A STUDY ON THE CURRENT IMPROVEMENT ON COMMUNITY ACCESS AND PRACTICES ON WATER, SANITATION AND HYGIENE IN BIDIBIDI SETTLEMENT IN YUMBE DISTRICT.

FEBRUARY 2021
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Acknowledgments

WMU would like to express its appreciation to UNHCR for assigning us the opportunity to conduct the End line survey. In addition, we would also want to appreciate whoever participated in the exercise that provides the key milestones to be realized by the project.
### Abbreviations and Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
</tr>
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<tbody>
<tr>
<td>KAP</td>
<td>Knowledge, Attitude and Practise</td>
</tr>
<tr>
<td>WASH</td>
<td>Water sanitation and Hygiene</td>
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<tr>
<td>FGDs</td>
<td>Focused Group Discussion</td>
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<tr>
<td>KII</td>
<td>Key Informant Interviews</td>
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<tr>
<td>WMU</td>
<td>Water Mission Uganda</td>
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<td>UNHCR</td>
<td>United Nations High Commissioner for Refugee</td>
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<td>OPM</td>
<td>Office of the Prime Minister</td>
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<tr>
<td>POCs</td>
<td>Persons of Concern</td>
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<td>RWCs</td>
<td>Refugee Welfare Councils</td>
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<td>HH</td>
<td>House holds</td>
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</table>
Executive summary

This report highlights the major findings and overall achievements of the WASH project over the 12 months period.

The End line survey confirmed that the main source of water for refugee families is tap stands (98%). The project also impacted on the Average litres of potable water per person per day collected at HH level. Zone 1 (19.2 L/P/D), Zone 2 (19 L/P/D), Zone 3 (18 L/P/D), Zone 4 (14 L/P/D) and Zone 5 (19 L/P/D) Waiting time has reduced by 6% because of the timeliness of our technicians on ground.

% of HHs with at least 10 L/P protected water storage capacity from baseline (58%) to (76%) End line. The maximum distance (m) from household to potable water collection point is in a walkable distance of not more than 10 minutes.

100% HHs are collecting drinking water from protected / treated sources. 97.8% HHs have family latrines. There’s a decline of 3% in cases of open defecation. 95% of HHs have access to bathing shelter facility.

99% of surveyed HHs have access to soap because of the UNHCR.
### WASH PARAMETERS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Indicator</th>
<th>Zone 1 Baseline Findings</th>
<th>Zone 1 End line Findings</th>
<th>Zone 2 Baseline Findings</th>
<th>Zone 2 End line Findings</th>
<th>Zone 3 Baseline Findings</th>
<th>Zone 3 End line Findings</th>
<th>Zone 4 Baseline Findings</th>
<th>Zone 4 End line Findings</th>
<th>Zone 5 Baseline Findings</th>
<th>Zone 5 End line Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Quality</td>
<td>Average litres of potable water/person/per day collected at HH level.</td>
<td>17L/P/D</td>
<td>19.2 L/P/D</td>
<td>13L/P/D</td>
<td>19 L/P/D</td>
<td>21 L/P/D</td>
<td>18 L/P/D</td>
<td>17 L/P/D</td>
<td>14 L/P/D</td>
<td>22 L/P/D</td>
<td>19L/P/D</td>
</tr>
<tr>
<td>Water Quality</td>
<td>% HHs with at least 10 L/p protected water storage capacity</td>
<td>67%</td>
<td>79%</td>
<td>50%</td>
<td>66%</td>
<td>38%</td>
<td>82%</td>
<td>52%</td>
<td>63%</td>
<td>62%</td>
<td>90%</td>
</tr>
<tr>
<td>Water Access</td>
<td>Maximum</td>
<td>240 M</td>
<td>220 M</td>
<td>400 M</td>
<td>375 M</td>
<td>250 M</td>
<td>200 M</td>
<td>320 M</td>
<td>300 M</td>
<td>250 M</td>
<td>220 M</td>
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<td></td>
<td>1</td>
<td>2</td>
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<td>distance [m] from household to potable water collection point</td>
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<td>Water Quality</td>
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<tr>
<td>% HHs collecting drinking water from protected/treated sources</td>
<td>100%</td>
<td>100%</td>
<td>99%</td>
<td>100%</td>
<td>99%</td>
<td>100%</td>
<td>99%</td>
<td>100%</td>
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<tr>
<td>Sanitation</td>
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<td></td>
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<tr>
<td>% HHs with family latrine/toilet</td>
<td>98%</td>
<td>99%</td>
<td>94%</td>
<td>98%</td>
<td>93%</td>
<td>97%</td>
<td>97%</td>
<td>99%</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>% HHs reporting defecating in a toilet/latrine</td>
<td>98%</td>
<td>99%</td>
<td>96%</td>
<td>98%</td>
<td>86%</td>
<td>94%</td>
<td>97%</td>
<td>99%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% HHs practicing open defecation</td>
<td>2%</td>
<td>1%</td>
<td>4%</td>
<td>2%</td>
<td>14%</td>
<td>6%</td>
<td>3%</td>
<td>1%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% HHs having access to</td>
<td>56%</td>
<td>99%</td>
<td>80%</td>
<td>97%</td>
<td>81%</td>
<td>88%</td>
<td>77%</td>
<td>90%</td>
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</tr>
</tbody>
</table>

