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1  Rationale

Established in 1990, the Water Supply and Sanitation Collaborative Council (WSSCC) is the only United Nations body devoted solely to the sanitation and hygiene needs of the most vulnerable and marginalized people. In 2008, WSSCC established the Global Sanitation Fund (GSF) to boost finances into countries with high needs for sanitation. GSF invests in collective behavior change approaches that enable large numbers of people in developing countries to improve their access to sanitation and adopt good hygiene practices. Independently measuring and verifying the success of the GSF programme at the household and community level is instrumental to the WSSCC/GSF monitoring and evaluation framework.

[Enter brief background on the GFS Programme in the specific country]

This outcome survey is part of a comprehensive, systematic, and harmonized evaluation of GSF programs in numerous countries. The survey is intended to provide consistent and representative estimates of key sanitation and hygiene indicators in the program area for use in assessing programme effectiveness. Using cross-sectional data collection in post-intervention areas as well as a subsample of pre-intervention groups, the survey will document the sanitation and hygiene-related behaviours and attitudes of the target population. Going forward, data generated from this survey may be used to compare indicators across time to assess effectiveness of program activities.

2  Methods

2.1  Design and population

The survey will be cross-sectional, with a multi-stage cluster sampling approach. The target population comprises all households and individuals living in communities where the GSF program has been initiated. Because the effects of the intervention are expected to reach community-wide, including into extra-household settings, data collection will also include assessment of schools and health facilities in all selected communities.

Since the current survey has not previously been implemented in the GSF program area, a matched group of comparable communities in areas that are scheduled to participate in the program but where program activities have not yet been implemented (pre-intervention communities) will be identified to serve as a basis for comparison with the post-intervention sample. Data from the present administration of the cross-sectional survey may be used for comparison to future assessments of the effects of the GSF program.

2.2  Objectives

The objectives of the survey are to:

1.  Provide consistent and representative indicator estimates for key sanitation and hygiene outcomes of the GSF programme in the programme area;
2. Document the degree to which ODF status is sustained among previously ODF-verified communities;

3. Assess integration of equity and non-discrimination and the needs of marginal and vulnerable households/populations in post-intervention communities;

4. Describe emerging indicators of programmatic effect, including behavioural norms, habits, and satisfaction with available sanitation service; and

5. Compare post-intervention communities to pre-intervention communities with respect to key sanitation and hygiene outcomes, including practices, behavioural norms, habits, and satisfaction.

2.3 Study procedures and measures

The survey will focus on a number of indicators related to WASH access, use, management, norms, habits, and satisfaction. The preliminary list of indicators to be measured in all GSF country programs is included in Annex 1. Because within-program and within-household equity are critical to assess, data will be collected from across a representative sample of the GSF program area, as well as two or more individuals within a home, representing men and women, persons who are aged 65 or older, and persons with limited mobility.

The survey will employ interviews and observations to determine the status of the relevant indicators. A list of survey elements by type of respondent is included in Table 1 and draft tools are included in Annex 2. The specific data collection procedures will include the following:

2.3.1 Household data collection tools

- **Head of Household:** A questionnaire (45 minutes) will be administered to the head of household; if the head of household is not available, a secondary financial decision-maker or the youngest male over age 18 in the household will be selected for interview (Annex 2.1)

- **Female (caregiver):** A questionnaire (45 minutes) will be administered to a female caregiver of a child under 5 years of age, if available. If there are no children under 5 or if no female caregivers are available, the youngest female over age 18 in the household will be selected for interview (Annex 2.2). Female respondents will be requested to provide a census of the household members and to report on the sanitation behaviours of all household members.

- **WASH access:** A questionnaire (30 minutes) will be administered as part of either the head of household respondent or female respondent in each household. The household questionnaire will include self-reported WASH and demographic information as well as an inspection of WASH facilities (included in Annexes 2.1 and 2.2).

- **Person over 65 years:** A questionnaire (20 minutes) will be administered to a person over age 65, if present in the household. If more than one person over age 65 is present in the household, the oldest household member who can provide consent will be selected for interview (Annex 2.3).

- **Person with mobility or visual limitations:** The same tool developed for persons over 65 years old (20 minutes) will be administered to a person with mobility or visual limitations, if present in the household. If more than one person with mobility or visual limitations is present in the household, the oldest household member with disabilities who can provide consent will be selected for interview (Annex 2.3).
• **Structured Observations:** A 3-hour direct observation will be conducted to assess household practices related to toileting behaviour, faecal hand contamination, and handwashing. Observations will be conducted in a sub-sample of households for approximately 3 hours per household. Observers will use a structured observation guide to record and describe *toileting practices* (latrine use/open defecation), *disposal of faeces* of children under five years of age, and *handwashing practices* around events of potential pathogen transmission (e.g., latrine use, preparing food, eating, feeding a child, disposing of child faeces, etc.) (Annex 2.4). Observations in each community will be conducted concurrently on the morning of the second day of data collection in each community. The observer will provide a generic rationale (to observe how people relate with their household environment) to the household for the observation and negotiate being situated in a location from which she can have a direct view of the latrine and the kitchen.

2.3.2 Extra-household data collection tools

• **Public schools:** A questionnaire (30 minutes) will be conducted with someone in an administrative or managerial role in all public schools in study communities. Only public (government-run) schools will be included. The questionnaires will include self-reported information as well as an inspection of WASH facilities (Annex 2.5).

• **Public health facilities:** A questionnaire (30 minutes) will be conducted with someone in an administrative or managerial role in all communities where a health facility is present. Only public (government-run) health facilities will be included. The questionnaires will include self-reported information as well as an inspection of WASH facilities (Annex 2.6).

• **Village ODF verification:** An observation tool (30 minutes) will be utilized to record whether human faeces are present in any common OD sites around the village, including along river banks/near water sources, in bushes/forest, in valleys/under bridges, around local pubs, in nearby farm land, in grazing lands, and in refuse collection sites (Annex 2.7).

*Table 1: Survey components by type of respondent*

<table>
<thead>
<tr>
<th>Type of information</th>
<th>Household WASH</th>
<th>Head of Household / Youngest adult male</th>
<th>Caregiver of young child / Youngest adult female</th>
<th>Disability / over 65</th>
<th>Institutions</th>
<th>Village ODF Verification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household demographics / assets</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Institutional descriptors (size, type)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water access, treatment, and storage (with inspections)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Sanitation facilities – presence, use, condition (with inspections)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Handwashing facilities – presence, condition, materials available (with inspections)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Participation and exposure to programme activities</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
Satisfaction with sanitation and hygiene services in the home | X | X | X |
Sanitation habits and social norms | X | X |
Latrine construction, cost, repairs | X |
Latrine use of all household members | X |
Menstrual hygiene management (MHM) | X | X |
Access to sanitation and hygiene services in the home | X | X |
Observation of common OD sites for signs of faeces | X |

2.3.3 Field work and quality control

Pre-testing data collection tools
Standardized data collection tools have been developed as part of the multi-country GSF program evaluation. The standardized tools will be customised to the local context and translated into all applicable local languages. The customised tools will be pretested in a minimum of 25 households representative of the target programme areas prior to training the full data collection team. The pre-test will involve a small group of 4-6 survey personnel who will be supervisors or interviewers in the actual data collection. At least 3 of these personnel will be female in order to pre-test the female (caregiver) questionnaire.

