

Research Terms of Reference

WASH Infrastructure Mapping

SSD1909

South Sudan

June 2019

Version 4

REACH Informing
more effective
humanitarian action

1. Executive Summary

| | | | |
|--|--|--|--|
| Country of intervention | South Sudan | | |
| Type of Emergency | <input type="checkbox"/> Natural disaster | <input checked="" type="checkbox"/> Conflict | |
| Type of Crisis | <input type="checkbox"/> Sudden onset | <input type="checkbox"/> Slow onset | <input checked="" type="checkbox"/> Protracted |
| Mandating Body/ Agency | WASH Cluster (UNICEF); the German Corporation for International Cooperation (GIZ) | | |
| Project Code | 32iAFF 2Z1 SSD WASH GIZ | | |
| Overall Research Timeframe (from research design to final outputs / M&E) | 11/2017 to 11/2021 | | |
| Research Timeframe Add planned deadlines (for first cycle if more than 1) | 1. Start collect data: 12/11/2018 ¹ | 5. Preliminary presentation: | |
| | 2. Data collected: 12-28/11/2018 | 6. Outputs sent for validation: January | |
| | 3. Data analysed: Early December | 7. Outputs published: __/__/__ | |
| | 4. Data sent for validation: __/__/__ | 8. Final presentation: __/__/__ | |
| Number of assessments | <input type="checkbox"/> Single assessment (one cycle) | | |
| | <input checked="" type="checkbox"/> Multi assessment (more than one cycle) <i>One mapping activity will be done for each of the 6 selected places</i> | | |
| Humanitarian milestones Specify what will the assessment inform and when e.g. The shelter cluster will use this data to draft its Revised Flash Appeal; | Milestone | | Deadline |
| | <input checked="" type="checkbox"/> | Donor plan/strategy | __/__/__ |
| | <input type="checkbox"/> | Inter-cluster plan/strategy | __/__/__ |
| | <input checked="" type="checkbox"/> | Cluster plan/strategy | Mid-October (HNO) and quarterly (SSHF) |
| | <input type="checkbox"/> | NGO platform plan/strategy | __/__/__ |
| | <input type="checkbox"/> | Other (Specify): | __/__/__ |
| Audience Type & Dissemination Specify who will the assessment inform and how you will disseminate to inform the audience | Audience type | | Dissemination |
| | <input type="checkbox"/> Strategic | <input checked="" type="checkbox"/> Programmatic | <input checked="" type="checkbox"/> Cluster Mailing (Education, Shelter and WASH) and presentation of findings at next cluster meeting |
| | <input checked="" type="checkbox"/> Operational | <input type="checkbox"/> [Other, Specify] | <input type="checkbox"/> Presentation of findings (e.g. at HCT meeting; Cluster meeting) |

¹ Timeline for remaining cities is under development depending on security and accessibility.