**Include defecating in the bush at night.**
<table>
<thead>
<tr>
<th></th>
<th>% HHs with access to soap</th>
<th>76%</th>
<th>97%</th>
<th>76%</th>
<th>83%</th>
<th>77%</th>
<th>79%</th>
<th>57%</th>
<th>85%</th>
<th>69%</th>
<th>90%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hygiene</strong></td>
<td></td>
<td>46%</td>
<td>95%</td>
<td>32%</td>
<td>91%</td>
<td>43%</td>
<td>79%</td>
<td>23%</td>
<td>85%</td>
<td>23%</td>
<td>53%</td>
</tr>
<tr>
<td>% HHs with access to a specific hand-washing device</td>
<td>96%</td>
<td>98%</td>
<td>99%</td>
<td>99%</td>
<td>92%</td>
<td>96%</td>
<td>90%</td>
<td>95%</td>
<td>97%</td>
<td>98%</td>
<td></td>
</tr>
<tr>
<td><strong>Solid Waste</strong></td>
<td></td>
<td>79%</td>
<td>92%</td>
<td>83%</td>
<td>90%</td>
<td>69%</td>
<td>89%</td>
<td>74%</td>
<td>91%</td>
<td>74%</td>
<td>93%</td>
</tr>
</tbody>
</table>
UNHCR WASH STANDARD INDICATORS.

These programme indicators are common to UNHCR WASH projects.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water supply</td>
<td>(86.2%) BL and (87.5) EL of surveyed households reported public tap stands to be their principle source of drinking compared to (14.2%) BL and (12.4%) EL who reported Hand pumps. There is no more water trucking in Bidibidi settlement. These 2 protected sources of drinking water their difference is accessibility and availability to household.</td>
</tr>
<tr>
<td></td>
<td>(82%) BL (84.4%) EL of Adult females, (12%) BL (10.5%) EL and (6%) BL (3.5) EL Adult males, are responsible for water collection. Most HHs are within (400M) BL, (273M) EL (10 minutes walk distance) and (89%) BL, (91%) EL HHs use jerrycans for water storage.</td>
</tr>
<tr>
<td></td>
<td>Average litres of potable water collected / per person / day is still below standard expect for zone 3 and 5 which is at 21l/p/d and 22l/p/d being above</td>
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</tbody>
</table>
the sphere standards while Zone 1 at 19.2l/p/d, Zone 2 at 19 l/p/d Zone 3 at 18l/p/d, zone 4 at 14l/p/d and zone 5 at 19l/p/d. There is a slight decline in the water per capita on HH level at the End line findings because of the water storage containers that have worn out.

(53.8%) BL (76%) EL HHs reported to be with at least 10 L/p protected water storage capacity, zone 4 reported to have the lowest with 63%.

(51.8)BL, (28%) EL of respondents reported to be cleaning their water containers at least once week, (39.2%) BL (70.9%) EL every time they use them while 9%BL (1%) EL say clean their containers at least once a month.

| Water treatment | (76.2 %) BL and (68%) EL of respondents reported not to treat their drinking water. (23.8%)BL and (32%) EL boil their water as a way of treatment, (13%) BL and (8%) EL let the water stand and settle before drinking, (20%)BL and (18%) EL use disinfection products and (7%) BL and (4%) EL expose water to sunlight as a way of water treatment. (75.2%)BL and (81%) EL of respondents‘ fingers didn’t touch the water during the observation of water removing from the storage container, (12%) BL and (7%)EL touched the water while (19%)BL and (12%) EL poured the water during the observation. More sensitization has to made to the 7% who are contaminating their water storage. This clearly shows that HHs are knowledgeable about the two cup system. |
| Sanitation | Over (41.2%) BL and (17%) EL children below 5 years practise Open defecation, 45.4% BL and (70%) EL use HH latrines, (7%) BL and (11%)EL use plastic potties. |
For children that practise open defecation, 90% HHs dispose off their children’s faeces into HH latrines while 10% buried it.

