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EVALUATION

Ex-Post Evaluation of the Water Access, Sanitation, and Hygiene for Urban Poor (WASH-UP) Activity in Ghana

November 2018

This publication was produced at the request of the United States Agency for International Development for the E3 Analytics and Evaluation Project and the Management Support and Technical Assistance Services project. It was prepared independently by Management Systems International, A Tetra Tech Company; and the Pragma Corporation

ABSTRACT

This ex-post evaluation examines the sustainability of results from USAID/Ghana's Water Access, Sanitation, and Hygiene for Urban Poor (WASH-UP) activity. The evaluation assesses current levels of service delivered by supported water and sanitation installations; factors that may have supported or impaired the sustainability of selected results; and how activity beneficiaries are applying supported hygiene practices. The team conducted a desk review; interviewed activity beneficiaries, partners, and stakeholders; and made structured observations at WASH-UP installations.

The evaluation finds that WASH-UP supported water schemes, including household and school water connections, community water points, and water kiosks, continue to provide services to beneficiaries. However, household and institutional beneficiaries raised concerns about the cost of piped water, which has led some service cancellations. Most WASH-UP supported household and institutional latrines continue to be operational, but large households and households with tenants are more likely to have non-functional latrines due to filled septic tanks and pits and the cost of desludging. The evaluation team recommends that USAID consider supporting alternative financial arrangements for compound and multi-family households and invest in broader support to address fecal sludge management in high-density urban centers.

WASH-UP also supported Water and Sanitation Committees (WSC) to manage public water and sanitation facilities. In most cases, WSCs continue to function and provide core services to their communities, although in three of five WSCs support for community sensitization to safe hygiene practices has lapsed. In addition, there is mixed evidence on sustainment of supported hygiene practices. The evaluation team recommends that USAID consider medium- and longer-term support to institutional actors such as WSCs, including linking them to government stakeholders to foster sustainability.

EX-POST EVALUATION OF THE WATER ACCESS, SANITATION, AND HYGIENE FOR URBAN POOR (WASH-UP) ACTIVITY IN GHANA

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Cover photo caption: Customers at the WASH-UP supported water kiosk in New Takoradi, Sekondi-Takoradi Metropolitan Assembly.

Credit from left to right: Anh Thu Hoang (MSI) and Charles Armah (MSI).

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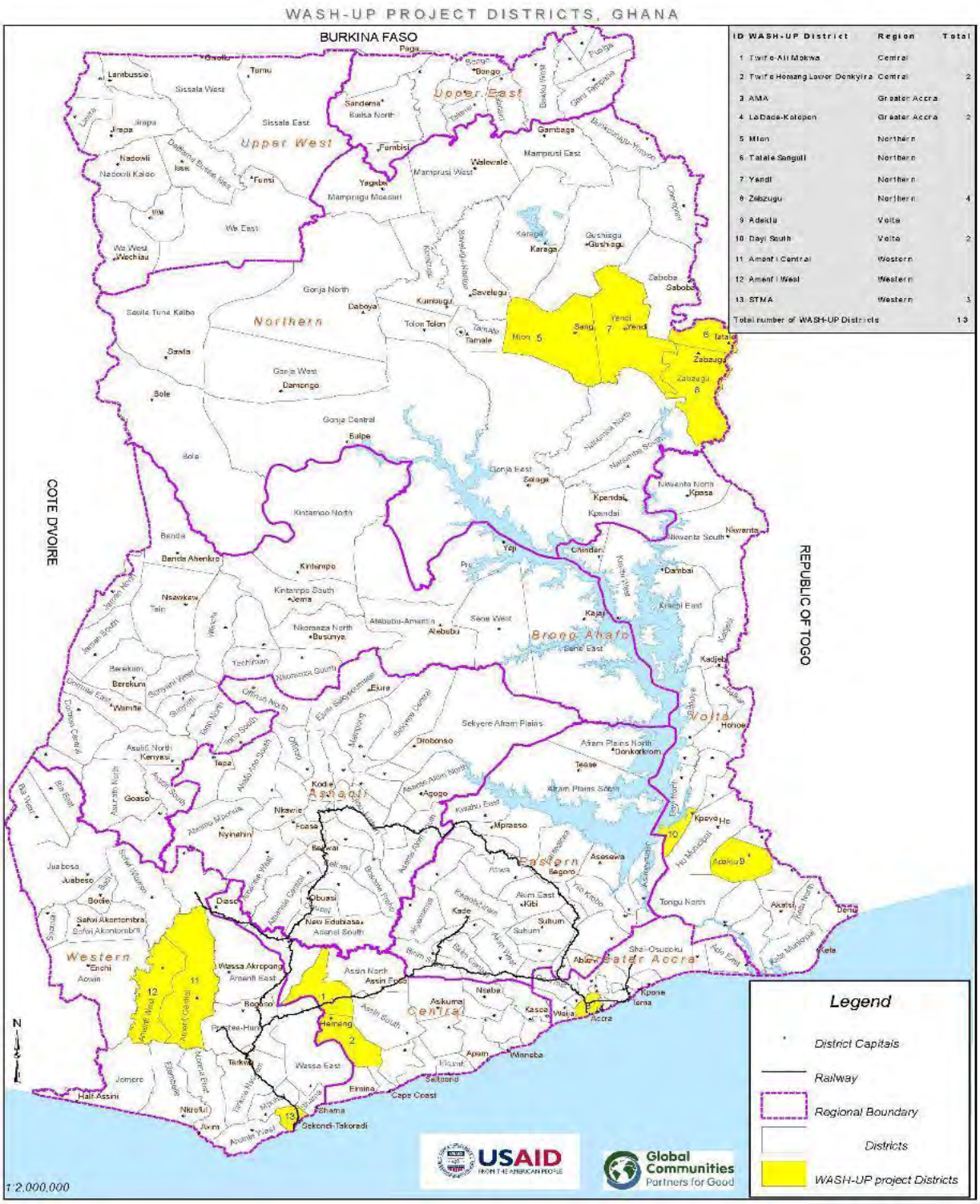
ACRONYMS

ADS	Automated Directives System (USAID)
AFR	Africa Bureau (USAID)
AMA	Accra Metropolitan Assembly
BCC	Behavior Change Communication
E3	Bureau for Economic Growth, Education, and Environment (USAID)
EHO	Environmental Health Officer
EQ	Evaluation Question
GWCL	Ghana Water Company Limited
HFFG	Hope for Future Generations
HH	Household
IP	Implementing Partner
JMP	Joint Monitoring Programme (UNICEF/WHO)
KII	Key Informant Interview
KVIP	Kumasi Ventilated Improved Pit
LaDaMA	La-Dade-Kotopon Municipality
mL	Milliliter
MPN	Most Probable Number
MSI	Management Systems International
MSTAS	Management Support and Technical Assistance Services
NGO	Non-Governmental Organization
SHEP	School Health Education Program
SOW	Statement of Work
STMA	Sekondi-Takoradi Metropolitan Assembly
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WASH	Water, Sanitation, and Hygiene
WASH-UP	Water Access, Sanitation, and Hygiene for Urban Poor
WHO	World Health Organization
WSC	Water and Sanitation Committee

MAP OF GHANA WASH-UP ACTIVITY DISTRICTS



EXECUTIVE SUMMARY

This report presents the findings, conclusions, and recommendations of an ex-post evaluation of the United States Agency for International Development's (USAID's) Water Access, Sanitation, and Hygiene for Urban Poor (WASH-UP) activity, implemented in Ghana in three phases from 2009-2016. USAID's Africa Bureau commissioned this evaluation in collaboration with the Bureau for Economic Growth, Education, and Environment (USAID/E3), the USAID/Ghana Mission, and USAID's Office of Learning, Evaluation, and Research in the Bureau for Policy, Planning, and Learning. The E3 Analytics and Evaluation Project and the Management Support and Technical Assistance Services Project jointly designed and implemented the evaluation.

Evaluation Purpose and Questions

The purpose of the Ghana WASH-UP ex-post evaluation is to better understand whether selected outcomes have been sustained and the factors that contributed to or impeded the sustainability of these outcomes. The evaluation also identifies approaches to sustainability that can be institutionalized for use in future USAID WASH programming. USAID will use the findings from this evaluation to improve the design, implementation, impact, and sustainability of future activities.

This evaluation responds to the following evaluation questions approved by USAID:

1. To what extent are the levels of service (as defined by WASH-UP) still observed 4 years after project closure?
   a. What's the level of functionality, quantity/output, quality, accessibility, reliability, and use of water schemes four years after project closure?
   b. To what extent are household and shared community latrines and handwashing facilities installed by WASH-UP still functional, adequately maintained and used?
2. Which factors or approaches contributed to or impaired long-term sustainability of selected WASH-UP project outputs and outcomes?
   a. What financial management structures are in place and are they ensuring fee collection and funding to cover recurrent expenditures? What role, if any, did WASH-UP play in establishing and/or strengthening these structures?
   b. What local water and sanitation governance structures (government, non-government and private entities and groups) are in place and how are they managing and maintaining services? How did WASH-UP capacity development activities contribute to the sustainability of these structures?
   c. Have the innovative economic enterprises that were promoted grown or have they closed? If they've grown, what factor contributed to that continued growth?
   d. What other factors improved or impaired sustainability?
3. In what ways are beneficiaries in WASH-UP BCC target communities applying hygiene practices that the project supported?

Activity Background

In 2009, USAID awarded the three-year, $4.5 million Ghana WASH-UP activity to Global Communities (formerly CHF International). USAID subsequently funded two extensions of WASH-UP, which brought the period of performance to seven years (October 2009 through September 2016) and total funding to $12,168,660. WASH-UP focused on increasing equitable access to improved water supply and basic

sanitation for the urban poor, improving governance for WASH, and decreasing the prevalence of water-related disease through behavior change communication (BCC) interventions.

To increase equitable access to improved water supply and basic sanitation facilities for the poor, WASH-UP pursued five objectives, which are noted below along with highlighted activity results.

Objective 1: Increase household access to improved drinking water. WASH-UP helped to extend 14.85 kilometers of new water mains and connected 885 urban households to water mains. The activity also helped establish 63 water kiosks, installed 14 machine-drilled boreholes, installed or rehabilitated 7 community water points, and provided safe water to 6 urban schools. Overall, WASH-UP enabled over 40,000 people, including 22,206 urban residents, to gain access to improved drinking water sources.

Objective 2: Increase household access to improved and sustainable sanitation. WASH-UP supported the construction of 1,311 household latrines (968 in urban communities) and provided improved sanitation to 21,618 urban and rural residents. This support included providing micro-loans and guiding self-construction for households. The activity also installed or rehabilitated 85 public and institutional latrines, including 72 latrines in schools serving approximately 19,000 pupils.

Objective 3: Promote innovative economic enterprises in the areas of water and sanitation. WASH-UP provided business management training and loans to micro-enterprises and entrepreneurs delivering water and sanitation services. The activity provided 809 loans to businesses (e.g., water kiosk vendors, door-to-door waste collectors, sellers of drinking water sachets and bottles) and micro-loans to 315 households to construct private latrines and water connections.

Objective 4: Improve hygiene and sanitation behaviors among the urban poor. WASH-UP promoted safe hygiene and sanitation practices through a mass media campaign, household visits, and trainings it provided through institutional partners, including at schools and health clinics. The activity reached over 94,000 individuals with these messages. WASH-UP also provided more than 34,000 individuals with access to over 1,200 handwashing facilities and trained 154 food vendors on safe food hygiene practices.

Objective 5: Strengthen local governance for water supply, sanitation service, and hygiene promotion. WASH-UP provided training and support in governance and financial management for 6 water and sanitation committees (WSC), trained 15 environmental health officers (EHOs) in Geographic Information System and Global Positioning System technology to better track WASH services in their focus areas, and supported environmental health departments in 3 assemblies to develop BCC action plans.

Evaluation Design

The evaluation team used a primarily qualitative approach to ascertain the status of WASH-UP installations, investigate what factors affected the sustainability of activity outcomes since WASH-UP's closure, and examine whether activity-supported hygiene practices are still being used by beneficiaries. The team collected primary data in Ghana in September and October 2018 in six of the nine urban communities where WASH-UP implemented activities. The team conducted individual and group interviews, focus group discussions, structured observations, and water quality tests. To answer the EQs, the team interviewed a broad spectrum of respondents including activity beneficiaries and implementing partners, national and local government representatives, and private- and public-sector stakeholders.

Several factors limited the evaluation team's ability to collect and analyze data or produce findings, including several resulting from the nature of an ex-post evaluation. These limitations included:

- Challenges in locating selected beneficiaries and intervention points;
- Inability to identify and secure interviews with key informants;
- Cognitive biases of respondents;
- Challenges with procuring water quality test materials, which limited the number of tests the team was able to conduct;
- Limited activity performance data to enable time comparisons; and
- Selection biases in the data collection sample.

Key Findings, Conclusions, and Recommendations

Evaluation Question 1: To what extent are the levels of service (as defined by WASH-UP) still observed four years after project closure?

WASH-UP supported, through its local partners, the installation of water and sanitation facilities in households, schools, and public settings. Activity results included connecting 885 urban households to water mains, installing 1,311 household latrines, and establishing public and institutional (including school) WASH facilities.

Household Water Access: The evaluation team found that most households that had obtained water through WASH-UP continue to receive piped water, and that the service is generally reliable and free of E.coli contamination. Access to water that the activity supported in schools and through public water points also continues and is seen as generally reliable.

Although E.coli tests of piped water in households found only three instances of contamination at "unsafe levels," most households visited expressed concern with the cleanliness of their water. Many households stated that their piped water was sometimes discolored and nearly half preferred sachet water because they believed it to be cleaner. The evaluation team did not directly observe instances of discolored water.

The evaluation team observed that it is common practice for households to store water in containers to mitigate potential water disruptions. Many of these containers were uncovered. Six of the 12 storage containers the team tested had high levels (>100/100mL) of E.coli contamination, which is considered "unsafe" by World Health Organization standards. Nineteen of the 42 water points the team tested, including containers and taps, did not meet Ghana's water standards, which call for no detectable levels of E.coli.

Based on these findings, the evaluation team concludes that households continue to benefit from WASH-UP supported water supply connections to Ghana Water Company Limited (GWCL) main line extensions and water supplied by mechanized borehole well taps. However, household concerns about water quality from the source lead many to rely on sachet water for drinking. Sachet water is expensive, has unknown quality, and poses environmental consequences through the introduction of plastic bag waste into an already challenged solid waste management system. Concerns about water disruption have also led many households to store water in open containers. This practice increases the risk of contamination and potential health risks as water is stored in open, potentially dirty containers or subject to unsafe handling practices as evidenced by the E.coli test results.

Recommendation**:** Future USAID/Ghana WASH interventions should assess and incorporate relevant best safe-water storage practices and BCC components into their interventions to ensure that supplied

water remains safe at the point of use. Approaches should be reinforced throughout the activity life cycle and monitored through onsite observations by implementing partners to assess whether promoted practices are being adopted.