| | | | |
|---|--|--|--|
| | | <input type="checkbox"/> Website Dissemination (Relief Web & REACH Resource Centre) <input type="checkbox"/> [Other, Specify] | |
| Detailed dissemination plan required | <input type="checkbox"/> | Yes | <input checked="" type="checkbox"/> No |
| General Objective | To support evidence- based WASH partner interventions in South Sudan by mapping water and sanitation infrastructure facilities and providing information on the functionality and quality of these to the WASH partners. Specifically, mapping water and sanitation infrastructure facilities and providing information on the functionality and quality of these so that WASH partners can take evidence-based decisions. | | |
| Specific Objective(s) | <ol style="list-style-type: none"> To provide up-to-date information on WASH infrastructure service provision in 6 urbans areas of South Sudan, with a focus on water and sanitation facilities; and To provide technical support WASH Development partners and WASH Cluster partners so that they can gather, consolidate and produce actionable information from WASH data collected in South Sudan; | | |
| Research Questions | <ol style="list-style-type: none"> What is the status of key WASH infrastructure, such as boreholes and sanitation points, in urban and peri-urban settings of South Sudan? What are the ownership and maintenance structures in place in urban setting for WASH infrastructure? How many water points and latrines are there by type, improved/unimproved, functionality, access and geographic location? | | |
| Geographic Coverage | Major urban areas, including Wau, Yambio, Yei, Aweil, Rumbek, and Torit, South Sudan | | |
| Secondary data sources | <ul style="list-style-type: none"> REACH WASH Infrastructure mapping (camp setting) GIZ WASH Infrastructure mapping previosuly done in Yambio, Yei and Torit by GIZ. The WASH Cluster Tableau site https://public.tableau.com/profile/wash7070#!/ | | |
| Population(s) <i>Select all that apply</i> | <input type="checkbox"/> | IDPs in camp | <input checked="" type="checkbox"/> IDPs in informal sites |
| | <input checked="" type="checkbox"/> | IDPs in host communities | <input type="checkbox"/> IDPs [Other, Specify] |
| | <input type="checkbox"/> | Refugees in camp | <input type="checkbox"/> Refugees in informal sites |
| | <input type="checkbox"/> | Refugees in host communities | <input type="checkbox"/> Refugees [Other, Specify] |
| | <input checked="" type="checkbox"/> | Host communities | <input type="checkbox"/> [Other, Specify] |
| Stratification <i>Select type(s) and enter number of strata</i> | <input type="checkbox"/> | Geographical #: _ _ _ Population size per strata is known? <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Group #: _ _ _ Population size per strata is known? <input type="checkbox"/> Yes <input type="checkbox"/> No |
| | | | <input type="checkbox"/> [Other Specify] #: _ _ Population size per strata is known? <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Data collection tool(s) | <input checked="" type="checkbox"/> | Structured (Quantitative) | <input type="checkbox"/> Semi-structured (Qualitative) |
| | Sampling method | | Data collection method |

| | | | | | | |
|---|--|--|--|----------------------------|-------------------------------------|-----------------|
| Structured data collection tool # 1 <i>Select sampling and data collection method and specify target # interviews</i> | | | <input checked="" type="checkbox"/> Direct observations (Target #): Target unknown as it will depend on how many water points exist in the 6 towns <input checked="" type="checkbox"/> [Other, Specify] (Target #): mapping | | | |
| Target level of precision if probability sampling | __% level of confidence | | __ +/- % margin of error | | | |
| Data management platform(s) | <input checked="" type="checkbox"/> | IMPACT | <input type="checkbox"/> | UNHCR | | |
| | <input type="checkbox"/> | [Other, Specify] | | | | |
| Expected output type(s) | <input type="checkbox"/> | Situation overview #: __ | <input type="checkbox"/> | Report #: __ | <input type="checkbox"/> | Profile #: __ |
| | <input type="checkbox"/> | Presentation (Preliminary findings) #: __ | <input type="checkbox"/> | Presentation (Final) #: _1 | <input type="checkbox"/> | Factsheet #: _6 |
| | <input type="checkbox"/> | Interactive dashboard #: _ | <input checked="" type="checkbox"/> | Webmap #: _ 6 | <input checked="" type="checkbox"/> | Map #: _ 6 |
| | <input type="checkbox"/> | [Other, Specify] #: __ | | | | |
| Access | <input checked="" type="checkbox"/> | Public (available on REACH resource center and other humanitarian platforms) | | | | |
| | <input type="checkbox"/> | Restricted (bilateral dissemination only upon agreed dissemination list, no publication on REACH or other platforms) | | | | |
| Visibility <i>Specify which logos should be on outputs</i> | REACH [By default unless specified otherwise] | | | | | |
| | Donor: Unicef, GIZ | | | | | |
| | Coordination Framework: WASH cluster logo, Unicef, GIZ | | | | | |
| | Partners: [List logos here if outside coordination framework] | | | | | |

2. Rationale

2.1. Rationale

The dynamic and multi-faceted nature of the South Sudanese displacement crisis has created significant challenges for the delivery of humanitarian aid. Accessibility and security issues within South Sudan have impeded a systematic understanding of WASH needs in many areas of the country. This has created difficulties in establishing a clear and unambiguous system for prioritizing the delivery of aid, thereby limiting the effectiveness of humanitarian planning and limiting the potential impact of donor funding. As this crisis continues to expand, evolve and spill into neighbouring countries, it has become increasingly important to fill information gaps in a systematic and comprehensive manner to inform a more effective humanitarian response and planning for immediate life-saving WASH activities and contingency planning for durable solutions.