Only (5%) BL (2.4)EL of adults still practise open defecation with reasons of (30%)BL and (19%)EL stated that they have no latrines, 40%BL (22%)EL stated that latrines are too far, (10%)BL and (6%)EL stated that they were too tired to go latrine, (9%)BL and (6%) stated that latrine too dark at night while (1%)BL had no reason for their open defecation.

(93%) BL and (81%) EL of HHs use a single household facility while (4%) BL and (19%) EL use shared facilities and the remaining 3% use communal latrines. (58.4%) BL and (71%) EL HHs use bricks for latrine construction, (10.4%) BL and (6.9%) EL use metal, (14.8%) BL and (8%) EL use wood, while (8%) BL and (54%) EL use plastic sheeting for their latrine construction.

(66%)BL and (72%)EL HH latrines provide privacy to HH members while (34%) and (28%)EL don’t provide privacy to the HH members for reasons like missing locks, or semi – permanent door.

(74.4%) BL and (93.6%) EL of HHs reported to have designated bathing facilities while (26.4%)BL and EL (6.4%) don’t have designated bathing facilities.

(72%) BL and (87%) EL of respondents reported to be observing presence of mosquitoes, (10%)BL (72%). (8%) BL and (20%) EL respondents said they observed Cockroaches, (6%)BL and (4%) EL flies while (13%)BL and (4%) EL did not observe any vectors.

<table>
<thead>
<tr>
<th>Waste management.</th>
<th>(70%) of respondents reported that they have solid waste disposal facilities.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(75.8%)BL and (81.2%)EL dispose off in HH pits, (9.4%) BL and (43.1%)EL designated areas, (8.4%)BL and (4.7%) EL burn it and (6.4%) BL and (3.3%)EL bury it.</td>
</tr>
<tr>
<td>Category</td>
<td>Details</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Hygiene</td>
<td>Respondent reported the key times when they wash their hands with soap (97%) before eating, (91%) after defecation, and (66%) before cooking. The other important hand washing moments yet ignored and less practised are: (44%) before breast feeding, (27%) after handling baby faeces, (33%) before feeding children. The other important hand washing moments yet ignored and less practised are: (44%) before breast feeding, (27%) after handling baby faeces, (33%) before feeding children. Hand washing with water is an adopted practise (32%) BL and (87.2%) EL and in the absence of soap, respondents opt for the following (27%) BL and (8.4) EL water only, (68.6%) BL and EL (84%) Ash. With observation, (66.6%) BL and (80.6%) EL respondents had HWF, (33.4%) BL and (20.4%) EL didn’t have HWF while (70.2%) BL and (88%) EL had water in the HWF, (10.4%) BL and EL (12%) didn’t have water in those HWF, (72.8%) BL and (81%) EL while (27.2%) BL and (18%) EL didn’t have soap next to the HWF soap placed near the HWF.</td>
</tr>
<tr>
<td>Health and hygiene message</td>
<td>(71%) BL and (83%) EL of surveyed HHs have access to Hygiene and Health messages. Of the households reported that most effective way of receiving hygiene messages, of the sampled households cited (28.4%) BL and (59%) EL Home visits from CHWs, followed by (12%) BL and (27%) EL community meetings, (3%) BL and (5%) EL FGDs and lastly (3%) BL and (37%) EL radio.</td>
</tr>
<tr>
<td>Diarrhoea prevalence knowledge and health seeking behaviour</td>
<td>Diarrheal cases were reported by (18%) BL and (11%) EL amongst children below 5 years. While (31.4%) BL and EL (16%) of household cited diarrheal cases amongst adults. Households reported that the most common methods used to prevent diarrhoea with citing (81%) BL and (84.4%) EL hand washing with soap,</td>
</tr>
</tbody>
</table>
Background and context

Over the past three years, more than a million South Sudanese refugees have escaped to Uganda, fleeing the violence of civil war and famine in their home country. But their fight for survival doesn’t end when they arrive. Due to the overwhelming influx of people, Uganda’s infrastructure can’t provide enough access to safe water for refugees and their local host communities. And without an understanding of healthy sanitation and hygiene practices, deadly waterborne illnesses can spread quickly. The United Nations has declared this refugee crisis the largest in Africa, and the need is both urgent and enormous.