The agenda for the pretest will include:

- 2 days: Training/familiarization on the survey questionnaires and interviewer and supervisor manuals. This training should include reviewing the translation(s) of the tools.
- 1-2 days: Pretest data collection in a minimum of 25 households that are comparable to the households involved in the main study.
- 1 day: Review/modification of survey tools and interviewer and supervisor manuals, including feedback on translations.

Computer assisted data collection (CAPI)
Data collection will be conducted electronically using recognized data collection software on tablets or smartphones to facilitate efficient and clean data entry and linking of data between respondents. Programming of the data collection software will include thorough testing for errors including verification of skip patterns, assuring that responses are required for all questions, and testing of all possible response options. All data collection forms will include unique identifiers as well as integrated start and end times.

Quality control
During data collection, supervisors will closely monitor data collection staff. Quality control activities will include performing daily spot-check observations of interviews as well as conducting periodic re-checks of survey sections. Supervisors will also review completed electronic data collection forms prior to uploading, including verifying unique identifiers. Paper records will be kept to track all interviews including time of interview and name of respondent in order to facilitate data cleaning in the case of errors inputting the unique identifiers or errors in uploading completed forms.
Data from the tablet computers will be uploaded to a secure server regularly (at least every 2-3 days) and monitored for quality assurance. Data monitoring will include assessment of outliers and inter-enumerator frequency of responses for key variables, including skipping variables. A data manager will be available to provide technical backstopping to the survey teams throughout data collection in case of tablet malfunction or programming errors.

2.4 Sampling

2.4.1 Sample calculation

The sample size estimation was developed in order to allow sufficient power to provide reliable point estimate for key outcomes of interest for each of the top-level administrative sub-units (state, region, district, etc.) within the program. Since availability of prior empirical data to guide estimates is limited, we work with the most conservative assumption, i.e., 50% outcome prevalence. While there are multiple outcomes in the GSF program, access to improved sanitation at the Basic service level according to UNICEF/WHO Joint Monitoring Programme criteria (https://washdata.org/monitoring/sanitation) was used for sample size calculation, as the primary goal of the GSF intervention is to eradicate open defecation and a key step to achieve the goal is ensuring universal access to basic sanitation.

**Cross-sectional household survey**

At 95% level of confidence, the formula for sample size calculation in the survey is as follows:

\[ n = \frac{z^2 \cdot p \cdot (1 - p)}{\delta^2} \]

The assumptions for this survey are:

- Estimates made at 95% level of confidence (alpha = 0.05); \( z = 1.96 \)
- Prevalence of outcome of interest = 50%; \( p = 0.5 \)
- Margin of error = 5%; \( \delta = 0.05 \)
- Amount of data loss = 5%
- Given the relatively small number of units per cluster (village), we are not applying a design effect.

Replacing the components of the formula with values, the sample size is:

\[ n = \frac{(1.96)^2 \cdot (0.5) \cdot (1 - 0.5)}{(0.05)^2} = 384.16 \approx 385 \text{ households} \]

To compensate for 5% data loss, **405 households** are needed per top-level administrative sub-unit (state, district, or division) within the program. The program has \( x \) top-level sub-units, thus the target sample size for the entire survey is **YYY households**.

NOTE: If budgetary constraints do not allow for the full sample size, final sample size should be negotiated with WSSCC and the following remark can be added:
However, due to budgetary and logistical constraints, the total possible sample size for the assessment is XX households. We therefore propose to enroll XX households per [top-level sub-unit], which will allow for a margin of error or precision of XX%.

It is advisable to make the number of households per top-level sub-unit as high as possible to maximize the precision and statistical power. The new precision of XX% can be calculated by reformatting the sample size calculation formula to

\[
\delta = \sqrt{\frac{(z)^2 \times (p) \times (1-p)}{n}}
\]

For example, if based on the budgetary and other constraints, we can only collect data from 200 households instead of 385 households. Holding all other values constant, the margin of error or precision will be as follows:

\[
\delta = \sqrt{\frac{(1.96)^2 \times (0.5) \times (1-0.5)}{200}} = 0.06929646 \approx 7\%
\]

The new margin of error or precision will be approximately 7%. The total sample size with additional 5% to compensate for data loss = 200 * 1.05 = 210 households. The remark can be as follows:

“However, due to budgetary and logistical constraints, the total possible sample size for the assessment is XX households. We therefore propose to enroll 210 households per [top-level sub-unit], which will allow for a margin of error or precision of 7%.”

Structured observations
Observations of actual sanitation and hygiene behaviours require a time-consuming approach thus, structured observations are designed to be completed in a subset of survey households. The assumptions for sample size calculation are as follows.

- Prevalence of outcomes of interest among participants from households in highest quantile of exposure scores: 0.35 (e.g. 35% of individuals in households in highest quantile of program exposure score are observed to wash hands with soap and water after fecal contact).
- Prevalence of outcomes of interest among participants from households in lowest quantile of exposure scores: 0.2 (e.g. 20% of individuals in households in lowest quantile of program exposure score are observed to wash hands with soap and water after fecal contact).
- 5% data loss
- Design effect of 2 to account for clustering within households. This is based on the literature on clustering of outcomes at household and community levels (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3235024/).

Based on these assumptions, 860 events are required. Assuming that 3 fecal contact events will occur in each 3-hour observation period, the estimated required sample size for the structured observations is 288 households.
**Comparison of post-and pre-intervention groups**

The analysis necessitates comparison of prevalence estimates in pre-intervention communities to those in post-intervention communities. The formula and assumptions for sample size calculation for the comparison group are as follows:

\[
  n = \left( (p_1 \times (1 - p_1)) + (p_2 \times (1 - p_2)) \right) \times \left( \frac{Z_{\beta} + Z_{\alpha/2}}{p_1 - p_2} \right)^2 \times d \times \text{adj}_{\text{confounder}} \times \text{adj}_{\text{loss}}
\]

1) \( p_1 \) is the Prevalence of outcomes of interest among program beneficiaries: 0.5 (e.g. 50% of program beneficiaries have basic sanitation services); due to limited data, we are using the most conservative estimate

2) \( p_2 \) is the Prevalence of outcomes of interest among non-beneficiaries: 0.35 (e.g. 35% of household in pre-intervention communities have basic sanitation services); based on limited data, we are using an arbitrary but conventional estimation of 15% lower prevalence

3) \( d \) is the Design effect of 2 (\( d = 2 \)) to account for clustering within communities

4) \( \text{adj}_{\text{confounder}} \) is the effect of 20% increase (\( \text{adj}_{\text{confounder}} = 1.20 \)) to allow for adjustment of potential confounders

5) \( \text{adj}_{\text{loss}} \) is the effect of 5% increase (\( \text{adj}_{\text{confounder}} = 1.05 \)) to compensate for non-reporting and data loss.

