitui	Kitui	Central	W/H	W/H	W/H	2
76	Eastern	Machakos	Machakos	Central	W/H	W/H	W/H	1
77	Eastern	Machakos	Mwala	Mwala	W/H	W/H	W/H	1
78	Eastern	Machakos	Yatta	Masinga	W/H	W/H	W/H	1
79	Eastern	Machakos	Machakos	Athi River	W/H	W/H	W/H	2
80	Eastern	Machakos	Yatta	Katangi	W/H	W/H	W/H	2
81	Eastern	Machakos	Kangundo	Kakuyuni	W/H	W/H	W/H	2
82	Eastern	Makueni	Makueni	Kilungu	W/H	W/H	W/H	1
83	Eastern	Makueni	Mbooni	Mbooni	W/H	W/H	W/H	1
84	Eastern	Makueni	Nzaui	Kalamba	W/H	W/H	W/H	1
85	Eastern	Makueni	Makueni	Wote	W/H	W/H	W/H	2
86	North eastern	Garissa	Lagdera	Modogashe	W/H	W/H	W/H	1
87	North eastern	Garissa	Ijara	Hulugho	W/H	W/H	W/H	1
88	North eastern	Garissa	Lagdera	Dadaab	W/H	W/H	W/H	2
89	North eastern	Wajir	Wajir South	Diff	W/H	W/H	W/H	1
90	North eastern	Wajir	Wajir Sast	Wajir bor	W/H	W/H	W/H	1
91	North eastern	Wajir	Wajir Sast	Central	W/H	W/H	W/H	2
92	North eastern	Mandera	Mandera Central	Shambir Fatuma	W/H	W/H	W/H	1
93	North eastern	Mandera	Mandera East	Libehia	W/H	W/H	W/H	1
94	North eastern	Mandera	Mandera West	Takaba	W/H	W/H	W/H	1
95	North eastern	Mandera	Mandera East	Central	W/H	W/H	W/H	2
96	Nyanza	Siaya	Siaya	Boro	W/H	W/H	W/H	1
97	Nyanza	Siaya	Siaya	Ugunja	W/H	W/H	W/H	1
98	Nyanza	Siaya	Bondo	Nyangoma	W/H	W/H	W/H	1
99	Nyanza	Siaya	Bondo	Maranda	W/H	W/H	W/H	2
100	Nyanza	Kisumu	Kisumu East	Kadibo	W/H	W/H	W/H	1
101	Nyanza	Kisumu	Kisumu West	Kombewa	W/H	W/H	W/H	1
102	Nyanza	Kisumu	Nyando	Upper Nyakach	W/H	W/H	W/H	1
103	Nyanza	Kisumu	Kisumu East	Winam	W/H	W/H	W/H	2
104	Nyanza	Kisumu	Kisumu East	Winam	W/H	W/H	W/H	2
105	Nyanza	Kisumu	Kisumu East	Winam	W/H	W/H	W/H	2
106	Nyanza	Migori	Migori	Suba East	W/H	W/H	W/H	1
107	Nyanza	Migori	Migori	Muhuru	W/H	W/H	W/H	1
108	Nyanza	Migori	Kuria West	Kehanacha	W/H	W/H	W/H	1
109	Nyanza	Migori	Rongo	Rongo	W/H	W/H	W/H	2
110	Nyanza	Migori	Rongo	Awendo	W/H	W/H	W/H	2
111	Nyanza	Homa bay	Homabay	Kobama	W/H	W/H	W/H	1
112	Nyanza	Homa bay	Suba	Gwasssi	W/H	W/H	W/H	1