Cost of Water Services: Both household and institutional respondents expressed concern about the high cost of water service, which has prevented some households from continuing to receive GWCL-supplied water. Based on the evaluation's sample, this problem appears most acute for renters living in compound households, where landlords are responsible for water payment of compound installed taps. Due to tenants' inability to consistently pay landlords for water use, some landlords have shut off access to installed water points. Similarly, the cost of GWCL-supplied water for schools and some water kiosk vendors was an issue.

Based on these findings, the evaluation team concludes that financial constraints pose barriers to continued household access to improved water, particularly for renters in compound households, lower-income households, and households that face financial constraints due to job losses or other intermittent financial challenges. This is an impediment to sustaining WASH-UP water access outcomes and suggests the need for approaches that address affordability.

Recommendation**:** Activities should explore financial/billing arrangements for compound houses where there are multiple household users on one connection with only one household responsible for bill payment, as well as reduced rates for water provided as a "public good," (e.g., for school connections).

Household and Community Latrines: The evaluation team found that latrines WASH-UP installed or supported generally continue to function and beneficiaries maintain their latrines at an adequate level. This was true for household, community. and school latrines, and for the different types of installed latrines. The exception was the raised compost latrines installed in Avenor, which were all non-functional. Household respondents in all communities except Avenor stated that the installation of household or shared latrines not only improved access to sanitation for household members but also contributed to a greater sense of pride and dignity. WASH-UP supported community latrines were also perceived to be cleaner and better than those supported by the government.

Barriers to sustaining access to latrines are similar to those sustaining water access: an inability to pay recurrent expenditures associated with usage. Single-family households noted a concern about the high cost of sludge removal and some refrain from using their latrines for urination to reduce the amount of liquid in the latrine and delay the need for waste removal. For shared and communal households with landlord/tenant relationships, respondents reported that landlords have restricted latrine access because tenants did not provide financial contributions for the initial installation of the latrine and/or its continued maintenance. In addition, latrines shared by large or multiple households require more frequent fecal sludge management (FSM) due to the volume of waste being introduced into pits/septic tanks. This increases users' costs to sustain latrine functionality. All the inoperable household latrines in the evaluation team's sample were due to full pit/tanks needing to be desludged. Many of the large families/compound houses already had multiple desludging removals since WASH-UP ended or were currently in need of desludging. Household respondents identified cost as the main barrier to having pits/tanks desludged, with facilities in densely populated areas more expensive to desludge due to equipment accessibility challenges.

Based on these findings, the evaluation team concludes that FSM is a barrier to the sustainability of sanitation interventions in WASH-UP communities. FSM is a complicated issue affected by policy, private- and public-sector engagement, financing, infrastructure, and environmental and other considerations of the sanitation market. While households have a significant role in obtaining a latrine, managing waste from those latrines requires an FSM system to ensure the latrine can be sustained.

While Ghana has taken steps to address these issues, more work is needed to strengthen this FSM system and ensure it is well implemented and scaled up, particularly in densely populated urban areas.

Recommendation**:** USAID should consider contributing to the development and scaling up of the FSM system, and make FSM a component in future contracted sanitation interventions.

Handwashing Facilities: WASH-UP supported the installation of handwashing facilities in most of the households and schools where it supported latrine installation. The evaluation team found that few households or schools currently have separate handwashing stations. Only 12 of the 29 households where the team observed installed latrines had designated handwashing facilities present. Also, only 7 of the 23 observed households that received water installations had designated handwashing facilities. Respondents provided several reasons for the absence of these facilities, include breakage and relocation to prevent theft. The team frequently identified designated handwashing facilities in schools, observing 29 handwashing facilities with running water out of the 34 installed with WASH-UP support.

However, the evaluation team identified only a few cases in households or schools of functional "basic" handwashing stations, as defined by the WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation, and Hygiene (JMP) handwashing ladder. This standard requires the presence of soap or other cleaning agents as well as water. Only 9 of the 52 households the team observed had a handwashing station meeting JMP "basic" criteria. In addition, only four handwashing stations were observed near latrines across the five schools the team visited.

Based on these findings, the evaluation team concludes that WASH-UP supported handwashing facilities have not been sustained and are not in place to support the promoted handwashing messaging. Household handwashing stations have often been removed or are reported to have never existed. Where they do exist, cleaning products are not available. In schools, handwashing stations function but cleaning products are not available.

Recommendation**:** USAID programming should establish an enabling environment and monitoring of facilities for handwashing in addition to BCC messaging. To foster sustainability, handwashing facilities should be installed in latrines where they can be more protected, and the design of these facilities should be hardened so they are less likely to be stolen or broken. Households should also be taught to make handwashing facilities with local materials so they can be replaced when they break – which will only be done if the household values and is committed to practicing the behavior.

Evaluation Question 2: Which factors or approaches contributed to or impaired long-term sustainability of selected WASH-UP project outputs and outcomes?

Water and Sanitation Committees: WASH-UP established five WSCs. The WSCs were intended to create demand and supply for water and sanitation services by: (1) managing public water and sanitation facilities, and (2) sensitizing community members to the importance of hygienic practices.

The evaluation team found that WASH-UP's training and support helped sustain four of the five WSCs, which continue to be operational and provide ongoing core management services for public water and sanitation facilities. Each of the four WSCs operate on a licensing model, with vendors providing a fee for service community latrines, water points, and public kiosks. Each vendor then pays a fee to the WSC, which uses the money for upkeep and maintenance. This model appears to be sufficient to cover maintenance costs, though each existing WSC expressed concern with meeting variable facility costs (e.g., electricity) while establishing prices that incentivize use.

With respect to sensitizing community members to hygienic practices, the evaluation team found that two of the five WSCs continue to undertake this role in collaboration with local government.

Based on these findings, the evaluation team concludes that while WASH-UP's support to the WSCs in operations and maintenance management has been important in sustaining these organizations, the newly established WSCs would have benefitted (or did benefit) from additional support following the activity's completion, which would have better equipped them to sustain service provision. WSCs that have received ongoing post-activity support from Global Communities or local assemblies have been the most sustained, including the New Takoradi WSC, which has expanded its services since WASH-UP ended. This suggests that the lack of engagement between the WSCs and local government officials during WASH-UP may have been a missed opportunity.

Recommendation**:** USAID should consider how it can continue to support newly established organizations such as the WSCs over the medium term (e.g., by linking them with other local actors and institutions that can provide support).

Recurrent Costs: The evaluation team found that nearly every beneficiary group it interviewed expressed concern with meeting recurrent costs for water and sanitation services. These costs include GWCL water fees (households, schools, and kiosks), electricity costs (WSCs), and standard latrine maintenance costs (WSC-managed latrines). The inability to satisfy recurring costs limited access to improved sanitation in some cases (especially for tenants) and constrained the expansion of WSCs and the growth of WASH businesses. This widespread concern suggests a lack of information or forward planning on the part of beneficiaries, but also suggests opportunities for future USAID engagement.

Recommendation**:** USAID should consider providing WASH beneficiaries with additional information about the medium- and long-term costs of household and commercial investments (e.g., by providing entrepreneurs with medium- and long-term business planning training to promote better sustainability). USAID should also consider periodic coaching and mentoring of WSCs and entrepreneurs and peer-to-peer support to sustain businesses.

Evaluation Question 3: In what ways are beneficiaries in WASH-UP BCC target communities applying hygiene practices that the project supported?

Hygiene Messaging: The evaluation team found that despite the intention to incorporate BCC messaging into the forward planning of WSCs, there is little evidence that sanitation and hygiene messages continue to be promoted in beneficiary communities. Many respondents could not recall the WASH-UP home visits, the messages, or the materials the activity developed and there is little evidence of new messaging. Promotional efforts largely ceased at the end of the activity. Government respondents noted that the EHOs have a role in promoting hygiene and sanitation in their communities and some lamented the lack of coordination and collaboration between WASH-UP and government agencies, believing that this could have contributed to greater sustainment of behavior change outcomes.

The evaluation team concludes that sustaining BCC messaging in communities requires a stronger institutional presence than that available through the WSCs at the end of WASH-UP. In these communities, the assembly and the EHOs could have taken on this role and supported the WSCs.

Recommendation**:** USAID should ensure that future WASH activities engage with key government and institutional stakeholders as partners to foster sustainability after the activity ends.

Hygiene Practices: The evaluation team found mixed evidence on the adoption of hygiene practices supported by the WASH-UP BCC campaign. Household beneficiaries retained some knowledge of good hygiene practices and BCC messages, but evidence of adoption was mixed. Households generally practice good hygiene in solid waste disposal and management, but few had handwashing stations with soap. Likewise, while respondents generally recognized the safety concerns posed by open defecation, the evaluation team did find evidence of its continued practice, especially where household or public

latrines are not readily available. In schools, there was evidence of the importance of hygiene practices among respondents, but there was little in the way of an enabling environment for the adoption of hygiene practices.

The evaluation team concludes that BCC messaging has not been sufficient to sustain good hygiene practices as the facilities available do not enable good practice. This suggests that as much, or perhaps more, emphasis should be placed on establishing an appropriate enabling environment to support BCC messages and test self-reported practices and knowledge.

Recommendation**:** USAID should consider working with schools and local governments to establish monitoring for public handwashing facilities to support handwashing at critical times.

INTRODUCTION

This report presents findings, conclusions, and recommendations from an ex-post evaluation of the United States Agency for International Development's (USAID's) Water Access, Sanitation, and Hygiene for Urban Poor (WASH-UP) activity, implemented in Ghana in three phases from 2009-2016. USAID's Africa Bureau (AFR) commissioned this evaluation in collaboration with the Bureau for Economic Growth, Education, and Environment (E3), the Ghana Mission, and the Office of Learning, Evaluation, and Research in the Bureau for Policy, Planning, and Learning. The E3 Analytics and Evaluation Project and the Management Support and Technical Assistance Services (MSTAS) project jointly designed and implemented the evaluation.[1]

The first section of this report provides background information about WASH-UP, including the results that the activity achieved. The second section describes the purpose of the evaluation and presents the evaluation questions. The third section explains the methodology of this evaluation and its limitations. The fourth section presents the evaluation team's findings and conclusions for each evaluation question. The last section presents the evaluation team's recommendations.

ACTIVITY DESCRIPTION

Background

In 2009, over half of Ghana's burgeoning population lived in urban communities, and more than half of this population lived in slum settlements with inadequate water supply and sanitation services. Rapid urbanization was part of the reason for a decline in water supply services for residents of two major urban areas in southern Ghana: the Accra Metropolitan Assembly (AMA) and the Sekondi-Takoradi Metropolitan Assembly (STMA). The proportion of the population in AMA and STMA using improved water supply declined from 86 percent in 1990 to 59 percent in 2009.[2] Further, the World Health Organization (WHO) and United Nations Children's Fund (UNICEF) Joint Monitoring Programme (JMP) reported only an 18 percent coverage for improved sanitation in 2008.[3]

In 2009, USAID/Ghana awarded a three-year, $4.5 million cooperative agreement to Global Communities (formerly CHF International) to implement the Ghana WASH-UP activity (agreement number EPP-A-00-09-00014). USAID subsequently funded two extensions of WASH-UP, which brought the period of performance to seven years (October 2009 through September 2016) and total activity funding to $12,168,660. WASH-UP focused on increasing equitable access to improved water supply and basic sanitation for the urban poor; improving governance for water, sanitation, and hygiene (WASH); and decreasing the prevalence of water-related disease through behavior change communication (BCC) interventions.

[1] Management Systems International (MSI, A Tetra Tech Company), implements the E3 Analytics and Evaluation Project in partnership with Development and Training Services, a Palladium company; and NORC at the University of Chicago. The Pragma Corporation implements the MSTAS project.
[2] Ghana Ministry of Water Resources, Works, and Housing Water and Sanitation Sector Performance Report 2010, p. 13. Accessed from: http://sanitationandwaterforall.org/wp-content/uploads/download-manager-files/Final_2010_Sector_Performance_Report[1].pdf.
[3] WHO/UNICEF JMP Progress on Sanitation and Drinking-water: 2010 Update, p. 42. Accessed from: https://www.unicef.org/media/files/JMP-2010Final.pdf.

During its first phase from 2009-2012, WASH-UP sought to improve water and WASH conditions in five poor urban communities: Avenor, Nima East, and Ayidiki in AMA; and Kojokrom and New Takoradi in STMA. In its second phase from 2012-2015, WASH-UP expanded to four more communities: Nima West in AMA, La Abafum-Kowe-Abese in La-Dade-Kotopon Municipality (LaDaMA), and Ntankoful and Assakae in STMA. During its sixth year, a second modification further widened WASH-UP's activities to poor rural communities in the Northern, Volta and Central Regions. Table 1 lists the phases and funding amounts for the WASH-UP cooperative agreement.

TABLE 1: WASH-UP COOPERATIVE AGREEMENT PHASES[4]

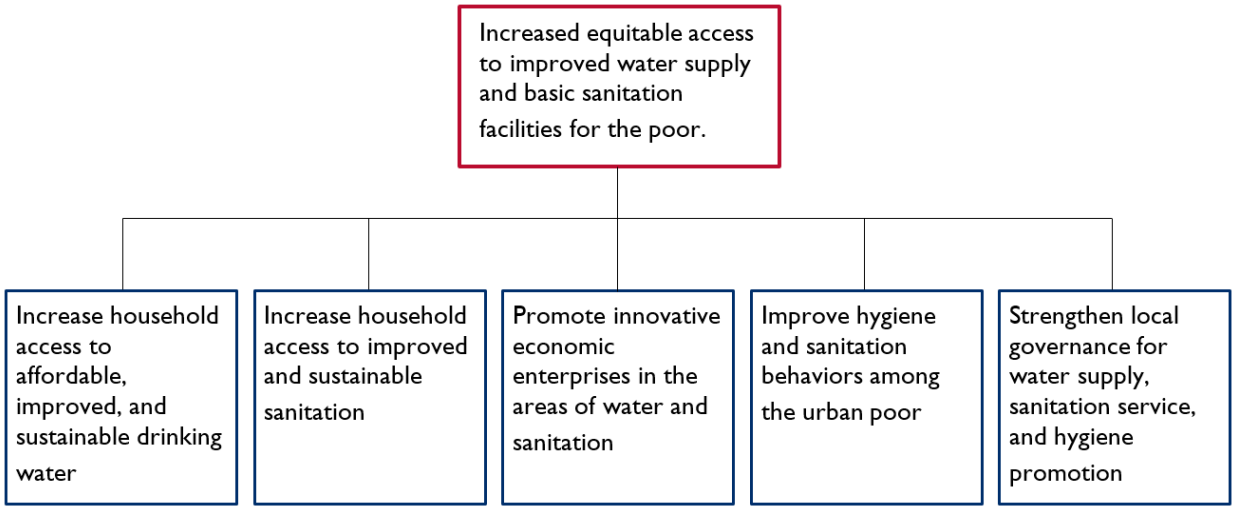
Cooperative Agreement Phase	Funded Amount
Phase I (2009-2012)	$4,499,826
Phase II (2012-2015)	$4,668,834
Rural Extension (2015-2016)	$3,000,000
Total WASH-UP Funding (2009-2016)	**$12,168,660**

WASH-UP Objectives, Interventions, and Results

To increase equitable access to improved water supply and basic sanitation facilities for the poor, WASH-UP pursued five objectives (Figure 1):

1. Increase household access to affordable, improved, and sustainable drinking water supply;
2. Increase household access to improved and sustainable sanitation facilities;
3. Promote innovative economic enterprises in the areas of water and sanitation;
4. Improve hygiene and sanitation behaviors among the urban poor; and
5. Strengthen local governance for water supply, sanitation service, and hygiene promotion.