(https://reliefweb.int)
Project outcomes
Outcome 1: Increased average per capita water consumption of all the 5 zones from 17 l/p/d to 20 l/p/d.

Outcome 2: Improved sanitation facilities according to SPHERE standards on appropriate use and regular maintenance of facilities and hand washing.

Intervention Plan

A) Sector: The proposed project will focus mainly on WaSH sector.

B) # Of Individual targeted: 231,065 (Refugee Influx dash board)

C) Geographic Area: The project was implemented in district of Yumbe entailing all the 5 zones.

Objective of the End line Survey
‘The main objective of the End line study was “to analyze the impacts of the project intervention by comparing the data with the set project indicators.

Methodology
This section provides a detailed description of the study process. It focused on the study design, data collection and analysis and reporting process.
The Study Design

A mix of both quantitative and qualitative techniques was adopted in the End line study. Quantitative data was collected through household surveys. Qualitative data was collected through structured key informant interviews and focus group discussions. These were moderated using discussion guidelines. The data collection tools (household survey and discussion guides) were developed using information generated through review of key project proposal and the monitoring and evaluation plan and other key documents. The quantitative data collection tools were leveraged on smartphones with Global Positioning System (GPS) facility enabled to support geo-referencing of survey locations and spatial analysis.

The Study Area

The quantitative data collection was restricted to zone 1, zone 2, zone 3, zone 4 and zone 5. On the other hand, qualitative data was obtained from both the project area but also from relevant authorities in Yumbe District. In addition, RWCs and other key stakeholders that work within the settlement were be considered.

The Sampling Strategy

The Proportionate Sampling Technique designed by Taro Yamane (1967) was adopted for the End line survey. This was based on the household numbers from the refugee and host communities. Probabilistic and non-probabilistic methods were then be used to sample the key respondents at household level. Therefore, the household numbers for each community were obtained to facilitate scientific determination of the sample size. Simple random sampling technique were adopted to select individual households for interviews.
Sample Size Determination

The following formula by Taro Yamane (1967) was applied to determine the sample size. This was based on the 2014 National census and Office of Prime Minister (OPM) Refugee Information Management (RIMs) population to determine the sample of the end line study and the Plan of action.

\[ n = \frac{N}{1 + Ne^2} \]

Where;

\( n \) = Sample Size
\( N \) = Population size (number of households from)
\( e \) = Confidence interval (0.05).

In summary, overall sample size were split according to the different zone populations at a 95% level of confidence and 5% margin of error.

<table>
<thead>
<tr>
<th>ZONES</th>
<th>POPULATION SIZE</th>
<th>SAMPLE SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone 1</td>
<td>43,482</td>
<td>366</td>
</tr>
<tr>
<td>Zone 2</td>
<td>49,772</td>
<td>368</td>
</tr>
<tr>
<td>Zone 3</td>
<td>54,367</td>
<td>372</td>
</tr>
<tr>
<td>Zone 4</td>
<td>31,987</td>
<td>362</td>
</tr>
<tr>
<td>Zone 5</td>
<td>49,763</td>
<td>370</td>
</tr>
</tbody>
</table>
3. A blend of several data collection methods were used. This was aimed at triangulating and authenticating the data collected as indicated in the study design. This was also be able to overcome the intrinsic biases that emerge as a result of application of a single method. The following are key data collection methods that were employed in the End line study.

**Household surveys**

A semi-structured quantitative household survey tool was self-administered by a team of competent enumerators. The tools were pre-tested before the actual administration in the data collection exercise. Pre-testing facilitated fine-tuning the tools to ensure relevance, consistency, completeness and coherency of all questions in the tool.

**Focus Group Discussions**

FGDs was conducted with selected participants. This helped to authenticate the quantitative data on the key project indicators. Purposive sampling technique was used to determine the number of focus group discussions to be conducted. This was based on the fact that; the targeted groups were able to provide an in-depth information that provided a comprehensive understanding of the indicator status. In particular, FGDs targeted WUC, Refugee Welfare Council members, each FGD constituted of 10-12 participants for easy moderation and management.