REACH, in close coordination with the South Sudan WASH Cluster, has identified four closely related needs that limit the reach, impact, and the effectiveness of WASH partner interventions and service delivery to beneficiaries. These gaps are as follows:

- Lack of a nationwide, county level evidence base for data driven decision making;
- Limited assessment capacity and coordination of assessment execution and design between WASH Cluster partners; and
- Lack of harmonisation of WASH Cluster assessments with ongoing multi-sectorial assessments by other actors;
- Public database of WASH infrastructure in key urban and peri urban locations

Through continued consultation with donors, development actors, WASH Cluster coordination, and wider humanitarian response coordination elements, REACH has concluded that the following elements will also be required to entrench best practices and ensure sustainability of the above activities:

- Continued methodological, analytical and information management (IM) support
- Inclusion of resilience and development actors in capacity building exercises

In order to address significant WASH-specific information gaps across South Sudan, it was proposed that REACH will support the WASH Cluster and WASH development partners through the creation of an infrastructure mapping pilot that could be used by partners countrywide to assist in the harmonisation of WASH infrastructure assessments. Through the synchronisation of data collection and by strengthening the sector's evidence base for decision making and programming, these assessments will support WASH Cluster partners to respond effectively to the needs of the vulnerable populations.

3. Methodology

2.1. Methodology overview

REACH will use quantitative mapping methodology, developed through close coordination between development donors and partners, and the WASH Cluster. Quantitative mapping will record what type of infrastructure exists (type of water point or latrine), who owns the infrastructure, whether it is free for users, how close it is to its users, and test the water at water points for contamination. Enumerators will use smart phones to conduct primary data collection in the designated urban or peri-urban setting, recording the location and condition of basic infrastructure of all water points and latrines in the area.

2.2. Population of interest

Populations residing within major urban areas, including Wau, Yambio, Yei, Aweil, Rumbek, and Torit, South Sudan.

2.3. Secondary data review

The relevant secondary data that is applicable to the WASH conditions in South Sudan and may be used is available through the following resources.

1. Assessments conducted by WASH partners in 2017 and 2018
<https://drive.google.com/open?id=0ByCiKoSmqETaQUF6TloyczJJRE0>
2. The WASH Cluster Tableau site
<https://public.tableau.com/profile/wash7070#!/>
3. The REACH Resource Centre—specifically the sources about the 6 urban areas that are being mapped and the populations that are currently there
www.reachresourcecentre.info

Additionally, once launched the WASH Knowledge Management and Decision Support Web Platform will become a key resource for finding secondary data as well as data gathered from conducted baseline studies.

2.4. Primary Data Collection

The following methodology takes Yambio Town as the case study and this same methodology will be applied to other settings in this mapping activity. The main tool that addresses the core indicators is found under Methodology Tools below. This tool was created from the inputs provided by UNICEF, GIZ, WHO and other key WASH development partners.

Core indicators

In order to conduct a comprehensive infrastructure mapping of WASH facilities in Yambio Town, a sweep of Yambio urban centre was done to account for each of the 250m² (55.6km²) grids which is the entire area. The team was led by the REACH WASH focal person, one GIS officer and data was collected by 17 enumerators in total (each working a different number of days). In order to build the capacity of local staff and assist with the future transfer of tools to partners, REACH worked to include as many NGOs and INGO, government staff as well as UN staff in the training and data collection process.

Following two days of training on the tools, enumerators were assigned a phone which contained Kobo collect and Maps.me. A total of 890 grids were distributed among a team of enumerators, leaving enumerators with 15 250m² grids per day. Enumerators used Maps.me to navigate to their assigned grid, for places where no facility is reportedly present, enumerator filled “empty place” inside the middle the grid. Once it was covered the grids colour will be changed to distinguish them from the yet to be assessed, this will be counter verified during data cleaning by spatially verifying the covered grids through the collected points. In the ODK mapping tool, enumerators will be prompted twice to confirm that they have checked their assigned grid and found no or extra WASH infrastructure within. To avoid overlap each enumerator will only visit the grids they are assigned. Follow the listed steps for effective data collection.