FIGURE 1: HIGH-LEVEL RESULTS FRAMEWORK FOR WASH-UP



For USAID added a sixth objective, to respond to emerging threats such as cholera and Ebola outbreaks, in response to the cholera epidemic in 2014-2015. As agreed with USAID, this ex-post

[4] USAID Ghana WASH-UP End-of-Project Evaluation Report April 2018, p. 12.

evaluation does not focus on WASH-UP activities implemented under Objective 6 or examine the activities that WASH-UP implemented in rural communities.

Global Communities employed a participatory approach to implement WASH-UP. This approach involved a broad range of national and local stakeholders to address critical gaps in availability and access to water and sanitation services for the urban poor. WASH-UP also worked with private- and public-sector partners as well as construction sub-grantees, as Table 2 shows.

TABLE 2: WASH-UP SUB-GRANTEES AND PARTNERS IN URBAN COMMUNITIES[5]

Sub-Grantee/ Government Partner	Role on WASH-UP	Phase(s) Active
Ayidiki Water and Sanitation Organization	Construction, training, and latrine user education in urban AMA communities.	1 and 2
Boafo Microfinance Services Limited	Private financial organization that provided business development support in all activity communities. In year two, the Youth and Social Enterprise Fund replaced Boafo.	1
Biofil	Responsible for the Biofil latrine. Installation was done by construction sub-grantees based on demand for the latrine.	Throughout the activity
Devtplan Consult	Sub-grantee responsible for assessing the institutional and financial management capacity of the urban WSCs.	
Ghana Water Company Limited (GWCL)	National agency responsible for urban water service provision. WASH-UP's key partner under Objective 1 for extending water mains and related water supply services.	1 and 2
Hope for Future Generations (HFFG)	Sub-grantee responsible for BCC and hygiene education activities in urban areas.	1 and 2
Professional Network Association	Sub-grantee responsible for WASH infrastructure construction in AMA urban communities.	1 and 2
Rural Development Network	Sub-grantee responsible for WASH infrastructure construction activities in STMA urban communities.	1 and 2
Youth and Social Enterprise Fund	Key provider of WASH micro-loans.	Throughout the activity

Below are descriptions of key WASH-UP interventions and results, drawn primarily from the WASH-UP Final Report (2016) and the USAID/Ghana WASH-UP End of Project Evaluation Report (2018).

Objective 1: Increase household access to affordable, improved, and sustainable drinking water supply

The WASH-UP Final Evaluation Report noted that "Objective 1 focused on expanding water access to communities and households through installation of individual house connections and public water points. In urban areas, this included construction of water supply infrastructure, including water mains, house connections and public standpipes" (17). Overall, WASH-UP's efforts under Objective 1 enabled over 40,000 people – 22,206 of whom resided in urban areas – to gain access to improved drinking water sources.

Key activity interventions and results under Objective 1 included:

[5] Sourced from the USAID Ghana WASH-UP end of Project Evaluation Report p. 19

Extending water mains: WASH-UP worked with the GWCL to extend water mains (i.e., primary water distribution pipelines) in urban areas, thereby providing opportunities for additional urban residents to receive piped water. Over the course of the activity, WASH-UP supported the extension of 14.85 kilometers of water mains.

Supporting household connections to water mains: Working in partnership with GWCL, WASH-UP subsidized poor urban households to allow them to connect to existing and new constructed water mains. The activity helped 885 urban households connect to water mains.

Establishing publicly and privately managed water kiosks for public use: WASH-UP provided financial support to establish water kiosks (i.e., booths that sell tap water and cater to residents who are unable to afford yard connections or are located too far from water mains to connect). WASH-UP helped establish 63 water kiosks, managed by both private entrepreneurs and public water and sanitation management teams.

Installing community boreholes and rehabilitating community water systems: Where it was not feasible to extend water mains to communities, WASH-UP supported the development and improvement of community water systems by drilling new boreholes with hand pumps and installing or repairing community standpipes. Over the course of the activity, WASH-UP supported the installation of 14 machine-drilled boreholes in 5 urban communities, 7 community standpipes, and public and community water systems in Ntankoful and Nima East, respectively.

Improving water services for schools: WASH-UP supported the installation of water (and sanitation) facilities in six urban schools.

Objective 2: Increase household access to improved and sustainable sanitation facilities

The WASH-UP Final Evaluation Report noted that "Objective 2 focused on increasing household access to improved and sustainable sanitation facilities, particularly critical in low-income urban communities where access has been limited, and there is widespread use of undesirable and unsanitary facilities and practices, including pan latrines and open defecation" (21). Key interventions under Objective 2 included:

Constructing household latrines: Global Communities and its partners supported household latrine installation in seven districts – Kojokrom, La, Nima West, Ayidiki, Nima East, Ntankoful, and Assakae – through interventions such as micro-loans and guided self-construction. WASH-UP constructed a variety of latrine types, including Kumasi Ventilated Improved Pit (KVIP) latrines, water closets, and Biofil latrines (a branded type of semi-dry toilet facility). Households generally chose from a variety of latrines, although community characteristics sometimes mandated the use of one technology over others. WASH-UP constructed 1,131 household latrines (including 968 in urban communities), which provided 21,618 urban and rural residents access to improved sanitation.[6] In urban communities, WASH-UP installed:

- 493 Ventilated Improved Pit latrines and KVIP latrines;
- 3 flush latrines;
- 334 water closets;
- 126 Biofil latrines; and

[6] WASH-UP reported the number of beneficiaries of household latrines through a count of members of households where the latrines were constructed. End of Project Evaluation Report p. 19 and WASH-UP Final Report 2016 p. 22.

- 12 elevated compost latrines.[7]

Constructing institutional/school latrines: WASH-UP supported the construction or rehabilitation of 85 institutional latrines at schools (72) and community-based health planning and services compounds (13). These latrines were usually KVIP or Biofil. Of the 72 school-based latrines, 6 were in urban areas, including multi-seat facilities in New Takoradi, Kojokrom Accra New Town, Ntankoful, Whindo-Assakae, and the La Roman Catholic School. The activity estimated that 19,237 pupils would benefit from the school latrines in both rural and urban communities. WASH-UP also supported the construction of three public latrine blocks in urban communities.

Implementing community-led total sanitation: In rural communities, WASH-UP worked with communities to increase demand for and capability of constructing sanitation facilities, and helped 20 rural communities achieve open defecation free status.

Table 3 presents the number of WASH-UP water and sanitation facilities supported, rehabilitated, constructed, and installed in each community over the duration of the activity.

[7] The number of latrines by technology was sourced from the "Compilation of Data Files for Evaluation" Excel spreadsheet that USAID shared with the evaluation team in June 2018.

TABLE 3: WASH-UP URBAN ACTIVITIES AND INSTALLATIONS BY COMMUNITY[8]

WASH-UP Urban Communities	Household Water Connections	Privately-Managed Water Kiosks	Mechanized Boreholes/ Taps	Other Water Facilities	Household Latrines	Household Handwashing Stations	Institutional and Public Latrines
Communities where activities began in 2009							
Avenor, AMA	29	1	0	0	12	12	0
Ayidiki, AMA	51	1	4	0	203	203	1** (20 stalls)
Nima East, AMA	46	7	2	1* 1**	125	125	1* (10 seater)
Kojokrom, STMA	567	3	2	0	287	287	1* (10 seater) 1** (10 seater)
New Takoradi, STMA	66	2	0	0	15	15	1* (10 seater) 1** (20 seater)
Communities where activities began in 2012							
Nima West, AMA	22	1	0	0	165	165	0
La Abafum-Kowe-Abese, LaDaMA	79	1	0	5***	113	113	1** (7 seater)
Ntankoful, STMA	0	0	5[9]/7	1* 2***	30	30	1** (10 seater)
Assakae, STMA	36	0	1	3***	18	18	1** (20 seater)
Total	**896**	**14**	**14**	**20**	**968**	**968**	**9 (117 seats)**

For Other Water Facilities:
** signifies a "community water system" (water supplied from the borehole is the community water supply system).*
*** signifies community standpipes (Ntankoful) – from a borehole or other types of 'vending points' (East Nima)*
**** institutional water storage tanks (installed in a school). Filled with water from the community borehole.*

For Institutional and Public Latrines:
** signifies a public latrine*
*** signifies an institutional latrine (installed in a school).*

[8] Data sourced from the "Compilation of Data files for Evaluation" Excel sheet that USAID provided to the evaluation team on June 26, 2018.
[9] Construction teams drilled five, but eventually capped all but one due to lack of water supply. One is currently in use.

Objective 3: Promote innovative economic enterprises in the areas of water and sanitation

The WASH-UP Final Evaluation Report noted that "Objective 3 focused on empowering the poor, particularly the urban poor and women, to establish Water and Sanitation-related businesses, including water kiosk operations, public toilet operations, door-to-door waste collection, food vending, sale of sachet water and bottled water, hairdressing, etc. with the aim of supporting private initiatives to meet local demand for WASH services in a safe and affordable way" (24). Key interventions under Objective 3 included:

Delivering trainings on business development: WASH-UP provided training on marketing, financial management, and other key business skills to microenterprises and entrepreneurs who delivered WASH-related services. Over the course of the activity, WASH-UP trained 527 individuals in 9 urban centers.

Providing business and household loans: WASH-UP partnered with the WSCs and the Youth and Social Enterprise Fund to provide small loans to households that wished to install water and sanitation facilities and to businesses that provided water and sanitation services. WASH-UP provided 515 loans to households in poor urban communities to construct household latrines and/or water connections. The activity also provided 809 loans to water and sanitation businesses, including water kiosk operators, public toilet operators, door-to-door waste collectors, food vendors, sachet water and bottled water sellers, and hairdressers.

Delivering trainings to latrine artisans: WASH-UP trained carpenters, masons, steel benders, and plumbers to support the installation of water and sanitation facilities in urban areas. The activity trained 20 artisans to construct facilities of specific quality standards, and these artisans installed most of the latrine facilities that the activity supported in urban areas.

Objective 4: Improve hygiene and sanitation behaviors among the urban poor

Under Objective 4, WASH-UP used BCC interventions "to create awareness of and promote good sanitary practices and hygiene behavior in target communities. BCC trainings and messages were provided to women's groups, daddies' clubs, school health clubs, water and sanitation management teams, community volunteers, health clinics and WASH related businesses such as food vendors and water sellers" (WASH-UP Final Evaluation Report, 26). Key interventions under Objective 4 included:

Promoting safe hygiene practices in households, schools, and clinics: WASH-UP visited residents in their homes to educate them on proper hygiene practices such as the use of household latrines and proper handwashing technique. The activity also delivered BCC trainings and messages to schools, health clinics, women's groups, daddies' clubs, water and sanitation management teams, community volunteers, and WASH-related businesses. WASH-UP reported that it reached over 90,000 individuals with handwashing messages.

Installing handwashing facilities: WASH-UP installed handwashing facilities with, and in close proximity to, each latrine the activity constructed, including household and institutional latrines. The activity installed approximately 1,250 handwashing facilities, which provided 34,348 people with access to improved sanitation.

Training food vendors: WASH-UP collaborated with EHOs and other partners to train 154 food vendors working in supported communities. The trainings focused on sanitation and hygiene practices, including proper foodstuff handling, hygienic food preparation, and handling of cooked food and storage.

Creating mass media animations: WASH-UP created mass media BCC messaging, including animations produced in English and local Ghanaian languages. The animations provided critical messages about the importance of proper handwashing at key times, proper disposal of refuse, and stopping open defecation by using household latrines.

Objective 5: Strengthen local governance for water supply, sanitation service, and hygiene promotion

The WASH-UP Final Evaluation Report noted that "Objective 5 sought to improve WASH governance through participatory approaches, working closely with Water and Sanitation Committees and Sub-Metro Water and Sanitation teams, building their technical and organizational skills to identify WASH needs, manage resources and support WASH facilities and services. Technical and organizational skills capacity building was also carried out with Metropolitan, Municipal and District Assembly officials and the GWCL" (30). Key interventions under Objective 5 included:

Promoting good practices in subnational institutions: WASH-UP delivered trainings to improve the governance capacity of metropolitan, municipal, and district assemblies to plan, design, and operationalize sanitation interventions.

Promoting capable WSCs: WASH-UP supported the establishment or strengthening of WSCs in nine urban committees. This support included conducting needs assessments and delivering technical, financial, and organizational management trainings.

Training EHOs in GIS/GPS technologies: WASH-UP provided Geographic Information System and Global Positioning System trainings to 15 EHOs from STMA and LaDaMA. These trainings provided EHOs with skills to track and collect WASH-related data and make informed location-based analyses.

Building the capacity of rural EHOs: WASH-UP trained 12 EHOs from LaDaMA, Accra, and STMA to build capacity in the participatory hygiene and sanitation transformation methodology and the development of BCC action plans. WASH-UP also trained EHOs to promote better hygienic practices to food vendors and other food handlers.

EVALUATION PURPOSE AND QUESTIONS

Evaluation Purpose and Audiences

The purpose of this ex-post evaluation is to better understand whether selected WASH-UP outcomes were sustained and the factors that contributed to or impeded their sustainability. USAID will use the findings from this evaluation to improve the design, implementation, impact, and sustainability of future activities. The evaluation also seeks to identify approaches to ensure sustainability that can be institutionalized for use across future USAID WASH programming.

The evaluation is aimed at several audiences. First, the evaluation's findings are expected to be relevant to USAID/AFR, USAID/E3's Water Office, the Bureau for Policy, Planning, and Learning, and USAID/Ghana, as well as Global Communities (which continues to implement water supply and WASH activities in Ghana). Secondary audiences for this evaluation include other USAID missions and operating units implementing water and WASH activities and their implementing partners. Ultimately, the findings from this evaluation will feed into the USAID/E3 Water Office's ongoing multi-country ex-post evaluation series, which is of interest to the broader WASH sector and will inform sector-level discussions on sustainability.