113	Nyanza	Homa bay	Rachuonyo	Kabondo	W/H	W/H	W/H	1
114	Nyanza	Homa bay	Suba	Mbita	W/H	W/H	W/H	2
115	Nyanza	Kisii	Kisii Central	Mosocho	W/H	W/H	W/H	1
116	Nyanza	Kisii	Gucha	Kenyenya	W/H	W/H	W/H	1
117	Nyanza	Kisii	Gucha South	Etago	W/H	W/H	W/H	1
118	Nyanza	Kisii	Kisii Central	Mosocho	W/H	W/H	W/H	2
119	Nyanza	Kisii	Masaba	Kiamokama	W/H	W/H	W/H	2
120	Nyanza	Nyamira	Masaba	Rigoma	W/H	W/H	W/H	1
121	Nyanza	Nyamira	Nyamira	Ekerenyo	W/H	W/H	W/H	1
122	Nyanza	Nyamira	Manga	Manga	W/H	W/H	W/H	1
123	Nyanza	Nyamira	Nyamira	Nyamira	W/H	W/H	W/H	2
124	Rift valley	Turkana	Turkana Central	Kerio	W/H	W/H	W/H	1
125	Rift valley	Turkana	Turkana North	Lokitaung	W/H	W/H	W/H	1
126	Rift valley	Turkana	Turkana North	Lokichogio	W/H	W/H	W/H	1
127	Rift valley	Turkana	Turkana Central	Central	W/H	W/H	W/H	2
128	Rift valley	West pokot	Pokot North	Alale	W/H	W/H	W/H	1
129	Rift valley	West pokot	Pokot Central	Sigor	W/H	W/H	W/H	1
130	Rift valley	West pokot	West Pokot	Kapenguria	W/H	W/H	W/H	2
131	Rift valley	Samburu	Samburu Central	Kirisia	W/H	W/H	W/H	1
132	Rift valley	Samburu	Samburu North	Baragoi	W/H	W/H	W/H	1
133	Rift valley	Samburu	Samburu East	Waso	W/H	W/H	W/H	2
134	Rift valley	Trans nzoia	Trans Nzoia West	Kinyoro	W/H	W/H	W/H	1
135	Rift valley	Trans nzoia	Trans Nzoia East	Kaplamai	W/H	W/H	W/H	1
136	Rift valley	Trans nzoia	Kwanza	Kwanza	W/H	W/H	W/H	1
137	Rift valley	Trans nzoia	Trans Nzoia West	Central	W/H	W/H	W/H	2
138	Rift valley	Trans nzoia	Kwanza	Kwanza	W/H	W/H	W/H	2
139	Rift valley	Baringo	Baringo	Marigat	W/H	W/H	W/H	1
140	Rift valley	Baringo	East Pokot	Tangulbei	W/H	W/H	W/H	1
141	Rift valley	Baringo	Baringo	Kabarnet	W/H	W/H	W/H	2
142	Rift valley	Uasin gishu	Eldoret West	Soy	W/H	W/H	W/H	1
143	Rift valley	Uasin gishu	Eldoret West	Turbo	W/H	W/H	W/H	1
144	Rift valley	Uasin gishu	Eldoret East	Moiben	W/H	W/H	W/H	1
145	Rift valley	Uasin gishu	Eldoret West	Turbo	W/H	W/H	W/H	2
146	Rift valley	Uasin gishu	Wareng	Kapseret	W/H	W/H	W/H	2
147	Rift valley	Elgeyo-marakwet	Marakwet	Chebiemit	W/H	W/H	W/H	1
148	Rift valley	Elgeyo-marakwet	Keiyo	Soy	W/H	W/H	W/H	1
149	Rift valley	Elgeyo-marakwet	Keiyo	Tambach	W/H	W/H	W/H	2