- Ensure a work plan distributing the grids to be covered per enumerator by date. The work plan should be reflected in the ODK form so that only the grids an enumerator is assigned to appears when the enumerator code is inputted.
- Ensure phones have Maps.ME loaded with a point and line kml file exclusive to each enumerator. The loaded kml files should align with the enumerator name and skip logic on the ODK form.
- Collection to start from the centre of the town moving outwards. This is ensured during distribution of the grids to the enumerators.
- Have a memo on best practices to be followed which will be part of training manual that can be referred whenever any clarification is needed. For example, security places shouldn't be mapped. These are sensitive areas that might get our staff into trouble.
- Ensure daily logging of the challenges faced for future considerations and planning.
- Once it is confirmed the grid is well covered, change the colour of the grid point and move to the adjacent closest grid. Maps.me shows the current location in relation to the loaded kml grid layers.
- Ensure production of a progress map showing the covered grids and those that are reported empty. Include these in the daily briefing, which should accompany actions points of the day based on lessons learned from previous day data collection.

2.5. Data Processing & Analysis

At the end of each day, the completed questionnaires will be collected using ODK Briefcase and the grids reviewed to record daily progress. Data will be checked and cleaned on a nightly basis as far as possible to prevent delays in releasing datasets and address data collection problems as they arise.

Data for the WASH factsheets and maps will be analysed on an ongoing basis and at the end of each data collection cycle. The final dataset will be reviewed by REACH HQ before publication and sharing.

Please see Annex 2 for a detailed Data Analysis Framework.

4. Roles and responsibilities

The REACH Assessment and GIS Officer will coordinate closely with partners to define and draft methodology, tools, analysis techniques and the reporting framework. They will design and execute capacity building workshops, as well as supervise and provide on-the-job training during inter-agency assessments. Finally, they will draft and complete assessment reports and factsheets, validate uploaded reports and datasets, and assist with the dissemination of the findings.

The IMPACT country coordinator will provide oversight of assessment tools, methodology design and data collection activities. Furthermore, they will coordinate these activities with the cluster partners to ensure the quality and timeliness of information products. The WASH Assessment Officer, GIS Officer and Field Coordinator will work together to support this

programme, as a part of their overall priorities. They will coordinate directly with partners but will remain under the direct supervision of the IMPACT Country Coordinators.

Table 2: Description of roles and responsibilities

| Task Description | Responsible | Accountable | Consulted | Informed |
|--|--|-----------------------------|---|--|
| <i>Developing tool, questionnaire, indicators, and ToR</i> | WASH Assessment Officer; WASH GIS Officer; GIS Assistant | REACH Assessment Manager | UNICEF, GIZ, WASH Cluster | WASH Cluster, key WASH Donors, WASH development stakeholders |
| <i>Supervising enumerators in the field</i> | GIS Assistant | WASH Assessment Officer | Key WASH INGOs, NGOs and UN agencies | Local authorities, key INGOs, NGOs and UN agencies |
| <i>Daily cleaning and delivery of datasets</i> | GIS Assistant | WASH GIS Assessment Officer | WASH GIS Assessment Officer | WASH Cluster, key WASH Donors, WASH development stakeholders |
| <i>Finalising the outputs</i> | WASH Assessment Officer; GIS Officer; GIS Assistant | REACH Assessment Manager | UNICEF, GIZ, WASH Cluster, REACH HQ | WASH Cluster, key WASH Donors, WASH development stakeholders |
| <i>Output dissemination</i> | WASH Assessment Officer; WASH GIS Officer; GIS Assistant | REACH Sector Unit Manager | WASH Assessment Officer, WASH Cluster, REACH HQ | WASH Cluster, key WASH Donors, WASH development stakeholders |

Responsible: the person(s) who execute the task

Accountable: the person who validate the completion of the task and is accountable of the final output or milestone

Consulted: the person(s) who must be consulted when the task is implemented

Informed: the person(s) who need to be informed when the task is completed

5. Data Analysis Plan

At the end of each day, the completed questionnaires will be collected using ODK Briefcase and the grids reviewed to record daily progress. Data will be checked and cleaned on a nightly basis as far as possible to prevent delays in releasing datasets and address data collection problems as they arise.