Evaluation Questions

The Ghana WASH-UP ex-post evaluation answers following evaluation questions (EQs), which are identical to those provided in USAID's evaluation statement of work (see Annex A):

1. To what extent are the levels of service (as defined by WASH-UP) still observed four years after project closure?
   a. What's the level of functionality, quantity/output, quality, accessibility, reliability, and use of water schemes four years after project closure?
   b. To what extent are household and shared community latrines and handwashing facilities installed by WASH-UP still functional, adequately maintained and used?

2. Which factors or approaches contributed to or impaired long-term sustainability of selected WASH-UP project outputs and outcomes?
   a. What financial management structures are in place and are they ensuring fee collection and funding to cover recurrent expenditures? What role, if any, did WASH-UP play in establishing and/or strengthening these structures?
   b. What local water and sanitation governance structures (government, non-government and private entities and groups) are in place and how are they managing and maintaining services? How did WASH-UP capacity development activities contribute to the sustainability of these structures?
   c. Have the innovative economic enterprises that were promoted grown or have they closed? If they've grown, what factor contributed to that continued growth?
   d. What other factors improved or impaired sustainability?

3. In what ways are beneficiaries in WASH-UP BCC target communities applying hygiene practices that the project supported?

For this ex-post evaluation, the evaluation team employed the USAID Local Systems Framework definition of sustainability, which is "the ability of a local system to produce desired outcomes over time. Discrete projects contribute to sustainability when they strengthen the system's ability to produce valued results and its ability to be both resilient and adaptive in the face of changing circumstances."

EVALUATION DESIGN

A joint team from the E3 Analytics and Evaluation Project and the MSTAS project designed and implemented the evaluation between June and October 2018.

Data Collection Methods

The evaluation team used a primarily qualitative approach to ascertain the status of WASH-UP installations, investigate what factors affected the sustainability of outcomes since the activity's closure, and examine whether activity-supported hygiene practices are still being used by beneficiaries. Annex C provides profiles of the core team members who led data collection activities.

At the start of the evaluation, the team conducted a targeted desk review of key WASH-UP performance reporting, monitoring, and evaluation documentation, along with relevant third-party sources and statistical data. This review helped the team understand how existing information can help answer the EQs. To inform its analysis, the team also used data from the WHO, the World Bank,

UNICEF, national statistic bureaus, Ghanaian Ministry of Water resources, and other national and regional organizations.

The team then carried out field-based data collection in September and October 2018 in six communities in AMA, LaDaMA, and STMA. During field research, the team conducted individual and group interviews, focus group discussions, structured observations, and water quality tests. To answer the EQs, the team interviewed a broad spectrum of respondents including activity beneficiaries and implementing partners, national and local government representatives, and private- and public-sector stakeholders. These included household and public water supply and sanitation beneficiaries, water kiosk and food vendors, WSC members, entrepreneurs who received WASH-UP supported micro-loans, GWCL representatives, EHOs, and staff at schools where WASH-UP supported water and sanitation installations. Table 4 summarizes the data collection events that the team completed.

TABLE 4: DATA COLLECTION EVENTS COMPLETED, BY CATEGORY

Method and Respondent/Installation Type	AMA/ LaDaMA	STMA	Total
Interviews with current and former WASH-UP implementing partner staff	4	2	**6**
Visits to households (HHs) with water supply connections to GWCL-managed piped water mains, including:	15	8	**23**
Interviews with HH water supply beneficiaries	15	8	**23**
Structured observations of HH water supply connections	15	8	**23**
Water quality tests (E. coli) of HH water supply connections (includes HH taps and HH water storage units)	26	9	**35**
Visits to water kiosks and community water standpipes, including:	4	5	**9**
Structured observations of water supply installations	4	0	**4**
Interviews with water vendors	3	4	**7**
Water quality tests (kiosk visit includes tap and container tests)	3	3	**6**
Interviews with water users	7	7	**14**
Visits to HH sanitation installation sites, including:	19	10	**29**
Structured observations of latrines	19	10	**29**
Structured observations of handwashing stations	19	10	**29**
Visits to institutional sanitation facilities, including:	1	3	**4**
Water quality tests	0	1	**1**
Visits to public sanitation facilities, including:	1	1	**2**
Interviews with latrine users	2	7	**9**
Interviews with public sector participants, including GWCL and assembly members	2	3	**5**
Interviews with private sector participants, including entrepreneurs and food vendors	4	4	**8**
Focus group discussions with WSC members	2	3	**5**
Individual or group interviews with sanitation and hygiene BCC stakeholders (excluding beneficiaries)	3	1	**4**

EQ 1 (Water Installations)

To answer EQ1, the team assessed if sampled water supply and sanitation installations had met pre-determined standards of service and use.

For water installations, the team used structured observations of WASH-UP supported installations, water quality tests, and interviews from a non-representative sample of installation beneficiaries. The team's objective was to determine the level of service for each installation. The dimensions of 'service'

for water supply installations included functionality, quantity/output, quality, accessibility, reliability, and use. In addition, the team's used its interviews with GWCL representatives and focus group discussions with WSC members to contextualize results.

EQ 1 (Sanitation Installations)

To assess levels of service for sanitation installations, the evaluation team interviewed a non-representative sample of beneficiaries of WASH-UP supported latrines and handwashing facilities installed in households and schools. The team also conducted structured observations of sampled latrines and handwashing facilities to assess their functioning, cleanliness, safety, privacy, and usage. In addition, the team interviewed institutional beneficiaries (e.g., school personnel) and implementing partners.

EQ 2 (Factors or Approaches Contributing to or Impairing Long-Term Sustainability)

To answer EQ2, the team conducted interviews and focus groups with beneficiaries, implementing partners, and other activity stakeholders to understand why some installations have continued to generate positive outcomes for users and communities while other installations have not. These data allowed the team to discern patterns and trends along several lines of inquiry about the factors or approaches that may have contributed to or impaired long-term sustainability of WASH-UP results.

EQ 3 (Outcomes of WASH-UP BCC Interventions)

EQ3 asked the evaluation team to identify ways in which beneficiaries in WASH-UP BCC target communities are continuing to apply hygiene practices that the activity supported. The team interviewed key BCC intervention participants and beneficiaries. The interviews were structured to test beneficiary recall of key WASH-UP supported sanitation and hygiene messages and whether intended beneficiaries are applying desired practices. The interviews were also designed to ascertain respondents' perceptions about the importance of using improved sanitation facilities. This was done to test the WASH-UP theory of change that improved understanding about the importance of using sanitation through BCC messaging would increase demand for latrines among target audiences.

Sampling Considerations

The evaluation team collected data in six of the nine WASH-UP supported urban communities. The team selected these communities based on three purposive criteria, to better understand what factors helped or hindered the sustainability of activity outcomes:

1. Balance of communities in the two regions where WASH-UP targeted poor urban areas: Greater Accra (four communities in AMA and one in LaDaMA) and Western (four communities in STMA).
2. Communities where WASH-UP completed interventions in its first phase (2009-2012) as opposed to the second phase (2012-2015).
3. Communities that present the greatest opportunity for assessing the sustainability of a mix of water supply and sanitation installation site types.

Using these criteria, the team selected the Ayidiki, Nima East, and La Abafum-Kowe-Abese communities in AMA and LaDaMA, and the Kojokrom, New Takoradi, and Ntankoful communities in STMA. Table 5 summarizes the sampling coverage of the evaluation data collection.

TABLE 5: SAMPLING OF COMMUNITIES FOR EVALUATION DATA COLLECTION

Community	Metropolitan Area	Sub-Metro	Region	Selected?
Communities where activities began in 2009				
Avenor	AMA	OkaiKoi South	Greater Accra	Pilot tests
Ayidiki	AMA	Ayawaso Central	Greater Accra	Yes
Nima East	AMA	Ayawaso East	Greater Accra	Yes
Kojokrom	STMA	Essikadu Ketan	Western	Yes
New Takoradi	STMA	Takoradi	Western	Yes
Communities where activities began in 2012				
Nima West	AMA	Ayawaso East	Greater Accra	No
La Abafum-Kowe-Abese	LaDAMA	La Dade Kotopon	Greater Accra	Yes
Ntankoful	STMA	Effia Kwesimintsim	Western	Yes
Assakae	STMA	Effia Kwesimintsim	Western	No

Data Analysis Methods

The evaluation team used qualitative software and Excel to analyze collected data and generate findings for each of the research questions contained within the EQs. The team then compared findings by data source and research question to develop its conclusions about the EQs.

Initially, the team entered data from its structured observations into an Excel database to create findings about the respective levels of service or the water and sanitation installations examined over the course of the evaluation. This included quantitative data from structured observations of water points, latrines, and hygiene facilities as well as water quality tests. The team uploaded its notes from interviews and focus group discussions into MAXQDA to allow for content analysis of open-ended text. In this way, the team synthesized data from each site visit to create findings by site. The team triangulated multiple data points as a method of verification. For example, to arrive at a conclusion on sustainability of local governance structures, the team examined notes from interviews and discussions with public sector informants (e.g., Ghana Water, EHOs, assembly) and implementing partner staff, as well as activity reports.

During and after data collection, team members debriefed in-person, by phone, and via email to corroborate findings from interviews, focus group discussions, and observations. Team members then compared qualitative findings across the various evaluators to verify the results and strengthen confidence in the team's findings.

The analysis enabled findings across sites and respondent types to be efficiently sorted and counted, which allowed the team to develop conclusions for each EQ. Where findings converged, themes were apparent. Where there were divergent findings, the team assessed the strength of evidence for different interpretations, and where necessary reported both interpretations as findings.

This report disaggregates results by geographic area and respondent type where possible. The team also categorized water points by installation type and analyzed counts of how many in each category met the different standards for EQ1.

Evaluation Limitations

Several factors constrained the evaluation team's ability to collect and analyze data or produce findings to answer the EQs. These resulted in part from the inherent challenges of conducting an ex-post evaluation, and are summarized below.

Challenges in locating selected beneficiaries and intervention points. The evaluation's data collection approach involved observing water and sanitation facilities installed up to eight years ago. While the team received contact information and GPS coordinates from activity implementing partners, locating identified beneficiaries within selected communities was time consuming, team members faced challenges in navigating unfamiliar communities and neighborhoods, and listed beneficiaries were often not available during the evaluation team's visits. As a result, observations required more time to conduct than originally intended, and limited the time available for other data collection activities.

Inability to identify and secure interviews with key informants. The data collection approach relied heavily on qualitative interviews. However, since WASH-UP ended two years ago and some interventions were completed up to eight years ago, the team did not always have accurate contact information for key informants. In other cases, the team was able to contact key informants but those individuals were not available to be interviewed during the data collection period. The evaluation team sought to mitigate this challenge by working closely with Global Communities to obtain contact information in a timely manner, but this mitigation approach was only partially successful.

Cognitive biases of respondents. Interview data are well known to be prone to cognitive biases on the part of the respondent and/or the interviewer. These include social desirability or acceptability bias – the tendency of individuals to provide responses that they believe will be "socially desirable" in the context or desirable from the researcher's/sponsor's point of view. To ensure the validity and reliability of its findings, the evaluation team worked to mitigate potential cognitive biases of in the research by using systematic triangulation of interview sources and appropriate selection of a range of interviewees.

Lack of locally available materials to conduct water quality tests. The evaluation team secured kits to conduct tests of local water sources. These kits relied on several items that needed to be procured in country but could not be locally identified by the team, specifically fluoride to calibrate the fluoride meter and a buffer set to calibrate the pH meter. As a result, the team was not able to conduct fluoride and pH tests for the evaluation.

Limited performance data. USAID provided the evaluation team with WASH-UP performance data that provided important clarification on the activity's technical approach, numbers of completed installations by type, and contextual factors. However, these data are of limited value to make accurate comparisons about the extent to which levels of service are still observed four years after the end of WASH-UP (as addressed in EQ1). For example, without installation-specific reports on the quantity, quality, reliability, and use of selected water supply installations, it is not possible to directly compare the status of these installations at the end of WASH-UP to their status today.

Selection biases. The evaluation's sampling approach depended on the availability of detailed and current contact information for relevant beneficiaries and stakeholders, from whom the team collected qualitative data based on perceptions and recall. Those respondents who were willing to share their views, or who were identified by the activity implementing partner, may not be representative of WASH-UP participants. In addition, although the team collected quantitative data, it was derived from a non-representative sample and is used primarily in this report to situate the context from which the team collected and reported on the qualitative data.

Logistical and timing challenges. The evaluation design required a range of instruments to be developed prior to field work. To meet USAID's timeline for the evaluation, these instruments were initially developed by MSI and Pragma home office staff before the full evaluation team had been onboarded. These home office team members had limited WASH expertise. In addition, the evaluation team lead was onboarded late in the design process as the previously proposed team lead candidate had to withdraw from consideration due to a scheduling conflict. During the in-country team planning meeting and instrument piloting, the evaluation team worked to refine and streamline the draft instruments and the overall data collection strategy. The short timeframe that the team had in-country to revise the instruments, coupled with the water quality test equipment issues noted above, resulted in some delays in the team's data collection activities. The team worked to mitigate these challenges by having the senior evaluator serve as acting team leader until the team lead's arrival in-country, and through constant communication between the sub-teams and with the MSI and Pragma home offices to adjust daily activities to optimize the team's in-country data collection efforts.

FINDINGS AND CONCLUSIONS

Evaluation Question 1: To what extent are the levels of service (as defined by WASH-UP) still observed four years after project closure?

WASH-UP worked with private- and public-sector partners as well as construction sub-grantees to provide improved water and sanitation to target communities. Activity results included:

- Enabling over 40,000 people to gain access to improved drinking water sources;
- Extending 14.85 kilometers of primary water mains in urban communities;
- Connecting 885 urban household to water mains;
- Establishing 63 water kiosks in urban areas managed by private vendors or WSCs;
- Installing seven community standpipes in Ntankoful (STMA) and a community water system in Nima East;
- Installing 14 machine-drilled boreholes in 5 urban communities; and
- Providing water and sanitation facilities for six urban schools.

This section discusses the sustainment of these WASH-UP results.

EQ 1a: What's the level of functionality, quantity/output, quality, accessibility, reliability, and use of water schemes four years after project closure?

WASH-UP increased access to water supply through the extension of GWCL water mains, household connections to the GWCL water supply, community and school water installations, and support for individual water kiosk vendors. To assess the sustainability of WASH-UP supported water supply installations, the evaluation team interviewed household beneficiaries, conducted five focus group discussions with WSC members, and observed WASH-UP supported water supply and sanitation installations in five schools, two community water system pipe stands, and seven privately managed water kiosks.

Household Water

Finding 1.1: For the most part, beneficiary communities continue to receive water established during the activity and following its completion.

The evaluation team interviewed 23 household water beneficiaries and observed their water supply connections. All but 3 of the 23 household water supply beneficiaries indicated that their WASH-UP supported water supply connections are currently functional.