**2.5 Recruitment and Training of Data Collectors**

The project recruited data enumerators with previous research experience and the ability to speak the local dialects. Translation with cushion of transcription errors were considered since the Southern Sudan dialects are diverse. 10 interviewers for quantitative data were recruited. The project also recruited an addition of 2
Research Assistants well versed in qualitative data to conduct focus group discussions while the WMU M&E staff conducted the key informant interviews.

Enumerators in particular were trained in data collection techniques, mastery of the data collection tools before field data collection exercise. During the training, the field team was also be briefed on the objectives of the End line, how to identify the appropriate respondents at various levels and how to fill in the questionnaire appropriately. Emphasis was put on research ethics, accuracy, completeness and the importance of rapport, dress code in data collection.

Quality Assurance and Control

Quality control is a process that was insured right from recruitment of competent enumerators, training, pretest, back stopping and close supervision. In this particular review, it was achieved through the following;

- Competent Data enumerators were carefully selected and preference for enumerators that had previous research experience in mixed research methodology (qualitative and qualitative research)

- A one-day comprehensive training was conducted to orient the enumerators of the data collection tools.

- A pre-test was conducted to evaluate the enumerators comprehension of the both the qualitative and quantitative tools and correction done prior to commencement of the actual data collection. The pre-test determined the average number of questionnaires that could be done in a day without constraining the data.

- The M&E Officer supervised the data enumerators throughout the entire fieldwork period
• The research team kept notebooks to record any events and were encouraged to take photos that seemed important in the interpretation of the findings.

• The team conducted daily de-briefing among the research team. The errors found were discussed with the Research Assistants before proceeding to do more field work activities the next day. This procedure helped to effectively identify mistakes during recording of responses and rectify the mistakes.

VALIDATION OF RESULTS, REPORTING AND FOLLOW UP

Data triangulation and validation is an integral part of the exercise and therefore the Initial findings were contained in the draft report and under the guidance of the M&E Officer. The team used the feedback provided in the compilation of the final report.

ETHICAL CONSIDERATIONS

Participation in this End line exercise was voluntary and a consent form that was signed by the respondent. Although, respondents/participants were encouraged to participate, they were free to turn down the invitation if they so wish. All information collected was treated as confidential and was used for its intended purpose only.

KEY FINDINGS
The principle source of drinking water most commonly used by all respondents across the 5 zones from the above figure 1 is (89.4%) Public tap stand as it is clearly shown. The rest of the respondents (10.6%) Hand pumps / Bore holes. Zone 4 scored the highest percentage of respondents who reported to use (92%), followed by zone 2 (91%), zone 3 (89%), zone 5 (87%) and zone 1 (88%). However, from the survey, there is no more water trucking in Bidibidi settlement.

WMU has prioritized in terms of increasing access of protected water sources across Bidibidi settlement. This was notably seen by the motorized water source with funding from UNHCR and Coke cola in zone 4 that saw the end to water trucking and the extension lines at the trucking points of zone that also ended water trucking in that zone.
Average findings showed that respondents cited that the second alternative was bore holes / hand pumps as clearly indicated above. Reasons for their choice is that Bore holes / hand pumps are more reliable since their water is always available and that they neither depend on solar or fuel in order to pump their water. Zone 1 (93%), zone 2 (97%), zone 3 (95%), zone 4 (92%), zone 5 (90%).

**Sources of water for other activities**
Survey findings revealed that HHs use Hand pumps and Public tap stands as their sources of water for other activities like gardening and brick laying. This because the alternative sources are either insufficient or not adequate enough to supply the population with water for other activities.

It further indicates that the protected sources for domestic drinking water are being encroached on for other activities. On average Hand pump and (16%) Public tap stand (51%).