Data for the WASH factsheets and maps will be analysed on an ongoing basis and at the end of each data collection cycle. The final dataset will be reviewed by REACH HQ before publication and sharing.

Please see [Annex 2](#) for a detailed Data Analysis Framework.

6. Monitoring & Evaluation Plan

| IMPACT Objective | External M&E Indicator | Internal M&E Indicator | Methodology | Focal point | Tool | Research-specific information (to be filled by country team for each research cycle/ToR) |
|---|---|--|-----------------------|-----------------------|--|--|
| Humanitarian stakeholders are accessing project products | Number of humanitarian organisations accessing IMPACT services/products Number of individuals accessing IMPACT services/products | # of downloads of x product from Resource Centre | User monitoring | Country request to HQ | User_log | Y |
| | | # of downloads of x product from Relief Web | | Country request to HQ | | Y |
| | | # of downloads of x product from Country level platforms | | Country team | | Y |
| | | # of page clicks on x product from REACH global newsletter | | Country request to HQ | | N |
| | | # of page clicks on x product from country newsletter, sendingBlue, bit.ly | | Country team | | Y |
| | | # of visits to the web-based platform (once functional) | | Platform management | | Y |
| Humanitarian stakeholders are using project products | Humanitarian actors use project products as a basis for decision making, aid planning and delivery Number of humanitarian documents (HNO, HRP, cluster/agency strategic plans, etc.) directly informed by project products | Perceived relevance of project programs | Usage M&E | Country team | Usage_Feedback and Usage_Survey template | Usage survey to be conducted at the end of the research cycle related to all outputs, targeting at least 20 partners |
| | | Perceived usefulness and influence of project outputs | | | | |
| | | Recommendations to strengthen project programs | | | | |
| | | Perceived capacity of REACH staff | | | | |
| | | Perceived quality of outputs/programs | | | | |
| | | Recommendations to strengthen project programs | | | | |
| Humanitarian stakeholders are engaged throughout the research cycle | Number and/or percentage of humanitarian organizations directly contributing to project programs (providing resources, participating to presentations, etc.) | # of organisations/WASH cluster partners providing resources (i.e. staff, vehicles, meeting space, budget, etc.) for activity implementation | Engagement Monitoring | Country team | Engagement_log | Running log to be kept of all contributions, inputs and engagement |
| | | # of organisations/WASH cluster partners inputting in research design and joint analysis | | | | |
| | | # of organisations/clusters attending briefings on findings; | | | | |
| | | # of organisations/WASH cluster partners attending trainings | | | | |

ANNEX 1: METHODOLOGY NOTES (IF RELEVANT)

WASH DEVELOPMENT CORE INDICATOR QUESTIONNAIRE

| Section A: GENERAL INFORMATION | | | | | |
|--------------------------------|-------------------|--|-------|---|---|
| A01 | Date of interview | | A07 | Grid number | |
| A02 | Enumerator code | | A08 | GPS coordinates (mandatory) | |
| A03 | Supervisor code | | A09 | Is this area populated? | <ol style="list-style-type: none"> 1. Commercial 2. More than 10 compounds 3. 5 to 9 compounds 4. Less than 5 compounds 5. It is not populated 6. This area cannot be assessed (insecure, bushy/forested, river/lake/pond, private property) |
| A04 | State | | A10 | What are you mapping? | <ol style="list-style-type: none"> 1. Water point (skip to section B) 2. Latrine (skip to section C) 3. There is no WASH infrastructure here |
| A05 | County | | A10.1 | Can you confirm you have walked through the entire grid and mapped all the existing WASH infrastructure, and there is no water point or latrine, or the area is not accessible? | <ol style="list-style-type: none"> 1. Yes, I have walked through the whole grid at there are no water points or latrines. 2. Yes, I am not able to access this grid as it is not accessible 3. No, there is a water point (skip to section B) 4. No, there is a latrine (skip to section C) |
| A06 | Settlement | | | | |