In addition, WASH-UP's support for the extension of secondary GWCL water lines enabled new users to access the GWCL water supply after the activity ended. It is not possible to say definitively how many additional households specifically obtained access as a result of the WASH-UP supported water line extensions. However, household respondents and Global Communities both reported that access to the GWCL supply is greater today because of the extensions.

Finding 1.2: Insufficient means to pay water bills is a barrier for some households' ability to continue to access supplied water

While most respondents stated that connections to the GWCL improved water supply have been sustained since the activity ended, barriers to household access remain for some households. Many beneficiaries raised the issue of costly water bills and eight stated that they are often unable to pay their water bills on time. One beneficiary said she tried to sell water to pay the water bill but is now unable to pay on time because GWCL charges her a higher commercial rate for water services. Two of the three household beneficiaries whose water supply connections were not functioning at the time of the site visit were disconnected because they could not afford to pay the GWCL bills; one had been disconnected for a year. These households have been forced to resort to previous water collection practices or to purchase water at publicly available water sources. While water purchased per individual use (at an average approximate sachet price of $.06)[10] or from a public water point/vendor is available, water from these sources is more expensive, which means the poorest pay more for water. In addition, these users must travel farther and spend more time collecting water.

Inability to pay was also an issue for some renters in compound households, where landlords are responsible for water payment of compound installed taps. Due to tenants' inability to consistently pay landlords for water use, some landlords have shut off (locked) access to installed water points. The extent to which tenants' access to water has been reduced cannot be estimated, however, because of the evaluation's limited sample size. The evaluation team also cannot determine what role tenants generally had in financing the installation process, if any, or what agreements were made about their continued access over the longer term following installation.

WASH-UP's baseline report showed that water and sanitation was the last consideration among five household expenditures (food, school fees, clothing, transportation, and water and sanitation). Thus, it is not surprising to find that some households continue to have insufficient funds or dedicate few funds for water.

Finding 1.3: Household water supplied by GWCL is generally reliable, although shutoffs due to electricity disruption are not uncommon.

Household beneficiary interviewees generally reported satisfaction with the reliability of the water service, although there were variations by community. Households in La-Abafum-Kowe-Abese

[10] F. Sare-Donkoh, "Pure Water now 30 pesewas," *Online Today* (January 27, 2016). Available at: https://www.todaygh.com/pure-water-now-30-pesewas/ (Accessed October 4, 2018).

(LaDaMA) and Aiyidiki (AMA) indicated that water flowed reliably and with only short and infrequent disruptions, whereas respondents in New Takoradi and Kojokrom (STMA) were more likely to cite long shutoffs in the water supply. In Kojokrom, these shutoffs resulted from railway construction in the community that required the relocation of existing water mains. The evaluation team did not determine the reasons for the increased number of shutoffs in New Takoradi.

Roughly half of household respondents stated that GWCL is their service provider for the operation and maintenance of their water supply connections. The remaining respondents reported that they either did not have a specific service provider, or had to find a local plumber to address supply issues.

Finding 1.4: Households obtain sufficient water from GWCL pipes and use it for many household purposes but are less likely to use it for drinking due to safety concerns.

While most respondents maintained that WASH-UP water supply was sufficient to meet their household needs, they were far more likely to use GWCL piped water for cooking, washing, and cleaning, than for drinking. Ten of 23 household respondents use GWCL water connections for drinking, while all households use it for cooking and nearly all use it for bathing.

Fifteen household respondents indicated they do not use their GWCL connection as their sole source of drinking water. Sachet water was the most common other source of drinking water. Nearly every household that relied on other sources of drinking water, except two households that were disconnected from the GWCL lines, stated that their water was often dirty and discolored. Most households believed sachet water to be safer than the GWCL-supplied water. As one household respondent in Nima East stated:

> *"We use the sachet water for drinking purposes and we do so because we do not want to fall sick. At times the water becomes a bit dirty and there is some odor so we feel it's not safe drinking the water and that's why we use sachet water as it's safer. We do not also know how safe sachet water is but we have been told its better than water from GWCL due to the odor and the color of water at times. Everybody uses sachet water now for drinking."*

The evaluation team observed flowing tap water in 18 of the households and did not see any water discoloration in those households.

Access to water has contributed to income generation activities for some households. Six household beneficiaries said they use the GWCL tap for such activities and one used it for gardening.

Finding 1.5: Nearly all households stored water, often in unsanitary conditions.

As is common across Ghana, nearly every household stored water, even those that find the GWCL water supply to be reliable. This mitigates the risk of water stoppages and shortages. As one household beneficiary from La-Abafum-Kowe-Abese noted, "Occasionally water does not flow, but we store water, so we are okay. We have never run short of water in this house."

Example of how household beneficiaries store water in unsanitary conditions. Credit: Kay Mattson, Pragma.

Water storage practices revealed potential risks of contamination. Many households do not cover their water containers and use unsafe water removal practices.

Finding 1.6: Water tests identified E.coli-contaminated drinking water in households (especially in storage containers) at levels in line with other studies.

While most respondents reported no water quality issues, some noted that their water was dirty or discolored, leading them to rely on other sources of drinking water.

To assess water quality, the evaluation team tested water from household GWCL taps, public taps from GWCL or borehole wells, and private water vendor kiosks (connected to the GWCL supply) for the presence of E.coli using the Aquagenx Compartment Bag Test for E.coli.[11] In addition, the team tested a sub-sample of household water storage containers for E.coli. The team was unable to tests for pH and fluoride (see the Evaluation Limitations section); those tests are not routinely conducted in Ghana as part of the national testing standards.

The E.coli tests provide results as a most probable number (MPN) per 100 milliliter (mL) estimate of the presence of E.coli following 48 hours of incubation at Ghana's ambient temperature. Overall, of the 42 E.coli tests the team conducted on samples of water from all sources and containers, 23 were identified as "low risk/safe" (<1/100mL), 10 as "intermediate risk" (1-10/100mL), and 9 as unsafe using WHO drinking water quality guidelines (see Table 6).

[11] See https://www.aquagenx.com/e-coli-test-kits/.

TABLE 6: E.COLI TEST RESULTS BY COMMUNITY AND TESTING POINT (TAP AND CONTAINER)

Collection Point by Region	Health Risk Category Based on MPN and Confidence Interval (E.coli CFU per 100 mL) [12]				
	Safe (<1/100)	Intermediate Risk/Probably Safe (1-10/100)	High Risk/ Probably Unsafe (>10-100/100)	Very High Risk/Unsafe (>100/100)*	Total
Container	3	2		4	**9**
Tap	13	5		2	**20**
AMA	**16**	**7**		**6**	**29**
Container				2	**2**
Tap	7	3		1	**11**
STMA	**7**	**3**		**3**	**13**
TOTAL	**23**	**10**		**9**	**42**

- All borehole well taps tested as "safe" for the presence of E.coli (0.0 MPN/100mL).[13]
- Three household taps had "unsafe" levels (>100/100mL) of E.coli.
- Six household containers had "unsafe" levels (>100/100mL) of E.coli.

The source of contamination for these water quality test results is unknown. In the case of household containers, unsanitary storage practices are likely to blame. The sources of contamination of household tap water could be due to breaks in lines, a contaminated tap, or inaccurate testing/test results.

While the WHO indicates that results for E.coli of between 1-10mL/100 are probably safe, Ghana water standards call for no detection of E.coli in 100 mL of drinking water samples. Therefore, 19 of the team's tests (approximately 45 percent) did not meet Ghana water standards for E.coli. These results also reinforce the importance of safe water storage in the provision of safe drinking water, an education component not included in WASH-UP's BCC campaign.

The overall results from all water quality tests were in line with Ghana Living Standards Survey Round 6[14] results, in which 43.5 percent of the population tested had a source with detectable E. coli and 62.1 percent of household samples had detectable levels.

Finding 1.7: The water tested from borehole wells did not show unsafe levels of arsenic.

The evaluation team also tested borehole well sources for Arsenic (As) using the Econo II Quick (Rapid Arsenic Test).[15] The results from all four borehole well taps in the Ntankoful community water system were 0.0/2.87 parts per billion, indicating that the water is "low risk/safe" for arsenic.[16]

[12] WHO Guidelines for Drinking Water Quality, Fourth Edition.
[13] The Government of Ghana's standard for E.coli, count/100ml, is for no detection of E.coli to be found in a 100 milliliter sample of drinking water (National Drinking Water Quality Management Framework for Ghana, June 2015, Ministry of Water Resources, Works and Housing).
[14] Ghana Statistical Service (2014) Ghana Living Standards Survey Round 6 (GLSS 6) Main Report http://www.statsghana.gov.gh/docfiles/glss6/GLSS6_Main%20Report.pdf.
[15] https://sensafe.com/quick-arsenic-econo-ii/.
[16] The guideline value for Arsenic (as AS) used by the WHO and Government of Ghana is 10 parts per billion.

School Water Installations

Finding 1.8: Schools with WASH-UP installed water services largely continue to receive water from those services, although cost and reliability are concerns.

The evaluation team visited five of the six urban schools where WASH-UP implemented interventions. Three had received water installations through WASH-UP. Two schools were connected to GWCL water mains, and the third had a borehole well with three storage tanks (two at the junior high school – one of which was used for the biofil latrines – and one at the elementary school). The borehole well and one GWCL water supply connection were functioning properly, while the third school had limited water pressure through GWCL and had to supplement its water supply through a borehole. Respondents from both GWCL-connected schools complained of the high cost of GWCL water.

Community Water Points and Water Kiosks

This section relates to community standpipes and water kiosk vendors that WASH-UP supported. The evaluation team interviewed eight current and former water kiosk vendors and two community standpipe operators. One water kiosk was closed during the team's visit, so the team could not observe the kiosk nor interview the vendor.

Finding 1.9: Eight of nine observed water kiosks continue to function properly.

The evaluation team visited nine water kiosks to interview vendors and users and observe kiosk operations and maintenance.

Eight of the water kiosks are currently fully functional and continue in business. Aside from small leaks, seven of these eight functional water kiosks are properly maintained, although one in East Nima showed signs of uncleanliness and poor general maintenance based on the team's observations of the exterior.

One water kiosk vendor interviewed in La could not afford to pay the GWCL commercial water rate and her connection was disconnected. That kiosk is no longer functioning and has fallen into disrepair.

Vendors in Kojokrom and New Takoradi who manage functional and well-maintained GWCL-fed water kiosks noted that their water flow is unreliable. The water vendor in Kojokrom explained that the problem with reliability had led her to invest in and obtain a second water tank.

> *"I have decided to get another tank to add it, sometimes when the tap is closed the current tank can only take about three days, so I want to apply for a loan to expand the business so that there will be water all the time. No, no other organization has approached me to support the business, apart from the global communities and CHF, no other organization has come. Yes, I can support and sustain my current kiosk, because if there is a problem I can just call the plumber to work on it. I have been running the other one for the past 15 years, so I know how the business works."*

All the water quality tests at kiosks indicated the water was safe from E.coli (0.0 MPN/100mL) (see Finding 1.5).

Finding 1.10: The one observed community water point (mechanized borehole) continues to function properly.

The evaluation team observed two community water points. One, in Nima East, was closed and only an outside inspection was possible. The other, in Ntankoful, was operational and consisted of seven community standpipes serviced by local vendors under the management of the Ntankoful WSC.

The manager of the Ntankoful water supply system noted that all seven standpipes were functional, but that one of the seven was currently closed because the WSC did not have a vendor to operate it. Water quality test results at community and public installations show safe levels for drinking. Three boreholes in STMA tested negative for Arsenic (Mg/L<2 parts per billion). All the E.coli tests of community water points indicated the water was safe from E.coli (0.0 MPN/100mL) (See Finding 1.5).

Finding 1.11: Increased access through household connections to piped water has reduced the demand for water kiosks.

Several water kiosk vendors stated that the increased access to piped water by households in their communities had reduced the demand for water from kiosks. Interviews with water vendors and managers as well as community management structures (i.e., the WSCs) indicated that making a profit after accounting for recurrent expenditures was challenging. With monthly revenues down while operation costs remain consistent, many community water kiosks are unable to save or invest their profits.

As one respondent stated:

> *"The connection was done well. It was made to get very close to my household. But after the project the water sales business has collapsed because most community people now have water connections in their homes. So, they no longer have to come and buy water from us."*

However, one kiosk vendor operating near a market in East Nima indicated that sales have been consistent. She has been able to quit her job at the market and support her family through her water kiosk business. She said if she had more space she could expand her business.

Finding 1.12: Water kiosk vendors perceive the GWCL commercial water rates to be high and a barrier to expanding their services.

Several vendors stated that commercial water supply rates were too high to run a profitable business. With a reduction in demand for water from kiosks as more community members are connected to water mains, GWCL's flat fee was perceived to be a major constraint on business growth. In at least two instances, respondents also referred to the problem of residential establishments competing as water vendors while avoiding commercial rates. As one respondent stated:

> *"GWCL gives us a flat commercial rate to pay every month. It's too high and we cannot pay. There are others in the community who also sell water although they pay household rates to GWCL, unlike us who pay commercial rates. So those other sellers are able to sell their water at prices lower than ours. This discourages people from buying water from us."*

Conclusions for Evaluation Question 1a

Conclusion 1.1: Households continue to benefit from WASH-UP supported water supply connections to GWCL main line extensions. These connections generally provide reliable access to potable water. However, concerns about water quality lead many households to obtain drinking water from other sources, mainly sachet water, which is expensive, has unknown quality, and poses environmental consequences through the introduction of plastic bag waste into an already challenged solid waste management system. Households appeared to have only anecdotal information about the quality of their GWCL-supplied drinking water and many perceived it to be unsafe when it was discolored.

Conclusion 1.2: Although households generally perceive the water supply to be reliable, many household respondents acknowledged that short supply disruptions occur. The widespread practice of storing water in open containers in Ghana to ensure adequate supply increases the risk of contamination

and potential health risks. What was once "safe" water from the source is stored in open, potentially dirty containers and/or subject to unsafe water handling practices, as demonstrated by the E.coli test results. WASH-UP did not address safe water handling practices in its BCC interventions, and households seemed unaware that their water handling practices may expose them to health risks.

Conclusion 1.3: Financial constraints pose barriers to ensuring continued access to improved water for some households, particularly for renters in compound households, lower-income households, and households that experience job losses or other intermittent financial challenges. While WASH-UP focused on and achieved increased access, issues of equity and affordability are also important considerations. Similarly, the affordability of GWCL service for schools and some water kiosk vendors was an issue. This may require similar approaches to ensure that access is sustained, as well as other financial arrangements such as reduced rates for water that is provided as a "public good."