6) \( Z_{\beta} \) is the critical value for power at 80% = 0.84

7) \( Z_{\alpha/2} \) is the critical value for normal distribution at 95% level of confidence = 1.96

8) Two-sided test.

Based on the assumption, the sample size for pre-intervention comparison group can be calculated as follows:

\[
  n = \left( (0.5 \times (1 - 0.5)) + (0.35 \times (1 - 0.35)) \right) \times \left( \frac{0.84 + 1.96}{0.50 - 0.35} \right)^2 \times 2 \times 1.20 \times 1.05 = 419.28 \approx 420
\]

Based in these assumptions, the sample size for the pre-intervention comparison group is 420 households.

**NOTE:** If budgetary constraints do not allow for the full sample size, final sample size should be negotiated with WSSCC and the following remark can be added:

“However, due to budgetary and logistical constraints, the total possible sample size for the pre-intervention comparison group is **XX households**. Assuming that the prevalence of outcomes of interest among program beneficiaries remained at 50%, this sample size would allow us to detect a difference if the prevalence of outcomes of interest among the comparison group was **XX%.”"
The difference in the prevalence of outcomes of interest among comparison groups of \( XX \)% can be attained most simply by replacing the value of \( p_2 \) through trial and error until the desired sample size is attained, then make the calculation accordingly.

For example, if due to constraints, the total number of households in comparison communities where data collection is possible in only 300 households instead of 420 households. The number of samples in the comparison community before adjusting for design effect and compensating for confounding adjustment and data loss is \( n = \frac{300}{(2 \times 1.20 \times 1.05)} = 120 \) households. Through trial and errors in calculation, the new \( p_2 \) is 32.5% instead of 35%, and the difference is 50% - 32.5% = 17.5%.

2.4.2 Selection of primary sampling units

*Post-intervention sample*

The overall principle of the sampling strategy is to maximize efficiency by following processes needed to 1) provide sufficiently informative and representative indicator estimates for all sampling domains, and 2) to have sufficient statistical power to test key hypotheses of interest with minimal respondent burden and logistical costs. Generally, a multi-stage, stratified, cluster sampling strategy, with random sampling procedures in each of the stages, is best suited for this purpose. The strategy is multi-staged because sampling will occur at more than one administrative level and it is stratified because selection of households will be distributed across strata. This procedure increases the likelihood that households would have been selected with equal probability in the whole survey and a self-weighting sample would have been generated. The overall sampling frame is shown in Table 2.

<table>
<thead>
<tr>
<th>Sampling level</th>
<th>Definition</th>
<th>Country unit name</th>
</tr>
</thead>
<tbody>
<tr>
<td>First level</td>
<td>Largest administrative division in the country (state, division, county, etc.)</td>
<td></td>
</tr>
<tr>
<td>Second level</td>
<td>Administrative unit directly below the first stratum (sub-division)</td>
<td></td>
</tr>
<tr>
<td>Primary sampling unit (PSU)</td>
<td>The unit of CLTS triggering/ODF declaration used in the GSF programme; typically corresponds to a village or community</td>
<td></td>
</tr>
</tbody>
</table>

All areas where the GSF program operates will be included in the sample selection process. If logistically feasible, villages will be randomly selected from each first-level unit using probability proportional to size selection. If necessary for logistical reasons, a sub-sample of second-level administrative units will be selected using probability proportional to size selection. An equal number of villages will then be sampled from within each of the selected second-level units.

Where the second-level units cover large geographical areas, further sampling at an intervening administrative level between the second-level unit and the PSU may be needed to reduce implementation cost and logistical complexity. If a smaller sub-unit is required, the smaller sub-unit may replace the
second-level in the sampling process outlined below. Additional considerations such as implementing partners may also be taken into account when selecting PSUs.

Based on the sample size of XXX households calculated in section 2.4.1 above, the sample will include XX villages across XX first-level units for the post-intervention sample, distributed across administrative units as shown in Table 3.

Table 3: Distribution of the post-intervention sample across administrative units

<table>
<thead>
<tr>
<th>Sampling indicator</th>
<th>Sample size per first-level admin unit</th>
<th>Total sample size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total # HH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of HH sampled per village</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total # villages</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If necessary: Total # second-level units sampled</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If necessary: # villages sampled per second-level unit</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In order to maximize representativeness of the sample, sampling at each administrative level will use procedures that ensure that a) the probability of selection for each unit is known and b) the probability of selection is directly proportional to the size of the unit, as measured by the number program beneficiaries in the unit. These conditions will ensure that units with the highest numbers of beneficiaries have the largest likelihood of being selected. These conditions will improve efficiency by minimizing the variance of indicator estimates and ensuring that precision is maximized and will improve representativeness by providing the information needed for constructing household weights during analyses.

For this assessment, sampling will be done using the following procedures:

Note to data collection firm: Please outline the procedure that you will follow for selecting sub-units (if applicable) and villages. There are multiple procedures that are consistent with the conditions outlined above. One example for selecting villages within a district would be to create a list of all program villages in the district like shown in the table below, with information on the population size in each village (column C). Create a column that tallies the cumulative total population (column D). Use a random number generator to select X random numbers between 1 and the total cumulative population for the district, where X=the number of villages that need to be sampled in the district. Then select the villages with cumulative totals that correspond to the random numbers (see column E). For example, in the table below, Village A would be selected if the random number was between 1-240, Village B would be selected if the random number was between 241-352, etc.

If you randomly select the numbers 430, 316, and 1117, that would correspond to:

- 430 = Village C (353-837)
- 316=Village B (241-352)
- 1117=Village E (894-1600)

<table>
<thead>
<tr>
<th>A. District</th>
<th>B. Village</th>
<th>C. Population size</th>
<th>D. Cumulative population</th>
<th>E. Selection range</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Note to data collection firms: In order to assess the sustained practice of positive WASH behaviours among villages that had been previously declared ODF, at least 430 of the households in the sample should be from ODF-declared villages (based on point estimates ±7% with 95% confidence and design effect of 2). If after random selection of villages there are an insufficient number of ODF-declared villages for a sample size of 430 households, villages within each selected division should be stratified by ODF status and an appropriate number of ODF-declared and non-declared villages should be randomly selected from each stratum. If needed, describe the stratified selection process here.

Within each PSU, XX households will be selected using the procedure outlined in section 2.4.3 below. The number of sampling units selected at each level is presented in Table 4.