| | | | | | |
|--|--|--|--|----------|--|
| | | | | If A10=3 | |
|--|--|--|--|----------|--|

| Section B: Water Points | | |
|-------------------------|---|--|
| B01 | Type of water source | <ol style="list-style-type: none"> 1. Borehole manual 2. Borehole motorized extraction 3. Water kiosk 4. Stand pipe 5. Piped system (fixed to distribution line) 6. Storage tank (related to distribution point) 7. Protected well (sealed, not only covered in sticks) 8. Unprotected well 9. Spring water/gravity pump 10. Other (specify) |
| B01.1 | Where does the water come from? <i>If B01=3, 4, 5, 6</i> | <ol style="list-style-type: none"> 1. Ground water 2. River 3. Swamp 4. Other (specify) 5. I am unable to confirm |
| B02 | Is the water point functional? | <ol style="list-style-type: none"> 1. Yes 2. No 3. Decommissioned 4. I am unable to confirm |
| B03 | Can everyone access the water point? | <ol style="list-style-type: none"> 1. Yes 2. No 3. I am unable to confirm |

| | | |
|--------------|---|--|
| B03.1 | Why is it not accessible to everyone? <i>If B03=2</i> | <ol style="list-style-type: none"> 1. Belongs to a private house 2. Belongs to an institution (school, hospital, clinic etc) 3. Requires payment/ membership 4. Difficult to reach (disabled people unable to reach) 5. Fear of safety/security to access 6. Other (specify) |
| B04 | In the last month, how did people pay for access to this water point? | <ol style="list-style-type: none"> 1. Per jerrycan 2. Per week 3. Per month 4. When it breaks down 5. Don't pay 6. I am unable to confirm |
| B04.1 | How much do you have to pay? <i>If B09 = 1</i> | <ol style="list-style-type: none"> 1. How much _____ SSP per jerrycan 2. How much _____ SSP per week 3. How much _____ SSP per month 4. How much _____ SSP when it breaks down |
| B05 | Test the water | |
| B09 | What is the name or reference number of the water point? | <ol style="list-style-type: none"> 1. Enter name or reference number 2. No name or reference number available |

Section C: Latrines

| | | |
|------------|-----------------|--|
| C01 | Type of latrine | <ol style="list-style-type: none"> 1. Family latrine 2. Communal/institutional latrine (in marketplace, school, etc.) 3. Shared latrine (between neighbouring HHs) 4. I am unable to confirm |
|------------|-----------------|--|

| | | |
|--------------|---|--|
| C01.1 | Do you have to pay to use the latrine? <i>If C01=2, 3</i> | <ol style="list-style-type: none"> 1. Yes 2. No 3. I am unable to confirm |
| C01.2 | How much do you have to pay? <i>If C01.1 = 1</i> | <ol style="list-style-type: none"> 1. How much _____ SSP per visit 2. How much _____ SSP per week 3. How much _____ SSP per month 4. How much _____ SSP when it breaks down |
| C02 | Is the latrine functional? | <ol style="list-style-type: none"> 1. Yes 2. No 3. I am unable to confirm |
| C03 | Is there a functional hand washing station (with water and soap/ash)? | <ol style="list-style-type: none"> 1. Yes (with water and soap/ash) 2. Yes (with water only) 3. Yes (with soap/ash only) 4. No 5. I am unable to confirm |
| C04 | Can everyone access the latrine? | <ol style="list-style-type: none"> 1. Yes 2. No 3. I am unable to confirm |
| C04.1 | Why is it not accessible to everyone? <i>If C03=2</i> | <ol style="list-style-type: none"> 1. Belongs to a private house 2. Belongs to an institution (school, hospital, clinic etc) 3. Requires payment/ membership 4. Difficult to reach (disabled people unable to reach) 5. Fear of safety/security to access 6. Other (specify) |
| C05 | What material is the roof of latrine made out of? | <ol style="list-style-type: none"> 1. Iron sheet 2. Grass 3. Plastic Sheet 4. No roof |