Conclusion 1.4: Location plays a key role in whether water kiosks are sustained. Water kiosks that were located near a strong customer base, or where consumers had no other, fewer, or less reliable water sources, were more likely to be sustained and be more profitable. Market assessments should be an integral component of any private water kiosk strategy, to ensure sustainability as well as support private vendors to market and grow their businesses, if so desired. At least one water kiosk vendor indicated they received no financial management or business training from WASH-UP and that such training would have benefited them greatly.

EQ 1b: To what extent are household and shared community latrines and handwashing facilities installed by WASH-UP still functional, adequately maintained, and used?

WASH-UP greatly improved household access to latrines over the course of the activity through a subsidy approach at the household/community level. The activity implemented "improved latrines" that were designed and observed to "hygienically separate excreta from human contact."[17] All sanitation beneficiaries in the six communities the team visited expressed immense appreciation for having access to improved latrines and indicated that the activity's financial support via grants or loans played a pivotal role in their ability to have a latrine.[18] WASH-UP supported latrines included household latrines for their owners' use and compound latrines for their renters' use, as well as public latrines and latrines at schools.

Household Latrines

Finding 1.13: Most WASH-UP supported latrines continue to be functional.

Twenty-five of the 29 WASH-UP supported household latrines observed by the evaluation team are currently functional. Household interviews revealed that people tried to maintain the latrines to the best of their ability. Beneficiaries reported cleaning the latrines on a rotating basis among paid tenants, keeping the latrines free of odor and flies, as well as making repairs and renovations as household budgets allowed. Most respondents indicated that maintaining the latrine was not more difficult now compared to the time immediately after the latrine was constructed. Beneficiaries also reported that they received limited education related to sanitation; most received latrine maintenance instructions from construction companies at the time of installation. Many households had made modifications to their latrines.

[17] JMP definitions https://washdata.org/monitoring/sanitation.
[18] Ibid.

The exceptions to this finding were primarily related to latrine pits/septic tanks being full (see Finding 1.16) and the non-functional raised compost latrines constructed in Avenor. While Avenor was not one of the selected evaluation communities, the team pilot tested the data collection instrument there and given the significant findings from that pilot testing, findings are included here.

The raised compost latrines implemented in Avenor were all found to be non-functional, and respondents saw them as "albatrosses" left in the community. One respondent indicated that, as a result of this poor experience with latrines, they were not interested in working with any other non-governmental organization (NGO) on sanitation in the future. This poses a potential barrier to future interventions for both Global Communities and USAID. Global Communities is aware that these latrines are not functioning and attributed it to the floods that took place in 2016, which infiltrated the raised pits and made them inoperable. Households also did not want to turn these latrines into pit latrines that could use vacuum tankers to remove waste once full due to the cost of that desludging method. The design was used in Avenor to accommodate the high-water table in these areas, so the threat was somewhat known. This geographic area poses particular challenges for latrine designs.

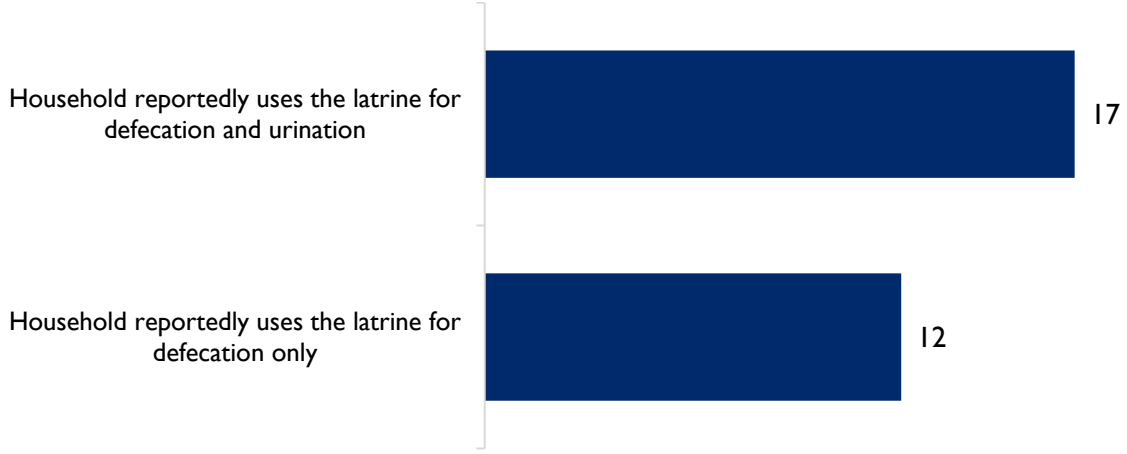
While respondents indicated that the floods had an impact on their use, other issues also led to the latrines not being used, including acceptance of the composting method – particularly during the time of cholera; lack of a viable method or location to take composted material (which had to be transported through communities); and laws that prohibit the transfer of open waste in communities. In addition, users reported that Accra lacks a market for compost given high fertilizer subsidies in Ghana.

Finding 1.14: Household respondents were more likely to use latrines for defecation than urination, and misuse technology to prevent the pits from becoming full or to increase perceived cleanliness by "flushing" latrines with water.

While most households use latrines for defecation, 11 respondents reported that household members urinate in the open or in the shower rather than in their latrines. Respondents stated that they did this to reduce the amount of liquid in the latrine to try to delay the need for waste removal. Some household respondents reported that the latrine installer has advised them to not urinate in the latrine. While urine poses less of a contamination issue, not urinating in latrines can make the breakdown process in WASH-UP supported latrine designs less effective if less urine is introduced into the pit/tank.

Further, some beneficiaries have modified their KVIP latrines to be "pseudo pour flush" latrines through the introduction of water for flushing or bowl cleaning. Although most households interviewed indicated that they only used a small amount of water to "flush" their latrine, this practice could be the reason why some households reported their latrines are filling up so rapidly, especially in large compound houses. The introduction of water also affects the aerobic biological processes, which can affect the overall effectiveness and sustainability of the latrines. Households seemed to understand that water should not be used in KVIP latrines. However, the practice continues, perhaps due to a failure to fully understand the consequences. As Figure 2 shows, 17 of the 29 household sanitation beneficiaries interviewed report their household uses the latrine for all needs versus defecation only.

FIGURE 2: HOUSEHOLD SANITATION BENEFICIARIES REPORTING THAT LATRINES ARE USED FOR ALL NEEDS (N=29)



Finding 1.15: Beneficiaries agreed that home latrines improved social factors and their quality of life.

Numerous respondents stated that the installation of household or shared latrines not only improved access to sanitation for household members but also contributed to a greater sense of pride and dignity. For example, one respondent in Nima stated:

> *"Talking of latrine in Nima during that time, it wasn't easy especially me. I am a community developer for over 20 years, so I come across so many people. We meet together and do several activities together. But with the latrine, I had to go to the public latrine as early as 4am to visit the toilet because that time there is no queue. The day I don't get to the public latrine early like 6am or 7am, I meet several people there who would approach me and greet me, and I feel shy for them to be greeting me in the queue. But when I had my own household latrine, I became very happy about it."*

Existing research[19] has shown that these normative/social factors play a significant role in households obtaining and sustaining latrines, since owners are proud to own them and are more likely to maintain them. The evaluation team observed that households with latrines that were financially supported by all users (e.g., single family latrines or compound facilities) were in better condition and operational in comparison to latrines where users were not financially responsible for maintaining the facilities (e.g., tenants of compound houses).

Finding 1.16: WASH-UP supported household latrines improved access but face typical challenges observed for shared household latrines in urban areas, with shared household latrines more likely be poorly maintained and more expensive to maintain.

[19] Shakya, HB, Christakis, NA, and Fowler, JH. Social Network Predictors of Latrine Ownership, Social Science and Medicine 125 (2015), 129-138. See: https://www.sciencedirect.com/science/article/abs/pii/S0277953614001713.

All the WASH-UP supported household latrines the evaluation team observed are considered "improved," as defined under the JMP's ladder for sanitation.[20] However, many have "limited service" given that they are shared with other households (whether in the same compound or in public settings for use when no latrine is available at their home). There is some disagreement in the sector concerning this definition, particularly as it relates to sanitation in densely populated poor urban areas. Such areas face challenges including lack of space for individual household latrines, land tenure issues, and limited resources for fecal sludge management (FSM). Thus, shared latrines are often implemented as the most viable option given these conditions. This was the case for the WASH-UP targeted urban communities.

In addition, in Ghana it is common in urban and peri-urban communities for generations of one family, as well as unrelated family members, to live in "compound complexes" where individual households have their own unit/room but share a courtyard or other space with other households on the compound. This, along with cost and space issues common to other urban areas, led WASH-UP to implement numerous shared latrines in compound housing settings.

While shared household latrines improved access, the evaluation team found that they were more likely to be non-functional or poorly maintained and less clean on average. Latrines that are shared by many household members or by multiple households require more maintenance and FSM due to the volume of waste being introduced into pits/septic tanks. This increases the cost to users to sustain latrine functionality. Both these issues resulted in some households no longer having access to WASH-UP supported latrines. Three of the four household latrines the team visited that were no longer functional were in shared compound houses – each with over 35 occupants.

WASH-UP supported household KVIP latrine in disrepair in Aiyidiki, AMA, in a household with over 35 members.

[20] See: https://washdata.org/monitoring/sanitation.

Left: WASH-UP supported household water closet that is no longer functional in Nima East, AMA. This household has over 35 members. Right: The door on that latrine. Credit: Kay Mattson, Pragma.

Finding 1.17: Sludge removal is a significant barrier to sustaining access to household latrines, particularly for large compound houses.

The barriers to accessing latrine sanitation are similar to the barriers for continued water access: an inability to pay for recurrent expenditures, which leads to discontinued or interrupted access. This is particularly relevant to shared and communal households where there are more users. For these residences, respondents reported that access has been interrupted or discontinued because tenants and landlords were unable to cover the maintenance costs, specifically fecal sludge removal of full septic tanks or pits.

Households with more users were more likely to report that their pits/tanks needed to be emptied, as compared to households or compounds with fewer users. For the 12 households that reported that their septic tanks or pits needed to be emptied since installation, the average number of users per household latrine was 29. For those 15 households that had not yet required their tanks or pits to be emptied, the average number of users was 14. In addition, for each of the four latrines that were not currently operational, the reason provided was that the pits/tanks were full and required desludging.

Cost appeared to be the main factor contributing to latrines not being desludged. This was not just due to the household or tenants' inability to pay, but also due to the reported higher cost of desludging in the area where these respondents lived. Households in concentrated urban communities, such as Nima East, must pay higher costs to remove sludge because big trucks cannot easily access households or additional equipment is required. These costs may also be compounded by improper latrine usage as described in Finding 1.13, which results in the need for more frequent sludge removal.

Households that had desludged reported using a local service provider that they had learned about via word of mouth or from a posted flyer. None could recall the name of the provider. It is also possible

that some households used informal manual desludge providers who are more likely to not properly dispose of waste (WSUP, 2017). This evaluation did not explore in detail the specific methods used to remove sludge. Households that had their latrines desludged and could recall or were willing to share the methods used reported that a truck with a long hose was used, indicating a mechanized method – most likely a vacuum tanker – as opposed to a manual method, which is common in Accra.[21]

Households that have not been able to desludge and whose latrines are inoperable have reverted to using public latrines. However, there is some evidence (see Finding 3.8) that these users have also reverted to old practices of defecating in plastic bags, which are often disposed of in canals and other areas that are not safe (considered open defecation) as this is "free of charge." While open defecation has been decreasing in Ghana, it is still reported to be practiced by approximately eight percent of urban populations.[22]

It does not appear that WASH-UP addressed FSM, although some households reported being told that "someone from the project would come to empty [the latrines]." Most respondents were not aware of the costs for desludging or the barriers they may face based on the location of their homes, which were often far from the main road.

Finding 1.18: WASH-UP supported latrines do not accommodate persons with disabilities.

The WASH-UP supported latrines observed did not provide accommodations for persons with disabilities when constructed. The few households the team visited with members or tenants who had disabilities explained that these family members are given assistance when needed. While this is good, persons with disabilities should not have to rely on family members for assistance when they need to use the latrine. While few households the team visited had members with disabilities, it does not appear that WASH-UP had a mechanism in place to modify facilities to make them accessible (e.g., placement of bars to assist a disabled person to transfer onto a toilet seat) at the point of installation when disabilities were known. Not having such aids in place can prevent individuals from using or having access to the facilities. Since household members' abilities can change over time, it is important that facilities be constructed with these potential issues in mind, particularly for households with elderly members.

Community and Institutional Latrines

Finding 1.19: WASH-UP supported community public latrines are functional, reliable, and preferred to government-installed public latrines.

WASH-UP also implemented some public latrines, such as in the market area of East Nima. These are managed by community WSCs, most of which were established under WASH-UP. For public shared latrines, the cost of maintenance appeared to be less of an issue, as there was a source of revenue from charging users, which the operators can use to maintain the facilities. Brief interviews with two public market latrine users near a market in East Nima indicated that users are willing to pay more for a cleaner latrine to avoid a less desirable facility. Respondents saw these latrines as more successfully maintained, given that they had a paid manager who oversaw their maintenance as well as a reliable source of income to put toward maintenance costs.

The evaluation team was only able to interview respondents at two community public latrines in Nima East and New Takoradi. In both cases, respondents stated they used the latrines frequently, because they lived or worked nearby. Respondents uniformly stated that WASH-UP supported WC latrines

[21] Boot, N. L. D., and R. E. Scott. "Faecal sludge management in Accra, Ghana: strengthening links in the chain." In 33rd WEDC International Conference on access to sanitation and safe water: global partnerships and local actions. 2008.
[22] See https://data.worldbank.org/indicator/SH.STA.ODFC.UR.ZS?view=chart.

were functional and open on most occasions, unless the manager was on vacation. In addition to the WASH-UP supported latrines, government-installed KVIP latrines were also located nearby. However, respondents preferred the WC latrines even though they were costlier because they were cleaner and perceived to be more hygienic. As one respondent stated:

> *"The new latrine neat, nice and does not smell. The old one anyone can go to – the new one is neat by choice – because it is more expensive people can afford it. Kids use the old because they don't have 50 pesewas. They charge 30 pesewas for the old latrine."*

WASH-UP supported public sanitation facility in New Takoradi, STMA. Credit: Charles Armah, MSI.

Finding 1.20: WASH-UP supported latrines in schools continue to function and are kept clean and well maintained.

Four of the five schools the team visited had received WASH-UP support for latrine installation. Of the 51 individual latrine stalls (23 boys' stalls and 28 girls' stalls) WASH-UP supported, 49 were fully functional. In addition, most of these latrines were observed to be moderately clean based on an overall latrine facility rating of 1 (low level of cleanliness) to 3 (high level of cleanliness). Three of the five latrine facilities were assessed to have a high level of cleanliness and two facilities were assessed to be moderately clean.

In comparison to the evaluation team's experiences observing school latrine facilities for other evaluations, the overall maintenance of the WASH-UP supported facilities was average considering the age of the latrines. Most latrines had only small maintenance needs, such as repairing biofil foot pumps, staining on concrete floors, and re-painting of exteriors. Adie from the biolfil foot pumps, the needed repairs did not affect the functionality of the latrines.