150	Rift valley	Nandi	Nandi Central	Kapsabet	W/H	W/H	W/H	1
151	Rift valley	Nandi	Nandi East	Ollessos	W/H	W/H	W/H	1
152	Rift valley	Nandi	Tinderet	Tinderet	W/H	W/H	W/H	1
153	Rift valley	Nandi	Nandi Central	Kapsabet	W/H	W/H	W/H	2
154	Rift valley	Laikipia	Laikipia East	Munyaka	W/H	W/H	W/H	1
155	Rift valley	Laikipia	Laikipia West	Ngarua	W/H	W/H	W/H	1
156	Rift valley	Laikipia	Laikipia East	Central	W/H	W/H	W/H	2
157	Rift valley	Nakuru	Nakuru	Solai	W/H	W/H	W/H	1
158	Rift valley	Nakuru	Naivasha	Naivasha	W/H	W/H	W/H	1
159	Rift valley	Nakuru	Molo	Keringet	W/H	W/H	W/H	1
160	Rift valley	Nakuru	Molo	Mau narok	W/H	W/H	W/H	1
161	Rift valley	Nakuru	Nakuru	Municipality	W/H	W/H	W/H	2
162	Rift valley	Nakuru	Nakuru	Municipality	W/H	W/H	W/H	2
163	Rift valley	Nakuru	Naivasha	Maai mahiu	W/H	W/H	W/H	2
164	Rift valley	Nakuru	Molo	Mau narok	W/H	W/H	W/H	2
165	Rift valley	Narok	Narok North	Mau	W/H	W/H	W/H	1
166	Rift valley	Narok	Narok South	Loita	W/H	W/H	W/H	1
167	Rift valley	Narok	Trans Mara	Keiyan	W/H	W/H	W/H	1
168	Rift valley	Narok	Narok North	Central	W/H	W/H	W/H	2
169	Rift valley	Kajiado	Kajiado Central	Namanga	W/H	W/H	W/H	1
170	Rift valley	Kajiado	Kajiado North	Magadi	W/H	W/H	W/H	1
171	Rift valley	Kajiado	Kajiado North	Isinya	W/H	W/H	W/H	2
172	Rift valley	Kajiado	Kajiado North	Ngong	W/H	W/H	W/H	2
173	Rift valley	Kericho	Kericho	Sigowet	W/H	W/H	W/H	1
174	Rift valley	Kericho	Kericho	Kabianga	W/H	W/H	W/H	1
175	Rift valley	Kericho	Kipkelion	Londian	W/H	W/H	W/H	2
176	Rift valley	Kericho	Kipkelion	Sorget	W/H	W/H	W/H	2
177	Rift valley	Bomet	Buret	Roret	W/H	W/H	W/H	1
178	Rift valley	Bomet	Sotik	Sotik	W/H	W/H	W/H	1
179	Rift valley	Bomet	Bomet	Longisa	W/H	W/H	W/H	1
180	Rift valley	Bomet	Bomet	Bomet Central	W/H	W/H	W/H	2
181	Western	Kakamega	Kakamega South	Ikolomani North	W/H	W/H	W/H	1
182	Western	Kakamega	Kakamega East	Shinyalu	W/H	W/H	W/H	1
183	Western	Kakamega	Mumias	Matungu	W/H	W/H	W/H	1
184	Western	Kakamega	Butere	Butere	W/H	W/H	W/H	1
185	Western	Kakamega	Kakamega Central	Municipality	W/H	W/H	W/H	2
186	Western	Kakamega	Mumias	Matungu	W/H	W/H	W/H	2
187	Western	Vihiga	Emuhaya	Emuhaya	W/H	W/H	W/H	1
188	Western	Vihiga	Hamisi	Tambua	W/H	W/H	W/H	1
189	Western	Vihiga	Vihiga	Chavakali	W/H	W/H	W/H	2
190	Western	Vihiga	Emuhaya	Luanda	W/H	W/H	W/H	2

191	Western	Bungoma	Bungoma South	Kanduyi	W/H	W/H	W/H	1
192	Western	Bungoma	Bungoma South	Bumula	W/H	W/H	W/H	1
193	Western	Bungoma	Bungoma East	Webuye	W/H	W/H	W/H	1
194	Western	Bungoma	Bungoma West	Nalondo	W/H	W/H	W/H	1
195	Western	Bungoma	Bungoma North	Kimilili	W/H	W/H	W/H	2
196	Western	Bungoma	Bungoma East	Webuye	W/H	W/H	W/H	2
197	Western	Busia	Busia	Nambale	W/H	W/H	W/H	1
198	Western	Busia	Teso North	Amagoro	W/H	W/H	W/H	1
199	Western	Busia	Teso South	Amukura	W/H	W/H	W/H	1
200	Western	Busia	Teso South	Chakol	W/H	W/H	W/H	2