| | | |
|------------|---|--|
| | | 5. Other (specify) |
| C06 | What material is the floor of latrine made out of? | <ol style="list-style-type: none"> 1. Plastic 2. Concrete 3. Wood 4. Dirt 5. Other (specify) 6. I am unable to confirm |
| C07 | What material are the walls of latrine made out of? | <ol style="list-style-type: none"> 1. Plastic Sheet 2. Bricks/concrete 3. Grass or local materials 4. Tin/other metal sheeting 5. Material or curtain 6. Other (specify) |
| C08 | How clean is the latrine? | <ol style="list-style-type: none"> 1. Clean 2. Slightly clean 3. Unclean 4. I am unable to confirm |
| C09 | How full is the latrine? | <ol style="list-style-type: none"> 1. Full (100%) 2. Almost full (75%) 3. Less full 4. I am unable to confirm |
| C10 | Is the latrine able to be locked from the inside? | <ol style="list-style-type: none"> 1. Yes 2. No 3. I am unable to confirm |
| C11 | Who can use this latrine? | <ol style="list-style-type: none"> 1. Men only 2. Men and women 3. Women only 4. I am unable to confirm |

Section D: CONFIRMATION GRID IS COMPLETE

| | | |
|------------|---|---|
| D01 | Can you confirm you have walked through the entire grid and either mapped all the existing WASH infrastructure, that there is no water point or latrine in the grid, or that the area cannot be accessed? | <ol style="list-style-type: none"> 1. Yes, I have walked through the whole grid at there are no water points or latrines. 2. Yes, I have walked through the whole grid at there are no more water points or latrines to be mapped |
|------------|---|---|

| | | |
|------------|---|--|
| | | <ol style="list-style-type: none"> 3. No, there are more water points or latrines to be mapped 4. It is not possible to access this area |
| D02 | Record the GSP location of the WASH infrastructure | |
| D03 | Do you have any additional comments (only when necessary) | <ol style="list-style-type: none"> 1. Add comment |

ANNEX 2: DATA ANALYSIS FRAMEWORK

| Indicator | Research questions | Questionnaire Question | Choices | Data collection method | Key disaggregations (Group types) |
|--|--|--|--|------------------------|-----------------------------------|
| # of water points by type, improved/unimproved, functionality, access, geographic location and quality | What is the type of each of water point? | B01. Type of water source | <ol style="list-style-type: none"> 1. Borehole manual 2. Borehole motorized extraction 3. Water kiosk 4. Stand pipe 5. Piped system (fixed to distribution line) 6. Storage tank (related to distribution point) 7. Protected well (sealed, not only covered in sticks) 8. Unprotected well 9. Other (specify) | Mapping ODK tool | By water point |
| | What is the functionality of each type of water point? | B01. Type of water source B02. Is the water point functional (water is coming out)? | B01 <ol style="list-style-type: none"> 1. Borehole manual 2. Borehole motorized extraction 3. Water kiosk 4. Stand pipe 5. Piped system (fixed to distribution line) 6. Storage tank (related to distribution point) 7. Protected well (sealed, not only covered in sticks) 8. Unprotected well 9. Other (specify) | Mapping ODK tool | By water point |