Table 4: Sample allocation by administrative units

<table>
<thead>
<tr>
<th>First-level units</th>
<th>Total number of second-level units</th>
<th>Number of second-level units selected</th>
<th>Number of PSUs (villages) selected</th>
<th>Number of households selected</th>
<th>Implementing partners</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Pre-intervention/comparison sample
We will identify pre-intervention areas that are similar to the sampled program divisions with regards to relevant socio-demographic characteristics and baseline WASH characteristics, depending on data availability. A similar sampling strategy to that described above will be used to select PSUs from these comparison pre-intervention areas.

Based on the sample size of 428 pre-intervention households calculated in section 2.4.1 above, the sample will include XXX villages across XXX first-level units for the pre-intervention sample.

Table 5: Distribution of the pre-intervention sample across administrative units

<table>
<thead>
<tr>
<th>Sampling indicator</th>
<th>Sample size per first-level admin unit</th>
<th>Total sample size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total # HH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of HH sampled per village</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total # villages</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If necessary: Total # second-level units sampled</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If necessary: # villages sampled per second-level unit</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2.4.3 Selection below the primary sampling unit

**Household level**

All households in the target PSU will be eligible for recruitment, regardless of household size or duration of residence in the community. XX households will be selected from each of the communities selected for the study. Field teams will obtain updated lists of households in each community from local authorities. Random selection of households will be made using a skip pattern. Field supervisors will calculate a sampling interval based on the formula

\[ x = \frac{y}{z} \]

where

- ‘x’ is the sampling interval
- ‘y’ is the total number of households in the village, and
- ‘z’ is the number of target households for the community.

The field supervisor will then generate a random start point between 1 and the sampling interval value and select from the household list the household corresponding to the sampling interval. Thereafter, the supervisor will use the skip pattern to select the target number of households from the list of households. Once households have been selected from the household list for interview, there will be no substitutions; the sample size has been calculated to account for non-response due to absence or refusal. However, if a selected household had vacated the village and the house is no longer occupied, the nearest household will be selected in its place.

If household lists are not available, teams will use the formula above to identify a sampling interval for the village. Starting from a random point in the village, each enumerator will pick a different direction and sample each Xth house in that direction.

All households where at least one interview was conducted on the first day of data collection in the village are eligible for participation in structured observations. At the end of the first day of data collection, the required number of the households where at least one interview had been conducted the first day will be randomly selected for participation in structured observations on the morning of the second day. Selection will be made using a random number generator.

**Respondent level**

Within each household, up to four residents will be selected for participation in interviews. Eligibility criteria for each type of respondent are as follows. For all eligibility criteria, “available” connotes present in the community during the data collection period and consenting to participation. “Adult” means over age 18 or legally emancipated.

**Head of Household / secondary financial decision-maker / adult male**

- The adult who identifies as head of household (primary financial decision-maker)
• An adult who identifies as a secondary financial decision-maker if the household head is not available
• The youngest available adult male if neither the head of household nor secondary financial decision-makers are available
• Any adult resident of the house if an adult male is not available

**Caregiver of young child / adult female**
• The adult female caregiver of the youngest child under 5 years of age
• The youngest adult female available if no female caregiver is available or there is no child under age 5

**Person with mobility or visual impairments**
• An adult who has difficulty with seeing, walking, self-care such as dressing and washing the body, or using hands for routine activities.
• Able to understand study procedures and provide informed consent

**Person over age 65**
• A person over 65 years of age
• Able to understand study procedures and provide informed consent

Survey staff will use the flow diagrams in Annex 3 to assess eligibility criteria of prospective respondents within each household.

### 2.4.4 Sampling of schools and health facilities

Public schools and public health facilities will be sampled in all selected communities where those institutions are present. If more than one school or health facility is present, one of each type of facility will be randomly selected.

### 2.5 Ethical considerations

#### 2.5.1 Human subjects review or waiver

The study will be submitted to an appropriate review board within the country to ascertain whether the study qualifies for an exemption of review due to its status as an internal program evaluation or whether it requires full human subjects review. No study procedures will be implemented without receiving either approval for human subjects research or a waiver.

#### 2.5.2 Supervisor and interviewer training

Enumerator training will consist of a seven-day curriculum that includes research ethics, rights and protection of research participants, informed consent process, data collection tools and procedures, and use of mobile data collection devices. The training curriculum will be reviewed and approved by an experienced public health professional. The training will be conducted in xxx language(s). The training schedule will include:

- 2 days: programme background, ethics, principles of data collection and sampling methods, review of data collection instruments.
- 1 day: use of computer tablet for data collection and classroom practice
- 1 day: field practice for the household questionnaires
- 1 day: clarifications, revisions, and training on structured observations
Ethical training will include the following themes, which are the topics that are covered in international CITI certification courses:

1. History and purpose of protections for research participants
2. Rights of a research participant:
   a. Right to know what their participation entails, risks or benefits they’ll receive, level of privacy, what will be done with information they give
   b. Right to choose whether to participate, completely free from coercion
   c. Right to privacy of the responses they give
   d. Right to have no harm done to them as a result of participating or not participating
3. Procedures for obtaining informed consent and consent script
4. Procedures for assessment and response to elevated risk to participants throughout study
5. Procedures for keeping data confidential

At the conclusion of this training, enumerators will be given a comprehensive test of ethical and study procedures.

2.5.3 Confidentiality
Names of survey participants will be recorded for identification purposes but will be removed from the dataset once all linking procedures have been completed during the data cleaning process. Interviews will be conducted in a space where the respondent and enumerators can be seen but not overheard. Enumerators will not divulge information shared during the interview to any external parties.

2.5.4 Informed consent
All respondents will be read a description of the study procedures and will be asked to provide consent for participating in the study. Consent will be recorded on signed paper forms as well as electronically. Informed consent scripts are included in Annex 4.

2.5.5 Risks to participation
Participation in the study will not subject participants to any excess risk other than their participation in interviews for up to 75 minutes and the presence of an observer in their homes for up to 3 hours. Study staff will ensure that all participants fully understand that their responses will not in any way affect their community’s participation in the GSF intervention and that all interview responses will be kept confidential.

Data will be stored on password-protected mobile data collection devices, and data will be downloaded onto a password-protected server. In order to follow up with the same families for different interview components, enumerators will retain lists containing the names and ID link for each participant. Enumerators will be instructed to keep these lists confidential and lists will be destroyed once all linking procedures have been completed during the data cleaning process.

2.5.6 Benefits to subjects
There are no direct benefits to participants other than knowing that information gained from this study will contribute to knowledge in the within the GSF programme.
2.6 Data analysis

2.6.1 Data management
All identifying information (such as respondent names) will be removed from the dataset once linking procedures have been completed. All data collection forms will include linking variables to identify the village and household, and these identifiers will be retained throughout the data analysis process.