**W/H-Withheld to conceal MPPS respondents' identities*

Appendix 3: EA Replacements

Original EA Name	Issues Arising	Replacement EA 1	Issues Arising	Replacement EA 2	Issues Arising	Replacement EA 3	Issues Arising	Replacement EA 4	Issues Arising
<i>W/H</i>	No network EA	<i>W/H</i>	Network EA - Successful						
<i>W/H</i>	No network EA	<i>W/H</i>	Network EA - Successful						
<i>W/H</i>	Inaccessibility due to flooding	<i>W/H</i>	Network EA - Successful						
<i>W/H</i>	No network EA	<i>W/H</i>	No network EA	<i>W/H</i>	No network EA	<i>W/H</i>	No network EA	<i>W/H</i>	Network EA - Successful
<i>W/H</i>	No network EA	<i>W/H</i>	No network EA	<i>W/H</i>	No network EA		Network EA - Successful		
<i>W/H</i>	No network EA	<i>W/H</i>	Network EA - Successful						
<i>W/H</i>	No network EA	<i>W/H</i>	Network EA - Successful						
<i>W/H</i>	No network EA	<i>W/H</i>	No network EA	<i>W/H</i>	Network EA - Successful				
<i>W/H</i>	No network EA	<i>W/H</i>	No network EA	<i>W/H</i>	No network EA	<i>W/H</i>	Network EA - Successful		
<i>W/H</i>	Insecurity in EA prevent data collection	<i>W/H</i>	Network EA - Successful						
<i>W/H</i>	Insecurity in EA prevent data collection	<i>W/H</i>	Network EA - Successful						
<i>W/H</i>	No network EA	<i>W/H</i>	Network EA - Successful						
<i>W/H</i>	Vacant EA	<i>W/H</i>	No network EA	<i>W/H</i>	Network EA - Successful				
<i>W/H</i>	Hostility	<i>W/H</i>	Network EA - Successful						
<i>W/H</i>	Hostility	<i>W/H</i>	Hostility	<i>W/H</i>	Network EA - Successful				
<i>W/H</i>	Inaccessibility due to flooding	<i>W/H</i>	Network EA - Successful						
<i>W/H</i>	No network EA	<i>W/H</i>	Network EA - Successful						
<i>W/H</i>	No network EA	<i>W/H</i>	Network EA - Successful						

W/H	No network EA	W/H	Network EA - Successful						
W/H	No network EA	W/H	Network EA - Successful						
W/H	No network EA	W/H	Network EA - Successful						
W/H	No network EA	W/H	Network EA - Successful						
W/H	No network EA	W/H	Network EA - Successful						
W/H	No network EA	W/H	Network EA - Successful						
W/H	Hostility	W/H	Network EA - Successful						
W/H	No network EA	W/H	Network EA - Successful						
W/H	No network EA	W/H	No network EA	W/H	Network EA - Successful				
W/H	Hostility	W/H	Hostility	W/H	Network EA - Successful				

**W/H-Withheld to conceal MPPS respondents' identities*

Appendix 4- Other Frequently Asked Questions- Community Meetings

	Frequently Asked Questions	Frequency
15	The citizen monitor worried, would he be paid or given some allowances whenever he carried activities for sauti za wananchi?	3
16	Is Twaweza a Government affiliated?	3
17	Would the responses of the 10 selected be a representation of opinions of an individual/community/ specific areas?	3
18	Is there replacement if one lost the phone?	3
19	Have the ten houses already been chosen or do we choose them now?	3
20	What happens if a respondent is illiterate/doesn't know how to use a phone?	3
21	What happens if someone drops?	3
22	Why was the survey being carried out?	3
23	If the team can tell mobile service providers about unavailability of network in the area?	3
24	Will these 10 people selected get to know each other?	2
25	Will they return the phones after the survey?	2
26	Will the benefits be for this community only or other communities too?	2
27	Am I allowed to use the phone for other issues?	2
28	Was the community safe in participating in the survey?	2
29	After the survey how will the results be communicated?	2
30	Why don't you ask us questions as a group instead of asking individually? How will only 10 people be able to represent the whole village considering that people face different challenges?	1
31	Why will the selected persons have to participate for 2 1/2 years	1
32	Which type of questions will be asked during the interviews?	1
33	Why count all houses while we only need ten?	1
34	How long would the survey take?	1
35	Can the panelist leave his or her phone behind when they travel for festive season?	1
36	Was the chief informed about the activity the team is doing?	1
37	Will the team visit again during the whole period of panelist participation?	1
38	If we were going to share phones to every one?	1
39	Why are we not issuing phones for the no network EAs? Where will the team will take the intended phones for the EA?	1
40	Is the team offering assistance or scholarship as we had asked how many children were in household?	1
41	How will they charge the phones as there is no electricity in the area?	1
42	What were the qualification requirements for the citizen monitor as they had nominated two people.	1
43	Whose education were we more interested in, the boy child or the girl child education because there are NGO's focusing more on female empowerment hence the villagers have a saying that ""Wasichana wote wasome na wavulana wote wachunge ng'ombe""?	1
44	What happens if the respondent doesn't understand English/Swahili and the person calling can't speak Somali/Oromo?	1
45	A lot of residents are intimidated to express their views during community meetings with local leaders, so is there a possibility for the organization to do a lot of Civic Education to the locals?	1
46	Will the 10 respondents who will be selected get employed?	1