| | | | | |
|--|---|---|------------------|----------------|
| | | <p>B02</p> <ol style="list-style-type: none"> 1. Yes 2. No 3. Decommissioned 4. I am unable to confirm | | |
| Is the water point improved or unimproved? | <p>B01. Type of water source</p> <p>B02. Is the water point functional?</p> | <p>B01</p> <ol style="list-style-type: none"> 1. Borehole manual 2. Borehole motorized extraction 3. Water kiosk 4. Stand pipe 5. Piped system (fixed to distribution line) 6. Storage tank (related to distribution point) 7. Protected well (sealed, not only covered in sticks) 8. Unprotected well 9. Other (specify) <p>B02</p> <ol style="list-style-type: none"> 1. Yes 2. No 3. Decommissioned 4. I am unable to confirm | Mapping ODK tool | By water point |
| What is the water point accessibility? | <p>B01. Type of water source</p> <p>B03. Can everyone access the water point?</p> <p>B04. In the last month, how did people pay for access to this water point?</p> | <p>B01</p> <ol style="list-style-type: none"> 1. Borehole manual 2. Borehole motorized extraction 3. Water kiosk 4. Stand pipe 5. Piped system (fixed to distribution line) 6. Storage tank (related to distribution point) 7. Protected well (sealed, not only covered in sticks) 8. Unprotected well 9. Other (specify) <p>B03</p> <ol style="list-style-type: none"> 1. Yes 2. No 3. I am unable to confirm | Mapping ODK tool | By water point |

| | | | | | |
|---|--|---|---|------------------|----------------|
| | Where is the water point? | D02. Record GPS location of the WASH infrastructure | | Mapping ODK tool | By water point |
| | Did water from the water point test positive for contaminants? | B05. Test the water | 1. Negative 2. Positive 3. Not tested | Mapping ODK tool | By water point |
| # of sanitation services by type, improved/unimproved, handwashing station present, functionality, access and geographic location | What is the type of each of latrine? | C01. Type of latrine | 1. Family latrine 2. Communal/ institutional latrine (in marketplace, school, etc.) 3. Shared latrine (between neighbouring HHs) 4. I am unable to confirm | Mapping ODK tool | By latrine |
| | What is the functionality of each type of latrine? | C01. Type of latrine C02. Is the latrine functional? | C01. 1. Family latrine 2. Communal/ institutional latrine (in marketplace, school, etc.) 3. Shared latrine (between neighbouring HHs) 4. I am unable to confirm C02. 1. Yes 2. No 3. I am unable to confirm | Mapping ODK tool | By latrine |
| | Is the latrine improved or unimproved? | C03. Is there a functional hand washing station (with water and soap/ash)? C05. What material is the roof of latrine made out of? C06. What material is the floor of latrine made out of? C07. What material are the walls of latrine made out of? | C03 1. Yes (with water and soap/ash) 2. Yes (with water only) 3. Yes (with soap/ash only) 4. No 5. I am unable to confirm C07. 1. Iron sheet 2. Grass | Mapping ODK tool | By latrine |

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|---|--|---|------------------|------------|
| | | <ul style="list-style-type: none"> 3. Plastic Sheet 4. No roof 5. Other (specify) <p>C08</p> <ul style="list-style-type: none"> 1. Plastic 2. Concrete 3. Wood 4. Dirt 5. Other (specify) 6. I am unable to confirm <p>C09</p> <ul style="list-style-type: none"> 1. Plastic Sheet 2. Grass or local materials 3. Tin/other metal sheeting 4. Sanitation Corridor (curtain wall) 5. Other (specify) | | |
| Does the latrine have a functional handwashing station? | C03. Is there a functional hand washing station (with water and soap/ash)? | <ul style="list-style-type: none"> 1. Yes (with water and soap/ash) 2. Yes (with water only) 3. Yes (with soap/ash only) 4. No 5. I am unable to confirm | Mapping ODK tool | By latrine |
| What are the estimated sludge levels in the latrine? | C09. How full is the latrine? | <ul style="list-style-type: none"> 1. Full (100%) 2. Almost full (75%) 3. Less full 4. I am unable to confirm | | |

| | | | | |
|---|---|--|-------------------------|-------------------|
| <p>What is the latrine accessibility?</p> | <p>C01. Type of latrine C04. Can everyone access the latrine?</p> | <p>C01 1. Family latrine 2. Communal/ institutional latrine (in marketplace, school, etc.) 3. Shared latrine (between neighbouring HHs) 4. I am unable to confirm C04 1. Yes 2. No 3. I am unable to confirm</p> | <p>Mapping ODK tool</p> | <p>By latrine</p> |
| <p>Where is the latrine?</p> | <p>D02. Record GPS location of the WASH infrastructure</p> | | <p>Mapping ODK tool</p> | <p>By latrine</p> |