2.6.2 Analytic approach
The analyses will be guided by an analytical model that describes the hypothesized impact pathway of the program interventions in this context (Figure 1). Exposure to CLTS program activities is expected to achieve outcomes of interest by motivating individual and household actions, and through social influences. Outcomes of interest include access to sanitation and hygiene facilities/services, and behaviors. The latter includes not just latrine use or handwashing but also safe disposal of child feces and the routine operation and maintenance that facilitate latrine use. Improved access and intentional or conscious behaviors are characterized as leading to sanitation and hygiene habits. Improved access and routine operation and maintenance are hypothesized to lead to satisfaction with the available services. Equity in access to services is an important goal of the ASHPP program, and many sanitation programs; equity can be assessed by analyzing access and behavior within-program, within-community, and within-household disparities.

*Figure 1: Analytical model to describe effects of the ASHPP intervention on household outcomes*

Broadly, the types of analyses to be conducted are:

1. Description of survey population, including demographics, access, behaviors, social norms, habits, etc.;
2. Weighted analyses of point estimates and 95% confidence intervals for key variables, overall and by key stratification variables (e.g., division, demographics, wealth status, year of ODF declaration, year of triggering, etc.);
3. Construction of composite indicators including PCA wealth indices, scores for specified constructs (e.g., social norms, habits, satisfaction, etc.), and determination of village-level ODF status.
4. Assessment of sustainability, as indicated by adherence to national and GSF program criteria;
5. Analyses comparing key indicators between intervention and comparison groups;

The JMP global indicator framework for monitoring the drinking water, sanitation and hygiene (WASH) elements of the SDG targets, will be used to guide the choice of program indicators (JMP, 2017). Composite indicators for drinking water (reported water source, location and time required to obtain water), handwashing (observed handwashing facility, soap and location of the facility) and sanitation (reported type of sanitation facility used, safe disposal of feces) will be constructed. Based on these indicators, the distribution of the sampled population across the levels of the JMP ladders will be characterized. Additional indicators related to WASH practices and behaviors will also be calculated. Several composite variables will be constructed, including: a) wealth index, b) program exposure, c) village-level ODF status, d) satisfaction with MHM, e) improved MHM facilities, f) satisfaction with sanitation facilities, g) latrine use habit strength, and f) latrine use social norms.

The preliminary list of indicators that will be included in the analysis is listed in Annex1.

2.6.3 Procedure to generate weighted estimates
If the sampling plan has been carefully followed, the sample is likely to be self-weighting. However, when the imbalance in number of PSUs within divisions (or intervening units) is large, the sample might not be perfectly self-weighting. In order to improve validity of the estimates and inferences drawn from the analyses in such situation, sample weights must be applied for the data distribution to be representative of the program population.

Conceptually, the weight is a correction factor for the differences in the selection probability of each household in the sample due to the multi-stage sampling procedure, and it will be calculated as the inverse of the probability of household selection. Since the sampling procedure involved a multi-stage process, the weights will be derived from the product of the sampling probability of the divisions, (or other intervening units where they exist), the PSU and the household. For estimating indicators, the weights will be normalized by dividing the weight for each survey household by the average of the survey weights for all the households. Where significant levels of non-response occur, the weights will be adjusted to account for non-response.

2.6.4 Estimation of program-level estimates of indicators
Sample count indicators (such as the number of people using unimproved sanitation services in the survey sample) will be calculated by multiplying average household size by sample proportions. For questions that involve household heads/caregivers providing specific information about other household members (e.g. latrine use by each household member), such information will be used to derive sample count statistics. However, where the respondent reported his/her own perception or status (e.g. satisfaction with menstrual hygiene management services), the assumption will be that the status of the respondent is applicable to other relevant household members. Alternatively, for indicators applying only to the respondent themselves, sample count data will be estimated accordingly. To derive program-level count estimates (e.g. number of people using unimproved sanitation services in the program population), raw household weights will be applied to sample count statistics.
2.6.5 Comparison of pre- to post-intervention communities

Differences in indicator values between the pre-intervention and post-intervention communities will be estimated using regression models.
## Annexes