**Figure 3. Source of water for other activities**

- **Zone 1:** Hand Pump: 9%, Tap stand: 14%, Rain water: 11%, Surface water: 39%, Unprotected spring: 33%
- **Zone 2:** Hand Pump: 55%, Tap stand: 70%, Rain water: 8%, Surface water: 11%, Unprotected spring: 11%
- **Zone 3:** Hand Pump: 60%, Tap stand: 24%, Rain water: 11%, Surface water: 20%, Unprotected spring: 17%
- **Zone 4:** Hand Pump: 39%, Tap stand: 20%, Rain water: 24%, Surface water: 11%, Unprotected spring: 11%
- **Zone 5:** Hand Pump: 33%, Tap stand: 36%, Rain water: 17%, Surface water: 8%, Unprotected spring: 14%

**Water per capita per zone.**
From the findings, the average liters of portable water for HHs is 18.8 l/p/d. Zone 1 at 19.2 l/p/d, zone 2 at 19 l/p/d, zone 3 at 18 l/p/d, zone 4 at 14 l/p/d and zone 5 at 19 l/p/d.
On inspection by the survey Enumerators, (76%) average HHs at least had 10 liters per day covered their storage water containers. zone 1 (79%), zone 2 (66%), zone 3 (82%), zone 4 (63%) zone 5 (90%). This is a good indication that HHs have learnt the importance of covering (protecting) drinking water containers.

**Distance to the nearest water point**
Findings show that the average walking distance to the nearest water point is 263M. Zone 2 HHs walk for 400 meters which is understandable since zone 2 by nature of its setting, it’s a water stressed area. Zone 1 HHs walk for 220 m and zone 5 have the same walking distance to the nearest water points while zone 4 HHs walk for 300 meters.

The findings further revealed that water points are within reach of the PoCs. No HH walks beyond 15 minutes to get water.

Figure 6. Distribution of HHs by distance to the nearest water point (meters)

Amount of water collected for HH use.
Figure 7: Proportion of HHs on whether they collect enough water to meet their needs

Reasons why HHs don’t collect enough

- Zone 1: 67% Yes, 33% No
- Zone 2: 58% Yes, 42% No
- Zone 3: 77% Yes, 23% No
- Zone 4: 52% Yes, 48% No
- Zone 5: 61% Yes, 39% No
The survey also sought to know as to why HHs don’t collect enough water to meet their domestic needs. And majority (60%) don’t have enough storage containers. Zone 3 (44%) having the most HHs without enough storage container, followed by zone 4 (57%) then zone 5 (60%), zone 1 (67%) and lastly zone 2 (73%). Most HHs’ storage containers have worn out since there are no partners supplying water storage containers.

The second reason as to why HHs don’t collect enough water was water storages with (20%), thirdly reported was waiting time at the water point (10%) and lastly cited was some (10%) HHs find to be too far from their HHs.

Persons who collect water for HHs.
On who usually collects water for HHs (82%) of adult females are responsible for collecting domestic (11.8%) of children (11-18) years also participate in water collection for HHs, while (6.2%) adult males take part in water collection at a smaller percentage. Further with the FGD held, the burden of water collection lies on women with just a few exceptions of men who give a helping hand. The children aged (11 – 18) are just learning from their mothers.

Cleaning of water collection container
From figure 10 above, (28%) of respondents clean their water at least once a week, (71%) clean their water containers every time they use them and (1%) clean their water containers at least once a month. There’s a tremendous improvement in jerrycan cleaning as compared to the Baseline findings 9% and 71% End line in HHs that clean their water collection containers every time they use them.
Survey findings show that (68%) do not treat their drinking water. This is because they get water from protected water sources. Findings showed that zone 2 has the highest number of HHs that treat don’t treat their water with while zone 4 (44%) has the least HHs that cited not treating their drinking water. (11.2%) reported that sometimes they treat water before drinking, while (19.4%) reported that they always treat their water before drinking.

With water treatment, (32%) mostly boil their water as a method of water treatment. Zone 5 having the most HHs that boil their water with (34%), zone 3 (33%), zone 1 (32%) and zone 4 (30%). (92%). Findings continued to show that zone 3 has the least usage of disinfection products for water treatment. Only (8%) lets the water stand and settle as a water treatment method.
Hygiene.

Presence of soap

Survey showed that (86%) had soap (zone 1 (97%), zone 2 (83%), zone 3 (77%), zone 4 (85%), zone 5 (90%). Zone 1 with the most respondent with soap (97%) and zone 3 having the least respondents with soap (77%). HHs with HWFs 80.6% (zone 1 (95%), zone 2(91%), zone 3(79%), zone 4 (85%), zone 5 (53%). Zone 1 having the most people with HWFs. More emphasis should be made to zone 5 the need of having HWFs in their HHs.

The COVID 19 Pandemic has increased on the HHs’ awareness about the need for Hand washing and hence installing tippy taps in the various HHs.
Further more findings revealed that (14.9%) purchase the soap that is used in HHs. (78%) is a distribution from NGOs and (6.6%) was gifted.