47	What happens if selected person is not around?	1
48	Can the phone be used by any other member of the family?	1
49	Will the citizen monitor be from the same EA?	1
50	How will the problems in the schools and dispensaries get to us?	1
51	Where are your offices located?	1
52	What happens in case one is called and his phone is off?	1
53	What happens if your household is selected and you don't want to participate?	1

Appendix 5- Other Frequently Asked Questions- Group Meetings

	Frequently Asked Questions	Frequency
14	How are we going to know that the information we give is effective?	4
15	In this group, are we going to be meeting regularly?	4
16	How many other villages are participating?	3
17	Are the questions on the phone going to be as many/same as these ones for today?	3
18	Requested to be given IDs/T-shirts/anything to show they are delegates of Sauti za Wananchi?	3
19	In the whole village why/how were 10 households selected to participate in the survey for 2 1/2 years?	3
20	Where is Ipsos/Twaweza offices located?	3
21	There was also a question about the usage of the phone for other purposes?	3
22	How do you use the solar panel?	3
23	Are you going to build for us hospital/roads/schools before or after end of 2 1/2 years?	3
24	Will the information we give leak to other people?	2
25	How are you going to help the orphans in this village?	2
26	Why are the phones being provided?	2
27	For how long will the survey last?	2
28	How can 2,000 people give opinion on behalf of 40 million people?	2
29	Who is funding the project/who has brought these phones?	2
30	What will be our work?	2
31	At the end, how many times will the office call us?	2
32	Will Twaweza make sure that our problems are addressed in the course of 2 1/2 years/after we will participate?	2
33	Is the government aware of the survey?	2
34	Can any other person answer questions on behalf of selected respondent?	2
35	Can we replace the sim cards if they get lost?	2
36	Can you charge your phone the same time you are charging the solar charger?	2
37	How much is this phone/are we going to pay for the phones?	2
38	Will the help be directed to us only or even the neighboring villages or whole country?	2
39	Will our details be held in privacy?	2
40	If someone is arrested, how will Twaweza help?	1
41	Is there a certain criteria of choosing who to participate?	1
42	Are they employing us to follow up on government institutions?	1
43	Citizen Monitor: when will I start to be given assignments?	1
44	Is there a number to call if there is a problem?	1
45	Which ministry are you from?	1
46	Are you going to give everyone in the village a phone?	1
47	For how long have you been doing this?	1
48	Why were you asking all those questions?	1

49	If a child is sick and taken to hospital, will you foot the bill?	1
50	Are we supposed to carry both phones?	1
51	Why ask information about our children?	1
52	Why are we being grouped?	1
53	How will Twaweza influence stakeholders e.g. government if you are not from government?	1
54	What if one respondent fails to answer questions well?	1
55	How can they know you are connected with other groups of Sauti za Wananchi throughout the country?	1
56	Why do I register the sim card and its already working?	1
57	Will our opinion be taken to radio as a recording?	1
58	What happens if you interchange the spaces for charging the phone?	1
59	Who are the implementers of the survey?	1
60	The booklet talks about awarding people with phones, when is that and how will it be done?	1
61	What will happen after the interviews are done over the phone?	1
62	Will our opinion be against the government?	1
63	Request for solar charger USB cable for electricity charging	1
64	Can the solar charger be used to charge other type of phones except the one given?	1
65	Do you give loans?	1
66	Do you have a department that is catering for the old/widows?	1
67	Does the solar charger have insurance?	1
68	How can we know that you are not devil worshippers?	1
69	Why didn't you tell the chief 2 weeks earlier to inform us that you are coming so that we make inquiries?	1
70	What will happen if we decide to kill you?	1
71	Incase anything happens to our children, how will we be assured that you are not involved?	1
72	Can we also report crime and accidents?	1
73	How long does it take to charge the solar?	1
74	Is this a group like nyumba kumi?	1
75	Is one allowed to ask one of the selected respondents to know how they answered the questions?	1

Appendix 6- 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 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 ρ is "rate of homogeneity". Value of ρ 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 roh = 0.3 (high) =>	roh	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. ~ 0.05 / 2 =	required s.e. (s)	0.025
i.e. required var(p) =	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 6- Data Weighting

Calculation of Sample Weights

Two main sampling weights were calculated for the SzW survey: household weights and individual (for those aged 18+ years) weights. The weights incorporated the probabilities of selecting the SzW EAs from 2009 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 SzW 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 2009 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:

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

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 (A_{hi}) 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 county) as they were during the 2009 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+.