### 3.1 Annex 1: GSF Outcome Survey Indicator List

<table>
<thead>
<tr>
<th>Indicator category</th>
<th>Indicator</th>
<th>Data collection method</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Programme exposure indicators</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participation in ODF programme activities</td>
<td>% of people who participated in different GSF programme activities</td>
<td>Self-report</td>
</tr>
<tr>
<td></td>
<td>% of people who participated in more than one activity</td>
<td></td>
</tr>
<tr>
<td><strong>Sanitation indicators</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latrine access and use</td>
<td>% of people with no access to sanitation facilities (open defecation)</td>
<td>Self-report</td>
</tr>
<tr>
<td></td>
<td>% of people with access to an unimproved sanitation facility</td>
<td>Observation</td>
</tr>
<tr>
<td></td>
<td>% of people with access to a limited sanitation facility</td>
<td></td>
</tr>
<tr>
<td></td>
<td>% of people with access to a basic sanitation facility</td>
<td></td>
</tr>
<tr>
<td></td>
<td>% of people with access to a safely managed sanitation facility</td>
<td></td>
</tr>
<tr>
<td></td>
<td>% of adults who report defecating in the open</td>
<td>Self-report</td>
</tr>
<tr>
<td></td>
<td>% of adults who report always using the latrine</td>
<td>Census</td>
</tr>
<tr>
<td></td>
<td>% of children under 5 whose stools are disposed of appropriately</td>
<td>Census, Observation</td>
</tr>
<tr>
<td>Sustained access to latrine</td>
<td>% of households in previously verified ODF communities that have access to an improved sanitation facility</td>
<td>Self-report, Observation</td>
</tr>
<tr>
<td></td>
<td>% of previously verified ODF communities that remain ODF (no households practice open defecation)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>% of HHs in previously verified ODF communities that adhere to the national ODF criteria</td>
<td></td>
</tr>
<tr>
<td>Condition of the latrine</td>
<td>% of households with access to a latrine with covering on all four sides</td>
<td>Observation</td>
</tr>
<tr>
<td></td>
<td>% of households with access to a latrine that has a functioning way to lock the door or prevent entry while in use</td>
<td></td>
</tr>
<tr>
<td></td>
<td>% of households with access to a latrine that offers a shelter (intact roof)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>% of households with access to a latrine that provides sufficient light when the door is closed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>% of households with access to a latrine that has a lid/cover for the pit hole</td>
<td></td>
</tr>
<tr>
<td></td>
<td>% of households with access to a latrine that has an intact slab</td>
<td></td>
</tr>
<tr>
<td></td>
<td>% of households with access to a latrine that has a floor with no holes or cracks</td>
<td></td>
</tr>
<tr>
<td>Category</td>
<td>Indicator</td>
<td>Source</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Latrine cost and financing</td>
<td>Mean cost of latrine construction in programme area for latrines constructed in the last 2 years</td>
<td>Self-report</td>
</tr>
<tr>
<td></td>
<td>% of households that were able to construct sanitation facilities using their own financial resources</td>
<td></td>
</tr>
<tr>
<td>Decision-making on latrine construction</td>
<td>% of people involved in decision-making regarding the type of toilet constructed</td>
<td>Self-report</td>
</tr>
<tr>
<td></td>
<td>% of people involved in decision-making regarding the location of toilet</td>
<td></td>
</tr>
<tr>
<td>Latrine use social norms and habits</td>
<td>% of population reporting strong social norms favouring latrine use</td>
<td>Self-report</td>
</tr>
<tr>
<td>Intra-household equity in latrine access and use</td>
<td>% of households reporting all boys in the home are allowed to use the household latrine</td>
<td>Self-report</td>
</tr>
<tr>
<td></td>
<td>% of households reporting all girls in the home are allowed to use the household latrine</td>
<td></td>
</tr>
<tr>
<td></td>
<td>% of household reporting that all men in the home are allowed to use the household latrine</td>
<td></td>
</tr>
<tr>
<td></td>
<td>% of households reporting that all women in the home are allowed to use the household latrine</td>
<td></td>
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<tr>
<td></td>
<td>% of households reporting that all elderly persons in the home are allowed to use the household latrine</td>
<td></td>
</tr>
<tr>
<td></td>
<td>% of households reporting that all persons with disabilities in the home are allowed to use the household latrine</td>
<td></td>
</tr>
<tr>
<td></td>
<td>% of women reporting that they can use the household latrine at any time</td>
<td></td>
</tr>
<tr>
<td></td>
<td>% of elderly reporting that they can use the household latrine at any time</td>
<td></td>
</tr>
<tr>
<td></td>
<td>% of people with disabilities reporting that they can use the household latrine at any time</td>
<td></td>
</tr>
<tr>
<td>Satisfaction with sanitation facilities in the home</td>
<td>Mean score of women on index indicating satisfaction with the privacy, safety, and cleanliness of their sanitation facilities</td>
<td>Self-report</td>
</tr>
<tr>
<td></td>
<td>Mean score of people with disabilities on index indicating satisfaction with the privacy, safety, and cleanliness of their sanitation facilities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mean score of people over 65 years on index indicating satisfaction with the privacy, safety, and cleanliness of their sanitation facilities</td>
<td></td>
</tr>
<tr>
<td>Hygiene indicators</td>
<td>% of people with no access to a handwashing facility</td>
<td>Observation</td>
</tr>
<tr>
<td></td>
<td>% of people with access to a limited handwashing facility</td>
<td></td>
</tr>
<tr>
<td></td>
<td>% of people with access to a basic handwashing facility</td>
<td></td>
</tr>
<tr>
<td>Handwashing behaviour</td>
<td>% of people who wash their hands after defecation or toilet use</td>
<td>Observation</td>
</tr>
<tr>
<td></td>
<td>% of people who wash their hands after faecal contact (human or animal)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>% of people who wash their hands before food preparation</td>
<td></td>
</tr>
<tr>
<td>Sustainability of handwashing facilities</td>
<td>% of households in previously verified ODF communities that have access to a handwashing facility on premises with soap and water</td>
<td>Observation</td>
</tr>
<tr>
<td>Water indicators</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access to a water source</td>
<td>% of people with access to surface water for drinking</td>
<td>Self-report</td>
</tr>
<tr>
<td>% of people with access to an unimproved drinking water source</td>
<td>Observation</td>
<td></td>
</tr>
<tr>
<td>% of people with access to a limited drinking water source</td>
<td></td>
<td></td>
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<tr>
<td>% of people with access to a basic drinking water source</td>
<td></td>
<td></td>
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<tr>
<td>% of people with access to a safely managed drinking water source</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water treatment and storage</td>
<td>% of households that treat their water to make it safe to drink</td>
<td>Self-report</td>
</tr>
<tr>
<td>% of households practicing safe water storage</td>
<td>Observation</td>
<td></td>
</tr>
<tr>
<td>Water insecurity</td>
<td>% of households that did not have a sufficient quantity of drinking water at least once in the last month</td>
<td>Self-report</td>
</tr>
<tr>
<td>Menstrual Hygiene Management (MHM) Indicators, household</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Awareness</td>
<td>% of women who were aware of what a period was at their first menstruation</td>
<td>Self-report</td>
</tr>
<tr>
<td>% of women who knew how to manage their first period</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stigma</td>
<td>% of women who agree with the statement: ‘Menstruation is a natural biological process’</td>
<td>Self-report</td>
</tr>
<tr>
<td>% of women who agree with the following statement: ‘Women and girls often feel ashamed about menstruation’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of women who feel ashamed when they are menstruating</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of women who could not perform their daily activities due to menstruation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management</td>
<td>% of women with access to a place at home where they feel comfortable changing their menstrual materials</td>
<td>Self-report</td>
</tr>
<tr>
<td>% of women with access to a place at home where they feel comfortable washing and cleaning their bodies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of women with access to a washing facility that provides sufficient water, light, accessibility, personal safety, and privacy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of women using reusable materials with access to a place where they feel comfortable drying their sanitary cloths in sunlight</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of women using reusable materials with access to a sufficient amount of water for cleaning their sanitary cloths</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of women satisfied with the materials available to them to manage last period</td>
<td></td>
<td></td>
</tr>
<tr>
<td>School indicators –</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latrine access and management</td>
<td>% of schools with no sanitation facility for students</td>
<td>Observation</td>
</tr>
<tr>
<td>% of schools with unimproved sanitation facilities for students</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hygiene access</td>
<td>% of schools with no handwashing facilities</td>
<td>Observation</td>
</tr>
<tr>
<td>% of schools with limited handwashing facilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of schools with basic handwashing facilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of schools with handwashing facilities accessible to small children and people with disabilities</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Water access and management | % of schools with no access to a water source | Self-report |
| % of schools with access to surface water for drinking | Observation |
| % of schools with access to an unimproved water source |
| % of schools with access to a limited water source |
| % of schools with access to a basic water source |
| % of schools with access to a safely managed water source |
| % of schools that treat their water to make it safe to drink |
| % of schools with water available throughout each school day and throughout the school year |
| % of schools with drinking water containers that are accessible to small children and people with disabilities |

| General WASH management | % of schools with a child club that addresses water, sanitation, and hygiene | Self-report |
| % of schools with a parent-teacher association that has addressed water, sanitation, and hygiene in the current school year |
| % of schools with someone designated to make sure drinking water is available, clean toilets, and make sure soap and water are available for handwashing |
| % of schools with a clean compound |

| Menstrual hygiene management (MHM) | % of schools that provide MHM services (e.g. education, disposal facilities for sanitary materials, facilities and materials for washing sanitary cloths, emergency supplies of sanitary materials) | Self-report |
| | Observation |