There’s a difference in findings with the results of Baseline to the results of End line in regard to where the PoCs get their soap. With the End line results, its evident that soap is distributed by NGOs (78%) as compared to the Baseline results where soap was being purchased. Soap distribution has been done by NGOs to avoid the spread of COVID 19 and also to avoid excuses of we cant avoid.
Critical Hand washing moments

One of the most critical hygiene behaviors which prevents diarrheal diseases is that of washing with soap or ash at the 5 critical moments throughout the day.

Figure 13. % of HHs that recalled the 5 critical hand washing moments

From figure 14 above, the most mentioned time for hand washing was (91%) after defecation, (88%) Before eating, After eating ( 91%), After cleaning / changing a child’s nappy (80% ) Before cooking ( 85%). Most HHs were in position to mention the 3 critical hand washing moments.
Specific Hand washing station /Device at household.

With regard to Hand washing stations at HH level, (81%) . Emphasis was put on HHs to install tippy taps. In addition, NGOs distributed tippy taps to enhance hand washing in bide to fight COVID 19.
Sanitation.

According to findings, (97%) HHs across all the zones defecate in HH latrines while (2%) practice open defecation. There’s a decline of 2% in Open defecation practice. (1%) defecate in communal latrines.
From figure 17 above, (70.6%) of children across the zones defecate in HH latrines (69%) zone 1, (71%) zone 2, (71%) zone 3, (76%) zone 4, (66%) zone 5. (17.6%) of children practice open defecation (24%) zone 1, (13%) zone 2, (21%) zone 3, (11%) zone 4, (19%) zone 5. For children that practise open defecation, 73% HHs dispose off their children’s faeces into HH latrines while 23% buried it as clearly shown below.
Figure 17. % of how children's faeces are handled

<table>
<thead>
<tr>
<th>Zone</th>
<th>Collected and disposed in HH latrine</th>
<th>Burry it</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone 1</td>
<td>71%</td>
<td>29%</td>
</tr>
<tr>
<td>Zone 2</td>
<td>69%</td>
<td>31%</td>
</tr>
<tr>
<td>Zone 3</td>
<td>54%</td>
<td>46%</td>
</tr>
<tr>
<td>Zone 4</td>
<td>83%</td>
<td>17%</td>
</tr>
<tr>
<td>Zone 5</td>
<td>90%</td>
<td>10%</td>
</tr>
</tbody>
</table>
Figure 18. % of HH Adult members that practise Open defecation.
Type of facility where HH members defecate

Figure 19: % of materials used for super structure

<table>
<thead>
<tr>
<th>Material</th>
<th>Zone 1</th>
<th>Zone 2</th>
<th>Zone 3</th>
<th>Zone 4</th>
<th>Zone 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bricks</td>
<td>62%</td>
<td>69%</td>
<td>83%</td>
<td>68%</td>
<td>73%</td>
</tr>
<tr>
<td>Wood</td>
<td>5%</td>
<td>7%</td>
<td>9%</td>
<td>10%</td>
<td>9%</td>
</tr>
<tr>
<td>Plastic sheeting</td>
<td>7%</td>
<td>0%</td>
<td>2%</td>
<td>4%</td>
<td>1%</td>
</tr>
<tr>
<td>Metal</td>
<td>7%</td>
<td>9%</td>
<td>1%</td>
<td>16%</td>
<td>3%</td>
</tr>
<tr>
<td>Thatch / Leaves</td>
<td>19%</td>
<td>15%</td>
<td>5%</td>
<td>2%</td>
<td>14%</td>
</tr>
</tbody>
</table>
Presence of bathing facility for HHs

From figure 21 above, majority HHs had bathing facilities (94%). Zone 1 (99%), zone 2 (97%), zone 3 (88%), zone 4 (90%) and zone 5 (94%). While (6%) did not have access to bathing facilities zone 1 (1%), zone 2 (3%), zone 3 (12%), zone 4 (10%), zone 5 (6%).
(72.6%) of respondents reported to be observing presence of mosquitoes, (20.4%) respondents said they observed Cockroaches, (8%) reported to be observing 4% flies. Mosquitoes are the most cited vectors and yet they are threat of causing malaria. Zone 3 having the most mosquitoes in the settlement (81%).