WASH-UP supported school latrines in Ntankoful, STMA where the latrine wall has cracked along the floor line and the foot pumps for two Biofil latrines are not functional. The photo also shows the failing chain-link fence reportedly damaged by the local community. The school contacted a plumber to fix the foot pumps but had no plans to fix the cracked wall or fence Credit: Kay Mattson, Pragma

However, there were more significant findings in two latrines that had larger concrete cracking in the building's super structure, which could potentially lead to structural failures if not repaired. Another latrine at Ntankoful junior high's installed chain link fence around the parameter of the facility was failing and poses potential health risks for tetanus to students from cuts. The school latrines were reported to be well used by students and were said to improve girl's school attendance and menstrual hygiene management. As one school respondent stated:

"The presence of the facilities has led to the improvement of hygiene behaviors in the school. The children wash the hands after sweeping the compound in the morning, after using the toilet, after school breaks. The children stay more and longer in school than before the latrines were the case, especially the female pupils. They now have a change room where they can change their pads and clean up, they are not messing themselves now. The girls do not miss school as was the case due to menstruation. They pupils bring their own pads, we have a place in the school to dispose the pads safely."

Handwashing Facilities

Finding 1.21: Most households where WASH-UP supported the installation of latrines or promoted handwashing messaging did not have designated handwashing facilities.

Households where WASH-UP supported the installation of latrines were also supposed to receive the activity's support for the installation of handwashing facilities around the same time. In addition, the activity reportedly targeted all households – including those that only received water-related interventions - with handwashing behavior change messages specific to washing hands at critical times.

To address the sustainability of the handwashing facilities and promoted handwashing practices that WASH-UP supported, the evaluation team attempted to observe handwashing facilities at 50 households that received a latrine or a GWCL water connection. Of these 50 households, only 19 currently have a "special place for handwashing" at their house that the team was able to observe.

Of the 29 households the team interviewed that received WASH-UP supported latrines, only 12 currently have a handwashing facility. Ten of these 29 households reported that a handwashing facility was not installed as part of the WASH-UP support. Global Communities confirmed that some households did not receive handwashing facilities due to delays from some of the fabricators of the facilities. Global Communities did report to the team that at least 83 percent of households had

handwashing facilities installed (403 out of 485).[23] Among households that had handwashing facilities installed but no longer present near latrines, the reasons given were generally either that the latrines had been moved to prevent theft or that the handwashing facility had broken and been subsequently removed. See Table 7 for additional data regarding the handwashing facilities.

Finding 1.22: Few WASH-UP supported household handwashing facilities were functional with both water and soap or cleaning products available.

Of the 19 handwashing facilities that the evaluation team observed, only 9 were determined to be fully functional at the designated location with soap and water at the time of the evaluation – defined by JMP's hygiene handwashing ladder as *Basic*.[24] Only 12 of the 19 handwashing facilities were observed to have a functioning water supply, of which 9 had soap or another cleaning product (e.g., liquid soap, grey ash) at the handwashing station.

Only 7 of the 23 water beneficiaries interviewed had a specific place to wash their hands. Six of these beneficiaries had running water available, but only four had bar or liquid soap at the handwashing facility.

TABLE 7: SUMMARY OF HOUSEHOLD HANDWASHING FACILITIES

Households by Intervention Area	Number with a Designated Handwashing Facility	JMP Handwashing Ladder			No Facility (No Special Designated Location)
		JMP Basic	JMP Limited		
		Functional Facility (Designated Location with Soap and Water)	Facility Without Soap	Facility Without Water	
Latrine Intervention Total HHs = 29	12	4	8	6	17
Water Intervention Total HHs = 23	7	5	2	1	16
Total	**19**	**9**	**10**	**7**	**33**

In East Nima, a predominantly Muslim community, respondents reported that, as handwashing facilities broke down, they reverted to using their *butas* (water pots) for latrine use – both for cleaning the bowl and for handwashing after latrine use. This is not an appropriate handwashing practice that will result in clean hands. One household had put a bar of soap on a post outside the latrine to ensure that soap would be available for use. While the intention is good, the method may not be safe. The bar of soap could retain contaminants after repeated use when the *buta* is used, as the *buta* is being used for multiple purposes (e.g., to flush or clean the toilet following defecation, to pour water for handwashing), and it may not provide sufficient water flow for handwashing (see photos under Finding 3.2).

The evaluation team found that most observed households (40 out of 52), regardless of intervention, do not have an operational handwashing facility with soap and water that meets the *Basic* definition of the JMP handwashing ladder. While WASH-UP reported to have distributed over 1,200 hand washing facilities,[25] WASH-UP monitoring data do not appear to assess if these facilities were maintained over the life of the activity or whether they were in place at the end of the activity. Most of the activity monitoring data focused on capturing activity outputs (e.g., messages provided to beneficiaries) as well as self-reported handwashing practices and knowledge, both of which were high. However, without the

[23] October 25, 2018 email message from Global Communities.
[24] See: https://washdata.org/monitoring/hygiene.
[25] As reported in the WASH-UP End-of-Project Evaluation, April 2018; this figure also includes schools and health facilities.

enabling environment (e.g., facilities with soap and water located near handwashing locations) in place to support promoted behaviors, these practices are not likely to be sustained. (Finding 3.1 provides additional information related to self-reported times for handwashing and WASH-UP BCC interventions.)

Finding 1.23: WASH-UP supported school handwashing facilities are in place but lack soap or another cleaning product, making them ineffective.

The evaluation team visited 5 schools where WASH-UP supported the installation of 34 handwashing stations. Twenty-nine of these stations had functioning water at the time of the team's visit. There were an additional 10 sinks near biofil latrine stalls that provide water, but these should not – and were not reported to – be used for handwashing, as the introduction of soap limits the effectiveness of the biofil latrines.

Of the five schools, all but those in La-Abafum-Kowe-Abese and Ntankoful had handwashing facilities at or near latrine facilities. Thirty handwashing stations were located at or near latrines. However, only four of these handwashing facilities near latrines had soap or other cleaning materials (e.g., white ash) present. A handwashing station is only considered "functional" (see Finding 1.22) when both water and soap are available, and 26 of the 30 of handwashing stations located at or near latrines (not including biofil sinks) did not meet this standard. While the four moveable facilities at Ntankoful were not placed at or near the latrine facilities, their facilities did have soap and water on the day of the team's visit.

While facilities were generally still in place, most lacked soap and some were not properly located near latrines to support handwashing after latrine use.

TABLE 8: STATUS OF SCHOOL HANDWASHING FACILITIES

Number of Handwashing Facilities (Not Including Biofil)	Number with Water	Number with Soap (Not Near Latrines)	Number Near Latrines	Number Near Latrines with Soap and Water
34	29	4	30	4

Handwashing facilities without soap in a school in New Takoradi, STMA. The handwashing facility on the right is also without water as the tank has a hole. Credit: Charles Armah, MSI.

Conclusions for Evaluation Question 1b

Conclusion 1.5: Latrines installed with WASH-UP support generally continue to function and provide access to improved sanitation for the communities served. This is true for household, school, and community latrines.

Conclusion 1.6: FSM is a barrier to continued improved sanitation for households and impacts the sustainability of WASH-UP sanitation interventions – particularly for large, lower-income compound houses where septic tanks and pits fill up quickly and require more frequent desludging. The cost to desludge latrines in high-density urban areas is greater and households unable to afford desludging revert to previous practices. Efforts to reduce these costs lead some households to take counter-productive steps such as limiting access to latrines and urinating in other locations. While this was most noted in shared household latrines, individual households may face similar challenges when their pits/tanks are full. At the time of the evaluation, smaller households had not yet had to empty their latrines.

Conclusion 1.7: Handwashing facilities haves not been sustained and are not in place to provide an enabling environment to support promoted handwashing messages, particularly at critical times such as after defecating and before preparing meals/eating. Household handwashing stations have often been removed or were reported to have never existed. Where they do exist, cleaning products are not available; thus, few handwashing facilities meet the JMP "basic" handwashing facility ladder definition. In schools, handwashing stations were still in place and functional, but cleaning products were frequently not available and many facilities are not located near latrines.

Evaluation Question 2: Which factors or approaches contributed to or impaired long-term sustainability of selected WASH-UP project outputs or outcomes?

This section addresses the factors and approaches that contributed to or hindered the long-term sustainability of selected WASH-UP outputs and outcomes. Sustainability factors identified in EQs 1 and 3 are not repeated here as findings. However, they inform the conclusions for EQ2, which address the full range of significant sustainment factors the evaluation team identified.

EQ 2a What financial management structures are in place and are they ensuring fee collection and funding to cover recurrent expenditures? What role, if any, did WASH-UP play in establishing and/or strengthening these structures?

EQ 2b: What local water and sanitation governance structures (government, non-government and private entities and groups) are in place and how are they managing and maintaining services? How did WASH-UP capacity development activities contribute to the sustainability of these structures?

Finding 2.1: WASH-UP was directly responsible for establishing the governance structures to support water and sanitation service delivery. These structures generally still exist.

All five WSCs the evaluation team spoke with began with WASH-UP. No such institution existed in three of the five communities prior to the activity. In one case, an unnamed NGO had previously helped with waste management in the community; in another, the Ministry of Water and Housing established a

local water and sanitation group. Neither of these institutions were active when WASH-UP began its work in the respective communities.

WSCs were intended to be responsible for demand creation and supply of community and household water and sanitation services, including by providing continued sensitization to community members on the importance of hygiene practices. To support this model, WASH-UP taught WSC members practice skills related to financial and organizational management.[26] The evaluation team's discussions with WSC members suggest that each of the four active WSCs operates slightly differently, with different approaches to membership (e.g., New Takoradi includes assembly members on the committee) and different levels of engagement (from regular meetings to only meeting in-person or via telephone for emergencies or when repairs are required).

Finding 2.2: WASH-UP provided training and support that contributed to the operation and viability of the WSCs, and continues to support some of the WSCs.

WSC members acknowledged that WASH-UP prepared the newly formed WSCs – with training in facilities management, financial management, and record keeping – to manage the delivery of services through kiosks, water points, and latrines. A member of the WSC in Kojokrom stated:

> *"After the committee was formed, it became clear that the WSC could not work without funds so the water points that was provided for the community was given to the WSC to manage; that is holding it in trust of the community we were managing it in terms of the bills, maintenance and what have you. So, we had to put something aside for maintenance purposes. It became necessary at a point in time for the committee to get some working tools for each of the electoral areas. So, with the help of education, workshops, and orientation from Global Communities, we have got a lot of support."*

WSC members acknowledged to the evaluation team the contributions and support from Global Communities during and even after WASH-UP ended. Most WSCs are still in contact with Global Communities and members noted that they can still call Global Communities if they need assistance.

Finding 2.3: Four of the five WSCs continue to manage water or latrine services and perform core management functions

Of the five WSCs that participated in the evaluation team's focus group discussions, four remain active. The WSCs of New Takoradi, Ntankoful, Nima East and Kojokrom all continue to supervise the collection of user fees and to undertake routine maintenance and repair of their facilities. WASH-UP formed and trained WSCs to function as businesses, capable of meeting current expenses through fee collection mechanisms. For the existing WSCs, this has largely been sustained, with most regularly managing to balance operational costs and sales to maintain adequate quality water and sanitation services in their respective communities.

The WSCs in La-Dade-Kotopon and New Takoradi provide contrasting examples of WSC experiences.

The La-Dade-Kotopon WSC operated a water kiosk using GWCL-piped water, which the WSC was forced to shut down after mispricing the water from its kiosk (basing it upon residential rather than commercial rates). As a WSC respondent noted:

> *"The water kiosk we used to manage has also been disconnected. Actually we did not know that the facility was to be managed as a water kiosk. We did not know the meter for the water system was a commercial one which meant we should have been selling water at a price a bit higher than what we*

[26] WSC Training Report TREND 2010; WASH-UP End-of-Project Evaluation 2018.

were doing. So when the bills came we did not have enough sales to pay the bills. The debt accumulated and GWCL decided to disconnect the supply to the system. There's no more water kiosk in the community."

In contrast, in the two years since WASH-UP ended, the New Takoradi WSC continues to meet regularly and was the only WSC from which the evaluation team was able to obtain financial documents. The New Takoradi WSC has tripled its sales in six years, from $2,827 to $9,766. The WSC also has good relationships with the assembly and the village chief. The STMA co-signed a loan with the WSC to repair the latrine, and the local village chief gave the WSC a plot of land in the lower part of the town to build a 20-stall latrine so local residents could have easier access to a latrine. The WSC also collaborates with the public health center, inviting nurses to conduct hygiene education with trade and community groups (e.g., hairdressing, sewing, religious).

Table 9 outlines the operations and management functions of the five WSCs.

TABLE 9: WSC GOVERNANCE AND FINANCIAL STRUCTURES

Location	Current Status	Ensuring Fee Collection and Funding	Costs Covered?	Role of WASH-UP
New Takoradi	Committee meets regularly	Kiosk fees are collected for water (from tanker) and small latrine fees are collected.	Appears to be breaking even. Took out a repair loan and repaid it within the year. Finds a balance between covering costs and not discouraging poorer potential users.	No preexisting water group. One preexisting NGO helped with waste management
Kojokrom	Committee meets irregularly, mostly for emergencies.	Collects user fees for three water kiosks. Latrine is free to encourage patronage.	Appears to be covering costs.	No preexisting water group. Instead, it brought together several other community groups.
Ntankoful	Committee meets quarterly and for emergencies	Vendors all have meters. Quality of water enables slightly higher cost than competition.	Well run. Pays vendors and covers repairs. Electrical costs are the greatest expense and must still be paid even when demand is low. However, overall costs are paid. Previously, allowances to committee members wasted budget and did not improve performance.	No preexisting group
Nima East	Committee meets irregularly, mostly for emergencies.	Sales are still made to the treasurer, but do not appear to be tracked.	Sales cover costs of routine maintenance, chemicals, and filters. Electricity is problematic. Considering selling sachets due to water quality to raise income and cover costs more easily.	Ministry of Water and Housing established a water/sanitation group. Not active prior to WASH-UP.
La-Dade-kotokpon	Committee has done no work since WASH-UP ended (demand still exists)	Kiosk is no longer active	Was not selling water at a price sufficient to cover the cost of commercial water tariffs and had water disconnected.	No preexisting group

Finding 2.4: Most WSCs fund recurrent expenditures through user fees collected by vendors, but have challenges establishing appropriate price points to cover variable costs.