<p>| Health facility indicators | % of health facilities with no sanitation facility | Observation |
| % of health facilities with unimproved sanitation facilities |
| % of health facilities with limited sanitation facilities |
| % of health facilities with basic sanitation facilities |
| % of health facilities with safely managed sanitation facilities |
| % of health facilities with sex-separated toilets |
| % of health facilities with toilets that are safe, private, and clean |
| % of health facilities with culturally appropriate anal cleansing materials |</p>
<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>% of health facilities with</td>
<td>accessible, safe, private, and clean toilets for</td>
<td>people with disabilities</td>
<td>% of health facilities where human faeces were observed anywhere on the grounds</td>
</tr>
<tr>
<td>% of health facilities where</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>human faeces were observed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>anywhere on the grounds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hygiene access</td>
<td>% of health facilities with no handwashing facilities</td>
<td>Observation</td>
<td></td>
</tr>
<tr>
<td>% of health facilities with</td>
<td>limited handwashing facilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of health facilities with</td>
<td>basic handwashing facilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of health facilities with</td>
<td>handwashing facilities accessible to people with disabilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water access and</td>
<td>% of health facilities with no access to a water source</td>
<td>Self-report</td>
<td>Observation</td>
</tr>
<tr>
<td>management</td>
<td>% of health facilities with access to surface water for drinking</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of health facilities with</td>
<td>an unimproved water source</td>
<td></td>
<td></td>
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<tr>
<td>% of health facilities with</td>
<td>a limited water source</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of health facilities with</td>
<td>a basic water source</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of health facilities with</td>
<td>a safely managed water source</td>
<td></td>
<td>Self-report</td>
</tr>
<tr>
<td>% of health facilities that</td>
<td>treat their water to make it safe to drink</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of health facilities with</td>
<td>water available throughout each day and throughout the year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waste management</td>
<td>% of health facilities with safe disposal of sharp waste</td>
<td>Self-report</td>
<td></td>
</tr>
<tr>
<td>% of health facilities with</td>
<td>safe disposal of infectious waste</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General WASH</td>
<td>% of health facilities with a management committee that has</td>
<td>Self-report</td>
<td></td>
</tr>
<tr>
<td>management</td>
<td>addressed water, sanitation, and hygiene in the past year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of health facilities with</td>
<td>someone designated to make sure drinking water is available, clean toilets, and make</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of health facilities with</td>
<td>sure soap and water are available for handwashing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of health facilities with a</td>
<td>clean compound</td>
<td>Observation</td>
<td></td>
</tr>
<tr>
<td>clean compound</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Menstrual hygiene management</td>
<td>% of health facilities that provide MHM services (e.g. education,</td>
<td>Self-report</td>
<td>Observation</td>
</tr>
<tr>
<td>(MHM)</td>
<td>disposal facilities for sanitary materials, facilities and materials for</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>washing sanitary cloths, emergency supplies of sanitary materials)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 All terms for water, sanitation, and hygiene facilities such as “improved”, “unimproved”, “limited”, “basic”, “safely managed”, etc. are defined according to JMP definitions
3.2 Annex 2: Draft tools
3.2.1 Head of Household / Youngest adult male Questionnaire
3.2.2 Caregiver / youngest adult female Questionnaire
3.2.3 Over 65 / Persons with disability Questionnaire
3.2.4 Structured Observations
3.2.5 School Questionnaire
3.2.6 Health Facility Questionnaire
3.2.7 Village ODF Verification
3.3 Annex 3: Respondent selection flow charts

Flow chart for Head of Household (HoH) Questionnaire

- Is the HH head or a secondary financial decision-maker available?
  - **YES** Administer HoH questionnaire, including WASH observations
    - Is HoH respondent female?
      - **YES** Administer Female (Caregiver) questionnaire
      - **NO** Go to female flow chart
    - **NO** Go to female flow chart
  - **NO** Is a male resident over the age of 18 available?
    - **YES** Administer HoH questionnaire, including WASH observations
    - Determine best time to return for 2nd visit
    - Go to female flow chart
    - **NO** Is HH head, secondary financial decision-maker, or a male resident over age 18 available at 2nd visit?
      - **YES** Administer HoH questionnaire
      - Determine if WASH observations have already been completed; if not, include them. Go to female flow chart if Female (Caregiver) questionnaire is not yet completed.
      - **NO** Administer HoH questionnaire to any adult in the household

**Available means present at home or in the community during survey days**

**Administering module includes securing consent; if the respondent refuses consent, treat the respondent as not available and return to the flow chart**
Flow chart for Female (Caregiver) Questionnaire

Is there at least one female household member over age 18?

YES

Is at least one adult female HH member available?

YES

Is there at least one child <5 in household?

YES

Is the adult female caregiver of the youngest child available for interview?

YES

Administer Female (Caregiver) questionnaire

NO

Identify caregiver of next youngest child, then next youngest, etc.

YES

Administer Female (Caregiver) questionnaire to the caregiver of the youngest child available

NO

Administer questionnaire to youngest adult female in the HH

NO

Determine best time to return for 2nd visit

Is at least one female HH member available at 2nd visit?

YES

Do not conduct female questionnaire for this HH

NO

Flow chart for modules within Female (Caregiver) Questionnaire

Has the HoH questionnaire been completed?

YES

Do not administer WASH observations during female questionnaire

NO

Administer WASH observations during female questionnaire
Flow chart for Over 65 Questionnaire

Is there a person in the household who is over age 65 AND can understand study procedures and provide consent?

YES
Is the person available?

NO
Do not conduct Over 65 questionnaire for this HH

YES
Administer Over 65 questionnaire.
If there is more than one person over 65, conduct interview with oldest person present who can provide consent

NO
Determine best time to return for 2nd visit

Is at least one person over 65 available at 2nd visit?

YES

NO
Do not conduct Over 65 questionnaire for this HH
Flow chart for Disability Questionnaire

Is there at least one person in the household who has difficulty with seeing, walking, self-care such as dressing and washing the body, or using hands for routine activities AND can understand study procedures and provide consent?

**YES**
Is the person available?

**YES**
Administer Disability questionnaire.
Conduct interviews with all persons with disabilities if more than one is available in the HH

**NO**
Do not conduct Disability questionnaire for this HH

**NO**
Determine best time to return for 2nd visit

Is at least one person with disability available at 2nd visit?

**YES**

**NO**
Do not conduct Disability questionnaire for this HH
3.4 Annex 4: Informed consent scripts

Consent form: Head of household / male interview

My name is _______ [Name of Interviewer] and I am working with XXXX on a survey to learn how to help households manage their household surroundings and stay healthy. Your household is one of sixteen households in this community that have been selected to participate in this survey.