(71%) of surveyed HHs have access to Hygiene and Health messages. Of the households reported that most effective way of receiving hygiene messages, (59.2%) of the sampled households cited Home visits from CHWs zone 1(70%), zone 2(68%), zone 3 (54%), zone 4 (38%), zone 5 (66%) (27.6%), followed by 12% community meetings, (5.8% ) FGDs and lastly (7.6% ) radio.
Furthermore findings revealed that (77%) HHs had visits from CHWs. With zone 1 having the most frequent visits from CHWs zone 1 (93%), zone 2 (75%), zone 3 (69%), zone 4 (78%). Yet (23%) of respondents denied having any visits from CHWs.

Zone 3 reportedly had less visits from CHWs (53%), zone 1 (33%), zone 2(30%), zone 4(38%), and zone 4 (38%).
Findings showed that (63%) respondents attended Health community meetings with zone 1 having the most attendees of health meetings (86%), zone 2(82%), zone 3(48%), zone 4(78%) and zone 5(22%).

(37%) of respondents didn’t attend Health community meetings. Emphasis should be given to Zone 5 and Zone 3 HHs to attend Community meetings. This will help them contribute to the well being of their communities.
Waste Management.

According to survey, (81.6%) of respondents reported that they have solid waste disposal facilities. (81%) dispose off in HH pits, (8.6%) designated areas, (4.4%) burn it and (3.4%) bury it.

Respondents with HH pit zone 1 (79%), zone 2 (83%), zone 3(69%),zone 4(74%), zone 5 (74%). Majority of respondents had the conscious of keeping their surroundings clean as clearly indicated in figure 24 below. The habit of littering is hardly noticed.
Messaging

(71%) of surveyed HHs have access to Hygiene and Health messages. Of the households reported that most effective way of receiving hygiene messages, (59.2%) of the sampled households cited Home visits from CHWs zone 1(70%), zone 2(68%), zone 3 (54%), zone 4 (38%), zone 5 (66% ) ‘ (28.4%), followed by 27.6% community meetings, (5.8% ) FGDs and lastly (7.6% ) radio
(64.6%) of respondents reported that children less than 5 did not have diarrhoea. While (35.4%) respondents reported to children with watery stool in the past 14 days. Zone 2 (82%) had the least children with diarrhoea cases in the past 14 days, zone 1 (55%), zone 3 (77%), zone 4 (49%), and zone 5 (60%).
Knowledge on prevention of Diarrhoea

Figure 27. % of HHs that recalled diarrhoea prevention methods

<table>
<thead>
<tr>
<th>Method</th>
<th>Zone 1</th>
<th>Zone 2</th>
<th>Zone 3</th>
<th>Zone 4</th>
<th>Zone 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAND WASHING WITH SOAP</td>
<td>87%</td>
<td>92%</td>
<td>77%</td>
<td>80%</td>
<td>86%</td>
</tr>
<tr>
<td>COOK FOOD WELL</td>
<td>88%</td>
<td>71%</td>
<td>96%</td>
<td>91%</td>
<td>90%</td>
</tr>
<tr>
<td>DRINK OR TREAT DRINKING WATER</td>
<td>90%</td>
<td>87%</td>
<td>89%</td>
<td>83%</td>
<td>97%</td>
</tr>
</tbody>
</table>
Recommendations for the End line.

Some support is still required for the water user committees. Most of the water users committee members are doing work on their own especially for fencing areas around the water points.

It is without a shed of doubt that the project has made tremendous impact in eradicating open defecation amongst the persons of concern. However there are still some zones that still need sensitizations to end open defecation. They should be encouraged on the benefits on proper latrine usage.

There is need to consider viable options for financing communally owned tools to support Pump Mechanics by empowering more Mechanics so that each zone has its own fully functioning Hand pump mechanic.

Provision of water storage containers so that each house hold is in position to reserve enough water for domestic use.

We appreciate the soap distribution to the PoCs but there’s need to issue out more quantities of soap to enhance hand washing since we are in the COVID 19 Era.

With the distribution of the Dome shaped slabs, households should be encouraged to come up with super structures as a result of the slabs. In so doing the sanitation coverage will improve across Bidibidi.

The need to motorize some hand pumps for the host community so as to forge more peaceful co- existence.

Model homes should be always rewarded as a way of encouraging others to emulate them.

Trade fairs should be encouraged amongst the persons of concern so that trade initiatives are encouraged and hence competition.