It is completely your free choice whether you want to participate or not. There is no problem or penalty if you say “no” now or any time in the future. You can decide not to answer questions and can withdraw from the study at any time.

If you agree to be in this survey, we request that you:

1. Participate in an interview for about 45 minutes
2. Permit us to see some parts of your household and compound during the interview.

In the interview, we will ask some questions about people in your household, life in your household, the facilities in the household and the surroundings, and your household activities. We may also look at specific household facilities and the surroundings.

We are also going to randomly select 4 houses in this community to ask for permission to observe household activities to better understand the way of life of the people in this community. If your house is randomly selected for this observation, someone from our team will observe your household for about 3 hours.

Everything that you tell us will remain private and the information obtained from you will be used for the purposes of this project only. Your name will not be included in any report on this study.

Neither you nor your household will receive any benefit directly if you choose to participate. It will only help us to understand the health of households in your community. It may help us improve conditions in communities in the future. There are no risks to participating except for the time that it will take to participate in the interview.

Do you understand everything I have explained to you?

Do you have any questions about this survey?

Do you agree to take part in this interview? (check one): YES ______ NO ______ (If no, end the interview)

Your Signature or mark: ___________________________ Date: ______________

Your Name (printed): _________________________________________________________________

Signature of person obtaining consent: ___________________________ Date: ______________

Name of person obtaining consent (printed): __________________________________________
Consent form: Female/caregiver interview

My name is _______ [Name of Interviewer] and I am working with XXXX on a survey to learn how to help households manage their household surroundings and stay healthy. Your household is one of sixteen households in this community that have been selected to participate in this survey.

It is completely your free choice whether you want to participate or not. There is no problem or penalty if you say “no” now or any time in the future. You can decide not to answer questions and can withdraw from the study at any time.

If you agree to be in this survey, we request that you:

1. Participate in an interview for about 45 minutes
2. Permit us to see some parts of your household and compound during the interview.

In the interview, we will ask some questions about people in your household, life in your household, the facilities in the household and the surroundings, and your household activities. We may also look at specific household facilities and the surroundings.

We are also going to randomly select 4 houses in this community to ask for permission to observe household activities to better understand the way of life of the people in this community. If your house is randomly selected for this observation, someone from our team will observe your household for about 3 hours.

Everything that you tell us will remain private and the information obtained from you will be used for the purposes of this project only. Your name will not be included in any report on this study.

Neither you nor your household will receive any benefit directly if you choose to participate. It will only help us to understand the health of households in your community. It may help us improve conditions in communities in the future. There are no risks to participating except for the time that it will take to participate in the interview.

Do you understand everything I have explained to you?

Do you have any questions about this survey?

Do you agree to take part in this interview?   YES_____   NO_____ (If no, end the interview)

Your Signature or mark: ___________________________ Date: ____________

Your Name (printed): ________________________________

Signature of person obtaining consent: _____________________ Date: ____________

Name of person obtaining consent (printed): ________________________________
Consent form: Persons with disabilities / elderly persons

My name is _______ [Name of Interviewer] and I am working with XXXX on a survey to learn how to help households manage their household surroundings and stay healthy. Your household is one of sixteen households in this community that have been selected to participate in this survey.

It is completely your free choice whether you want to participate or not. There is no problem or penalty if you say “no” now or any time in the future. You can decide not to answer questions and can withdraw from the study at any time.

If you agree to be in this survey, we request that you participate in an interview for about 20 minutes.

In the interview, we will ask some questions about life in your household, the facilities in the household, and your household activities. We will also look at specific household facilities and the surroundings.

Everything that you tell us will remain private and the information obtained from you will be used for the purposes of this project only. Your name will not be included in any report on this study.

Neither you nor your household will receive any benefit directly if you choose to participate. It will only help us to understand the health of households in your community. It may help us improve conditions in communities in the future. There are no risks to participating except for the time that it will take to participate in the interview.

Do you understand everything I have explained to you?
Do you have any questions about this survey?

Do you agree to take part in this interview? YES______ NO______ (If no, end the interview)

Your Signature or mark: ______________________________________ Date: ______________

Your Name (printed): ___________________________________________

Signature of person obtaining consent: ____________________________ Date: ______________

Name of person obtaining consent (printed): ________________________
Consent form: School Administrator / Head Teacher

My name is _______ [Name of Interviewer] and I am working with XXXX on a survey to learn about water and sanitation practices in this community. Your school has been selected to participate in this survey.

It is completely your free choice whether you want to participate or not. There is no problem or penalty if you say “no” now or any time in the future. You can decide not to answer questions and can withdraw from the study at any time.

If you agree to be in this survey, we request that you:

1. Participate in an interview for about 15 minutes
2. Permit us to see some parts of your school and compound during the interview.

In the interview, we will ask some questions about the school’s facilities and management. We will also look at specific school facilities and the surroundings.

Everything that you tell us will remain private and the information obtained from you will be used for the purposes of this project only. Neither your name nor the name of your school will be included in any report on this study.

Neither you nor your school will receive any benefit directly if you choose to participate. It will only help us to understand the health and practices of people community. It may help us improve conditions in communities in the future. There are no risks to participating except for the time that it will take to participate in the interview.

Do you understand everything I have explained to you?

Do you have any questions about this survey?

Do you agree to take part in this interview? YES______ NO______ (If no, end the interview)

Your Signature or mark: ____________________________ Date: ______________

Your Name (printed): __________________________________________________________

Signature of person obtaining consent: __________________________ Date: __________

Name of person obtaining consent (printed): __________________________________________
Consent form: Health Facility Administrator

My name is _______ [Name of Interviewer] and I am working with XXXX on a survey to learn about water and sanitation practices in this community. Your health facility has been selected to participate in this survey.

It is completely your free choice whether you want to participate or not. There is no problem or penalty if you say “no” now or any time in the future. You can decide not to answer questions and can withdraw from the study at any time.

If you agree to be in this survey, we request that you:

1. Participate in an interview for about 15 minutes
2. Permit us to see some parts of your school and compound during the interview.

In the interview, we will ask some questions about the facilities and management in this health facility. We will also look at specific facilities and the surroundings.

Everything that you tell us will remain private and the information obtained from you will be used for the purposes of this project only. Neither your name nor the name of your health facility will be included in any report on this study.

Neither you nor this health facility will receive any benefit directly if you choose to participate. It will only help us to understand the health and practices of people community. It may help us improve conditions in communities in the future. There are no risks to participating except for the time that it will take to participate in the interview.

Do you understand everything I have explained to you?

Do you have any questions about this survey?

Do you agree to take part in this interview?  YES_____  NO_____ (If no, end the interview)

Your Signature or mark: __________________________ Date: ____________

Your Name (printed): ____________________________________________

Signature of person obtaining consent: __________________________ Date: ____________

Name of person obtaining consent (printed): __________________________