Each of the four operating WSCs collects user fees for the sale of water from kiosks or community water points. The general practice is for users to pay a fee to a vendor. The water the vendor sells is metered and the vendor correspondingly pays a portion of the proceeds to the WSC, which uses the funds to cover the cost of elecricity, cleaning services, basic maintenance, and repair. Focus group participants from all four WSCs reported that these committees can cover their overhead costs effectively using only the revenue generated from their fee structures. Two WSCs reported taking out short-term loans for equipment maintenance and repair, but in both cases they were able to repay those loans within a year without changing their fee structure or revenue collection practices.

Participants from each WSC expressed challenges in covering variable recurring costs for WSC facilities. Participants in two WSC focus groups pointed to electricity costs as the most challenging to meet. One of the groups noted that electricity costs did not fluctuate to the same degree as the demand for water, which makes such costs more challenging during times of low demand. Nonetheless, participants from both WSCs reported being able to meet the necessary costs. One group was even considering expanding its water kiosk service to include water sachet production, to increase revenue and more readily respond to overhead costs.

Three of five WSC groups operated latrines and highlighted the challenge of pricing those facilities. The fee must be low enough to encourage even the poorest members of the community to use the latrines, while generating enough revenue to cover maintenance and overhead for the facilities. One WSC determined that usage was so important that it waived the latrine fee entirely, using funds from the water kiosks to cover latrine costs.

Finding 2.5: While some WSCs have largely ceased to sensitize their communities about hygiene practices since the end of WASH-UP, others have continued.

The WSCs played an important role during WASH-UP in helping partners "carry out hygiene behavior change communication in their communities and fine-tun[e] messages and approaches on what would be culturally acceptable" (WASH-UP Final Report, page 38). At the end of the activity, Global Communities worked with the WSCs to establish sustainability plans to ensure that health and hygiene practices and standards continue to be encouraged in communities.

The evaluation team found that two of the four remaining WSCs continue to promote safe hygiene practices. In both Kojokrom and New Takoradi, the WSCs continue to participate in hygiene education activities. In New Takoradi, the WSC undertakes a variety of activities including assisting households to contact waste management service providers for fecal sludge removal and periodically undertaking hygiene education activities in local schools, in collaboration with Global Communities. In Kojokrom, following the end of WASH-UP the WSC obtained the support of the assembly to provide education services at sufficient scale for their community. As a WSC memter noted:

> *"We decided to involve ourselves with education and sensitization to train others on what we have been taught by the WASH-UP project."*

The remaining WSCs have also essentially stopped promoting and sensitizing their communities to safe water and sanitation practices. As one WSC member stated:

> *"We used to involve the community members. But we have had a break in the hygiene education we used to do."*

Finding 2.6: While WSCs did not systematically engage with the local government during WASH-UP, this engagement contributed to sustainability where it occurred.

Of the five WSCs that the evaluation team spoke with, three did not recall any engagement with local government officials as part of WASH-UP. The remaining two did engage with the local assembly, but not because it was part of a specific engagement strategy but rather because the WSC included assembly members. Experiences significantly diverged between the members of these two categories of WSCs.

Arguably the two most successful WSCs, in New Takoradi and Kojokrom, inclue multiple assembly members. These WSCs are also actively engaged with the assembly in delivering WASH programming, as demontrated by the quotes below.

> *"On the monthly national sanitation days, community leaders join us organize clean-up campaigns; assembly members support us with logistics and funds to conduct the clean-up exercise." – Kojokrom WSC member*

> *"We also partake in the sanitation of the community itself and sometimes with the involvement of STMA; fortunately for us we have three assembly members on the WSC who are automatic members of the committee because that was how the arrangement was." – New Takoradi WSC member*

By contrast, none of the members of the remaining WSCs discussed cooperative activities with the local assemblies, although members of two committees lamented the absence of engagement with local government actors, as noted in the quotes below.

> *"We will like STMA to write a letter to the Ntankoful community as a way of starting a formal engagement with us. They should request a general meeting between all parties involved, including the traditional authority to iron out our relationships and clarify everyone's role so we can sustain the resources and investment made for us." – Ntankoful WSC member*

> *"The NGO told us that the project was coming to an end. But they didn't tell us anything at the very time the project ended. They just stopped coming to the community. They did not create any sustainability arrangements between us and the municipal assembly. In this community we look up to the municipal assembly...The assembly is always with us. So there should have been an arrangement for us to continue our work with support from the assembly." – La-Dade-Kotokpon WSC member*

EQ 2c: Have the innovative economic enterprises that were promoted grown or have they closed? If they've grown, what factor contributed to that continued growth?

Finding 2.7: WASH-UP's micro-finance strategy stimulated entrepreneurial growth, which has made WASH-UP supported entrepreneurs more self-sufficient.

Similar to the findings from the WASH-UP End-of-Project Evaluation, the level of satisfaction reported by entrepreneurs related micro-finance, training, and business support was high. Interviews with seven entrepreneurs suggest that micro-financing was a successful strategy to build the self-sufficiency of small business owners, especially women. Five of seven entrepreneurs the team interviewed were women who used earned profits to expand their businesses and/or take care of their families.[27] As one WASH-UP supported hairdresser stated:

[27] All but one entrepreneur did not take out a micro-loan; this person worked in masonry and construction but benefited from WASH-UP trainings.

"The profits I made from my business through the loan, I have used it to buy a land and I am constructing a house which is not yet complete. But if I keep getting the loans to expand my business, I would get more money to finish my house."

Almost all said they had repaid their loans within a year. The only person who no longer had her business was forced to stop because of illness. Most also received more than one loan, though not always through WASH-UP. One entrepreneur got a second loan from another company and paid 30 percent interest.

Finding 2.8: Some WASH-UP supported entrepreneurs would have liked additional training in medium-term business planning.

When asked for recommendations to assist businesses like theirs to grow, many women suggested continued education. Research has shown the importance of supporting entrepreneurs through approaches tailored to their requirements (Kutzhanova 2009). For example, even though many WASH-UP supported entrepreneurs had business experience prior to receiving the activity's support, they could have benefited from support to find solutions to market competition, trends, or other cost-saving innovations.

This need was manifested by the limited potential for business growth of water kiosks in communities where WASH-UP (or others) supported direct household connections to other sources of water. This led to a lack of demand, to which some vendors had trouble adapting. Another example was posed by a hairdresser in Ayidiki who lost about half her sales because of the recent hair trend (the natural look), Her business suffered since her services did not cater to those clients. To make ends meet, she started a second business, selling food at the market after closing her salon at 6 pm.

EQ 2d: What other factors improved or impaired sustainability?

Finding 2.9: WASH-UP does not appear to have collaborated with government or institutional partners to ensure continued support after the end of the activity.

As discussed below, government respondents – notably the EHOs – lamented the lack of collaboration between WASH-UP and local government officials who could have provided concurrent and continuing support of the activity's efforts. Based on activity reports, interviews, and focus group discussions with public sector informants, implementing partners, and WSC members, it appears that WASH-UP's engagement with the public sector was narrowly focused throughout the activity (e.g., establishing a steering committee to design and launch the activity in the first year, building the capacity of EHOs around GIS, developing a training manual for food vendors). In the absence of a stable institutional partner, beneficiaries lacked financial resources, technical expertise, and moral support to continue initiatives such as the BCC campaigns or to intervene with GWCL on issues of water quality and tariffs.

Conclusions for EQ2

Conclusion 2.1: The support that WASH-UP provided to the WSCs in operations and maintenance management was important to sustain these organizations. Due in large part to this support, four of the five WSCs established under the activity continue to provide core operations and management for community water and sanitation services. However, the WSCs continue to face challenges in pricing services in the face of variable costs, including electricity. Further, although Global Communities worked with WSCs to develop sustainability plans that would allow them to continue to support BCC messages in their communities, only two of the five WSCs continue to support hygiene sensitization.

Conclusion 2.2: The newly established WSCs would have benefitted (or did benefit) from additional support following the completion of WASH-UP, which would have better equipped them to sustain service provision. Some WSCs reported continuing to receive support from Global Communities while others have received support from, or have worked in collaboration with, local assemblies. These WSCs have been sustained to the greatest degree; the New Takoradi WSC even expanded its services since WASH-UP ended. This suggests that the lack of engagement between the WSCs and local governments during WASH-UP may have been a missed opportunity.

Conclusion 2.3: WASH-UP beneficiaries have found it challenging to meet the recurrent costs of their water and sanitation investments, and in some cases it is beyond their means. This inability to satisfy recurring costs limited access to improved sanitation in some cases and constrained the growth of WASH businesses. This may manifest a need for additional training in planning or identifying sources of continued financial support.

Evaluation Question 3: In what ways are beneficiaries in WASH-UP BCC target communities applying hygiene practices that the project supported?

WASH-UP implemented a range of BCC interventions to promote desired WASH practices among urban communities. Global Communities subcontracted with a NGO, HFFG, that implemented the activity's BCC component. BCC interventions focused on influencing behaviors associated with WASH, principally hygiene and sanitation. Key WASH-UP interventions under Objective 4 included:

- WSC volunteers visited households to talk with residents about proper handwashing techniques and fostering environmental cleanliness, as well as increase demand for household latrines.
- The activity hosted public forums and events – often through the WSCs – to communicate with the community about hygiene practices such as the use of household latrines, proper handwashing techniques, and fostering environmental cleanliness.
- The activity trained food vendors on proper handling of food, proper handwashing, and safe disposal of solid and other waste.
- The activity conducted national mass media campaigns around three themes: promoting handwashing at critical times, proper disposal of refuse, and stopping open defecation by using household latrines.

Finding 3.1: Most households displayed knowledge about the importance of handwashing and could recite some, but not all, of the critical times for handwashing.

Most household respondents displayed an understanding of the importance of handwashing at critical times and could recite some of the critical times when asked an open-ended question. Only one of the 49 household respondents could recite all critical times. Eighty percent of household respondents recited three of the critical times for handwashing. WASH-UP's messaging and household visits taught beneficiaries about five critical times for handwashing: after defecation, before cooking, before eating, before child feeding, and after diaper changing. The evaluation results related to sanitation and hygiene awareness are similar, but slightly less, to those reported in the WASH-UP End-of-Project Evaluation, where a high proportion of respondents cited handwashing after defecation, before eating, and before preparing food (88, 96, and 44 percent, respectively).[28]

[28] The WASH-UP End-of-Project Evaluation's results employed structured surveys with a sample of 443 respondents.

Table 10 shows the frequency with which household informants recited specific messages.

TABLE 10: HOUSEHOLD FREQUENCY OF RECITING HANDWASHING TIMES (N=49)

Critical Handwashing Times	% of Households Reciting
After toileting	87 %
After defecation	83 %
Before eating	81 %
Before preparing/cooking food	29 %
After changing diapers of babies/cleaning child's bottom	6 %
Before feeding a child	2 %

Percentages do not add up to 100. The evaluation team captured all times that respondents mentioned in an open-ended question. "After toileting" and "After defecation" were seen to be the same thing, but respondents mentioned them only slightly differently. It is possible that "After toileting" could just mean urination and/or both. The evaluation team did not explore this further with respondents.

Finding 3.2: In Muslim communities, handwashing may be a bigger issue due to culture practice.

Cultural practice in Muslim households, such as the use of the *buta* (water pot) for ablution and placement of a bar of soap on the wall, are not hygienic and pose potential risk for re-contamination during handwashing. These practices were identified in nearly all Muslim households the team visited in AMA and STMA. Respondents, however, considered these practices to be safe and hygienic. Given these perceptions, it will be difficult to change these practices for washing hands under running water with soap, especially at critical times, without a focused effort on why current practices may pose disease transmission challenges.

Handwashing facilities in a Muslim household in Nima East. Cation: Daniel Agoha, MSI.

Finding 3.3: Most household respondents could not recall receiving WASH-UP household visits or specific communications about handwashing.

Most households could not recall receiving information about handwashing through household visits and few could recall, despite the team's probing, any specific WASH-UP BCC messages. The team could not

determine if respondents had merely forgotten the BCC messages and home visits, or did not receive them in the first place. Overall, most respondents had some understanding of handwashing at critical times and attributed this knowledge to "just knowing," level of education, or their "Muslim culture," rather than to WASH-UP.

Finding 3.4: Few household respondents could recall the WASH-UP promoted hygiene and sanitation materials and outreach.

Few household respondents recalled receiving any WASH-UP hygiene and sanitation promotional materials. Two households in La-Abafum-Kowe-Abese and Avenor explained that they had previously posted WASH-UP BCC promotional materials on their walls, but that they had been destroyed by rain. Household respondents who recalled receiving such materials were more likely to have been involved with WASH-UP as community mobilizers (e.g., water vendors, WSC members).

Respondents also could not recall having received any specific information about proper safe water storage or waste management, although the evaluation team found relatively strong adherence to practices for waste management – but not water storage – in the communities. Some households remembered hearing more general radio or television messages, many of which occurred following the completion of WASH-UP. These messages, such as "Keep it Clean," related to latrine installation.

Finding 3.5: Food vendor respondents attributed improved understanding of food sanitation to the WASH-UP BCC interventions.

WASH-UP provided training to food vendors on proper handling of food. Apart from receiving subsidies to expand their businesses, the BCC action plan for food vendors covered proper handwashing, safe disposal of human excreta, and safe disposal of solid and other waste including proper food hygiene and vending. The evaluation was only able to interview two food vendors in La-Abafum-Kowe-Abese and Avenor. These vendors stated that WASH-UP messaging improved their understanding and knowledge of the importance of proper food handling hygiene practices. Respondents indicated they were able to expand their businesses with the subsidy and now feel confident serving hygienic meals to the clients:

> *"We wash our hands more frequently now. We have also become mindful to encourage the school children to wash their hands before eating."*

Food vendors in La Anglican School, however, lamented their lack of access to potable water by school authorities, despite the important role they play in the pupils' lives:

> *"Our challenge is that, although the school has a water system and the school is aware that we need to provide water for the school children to wash their hands, we are not allowed to fetch water from the school. We pay a toll to the school because we are selling on their land, but the school wants us to pay another money for the water. The toll should have been enough. For the sake of the children, the school should have given us constant access to the water."*

Finding 3.6: There is mixed evidence on the sustainment of BCC messaging in schools.

WASH-UP's BCC component worked through the School Health Education Program (SHEP) in schools. Under SHEP, WASH-UP worked with school health clubs and school hygiene coordinators to educate students on proper hygiene practices. In addition, schools received sanitation and hygiene facilities such as latrines, washing facilities, and water supply systems. The evaluation team interviewed five SHEP coordinators, and each stated that school hygiene facilities were still in use and contributed to better hygiene for pupils and teachers. The SHEP coordinator in La Anglican primary school stated:

"We were also given 12 hand washing stations. Each consists of a Veronica Bucket and a stand, as well as a bowl that collects the waste water. This were completed in 2014. Every facility is still functioning, and we are using them…There's a lot of benefit. The school children used to go out of the school to homes around to fetch water using gallons and buckets. But now water is readily available in the school and that has saved time and energy. In 2015 when there was a Cholera outbreak, none of our school children was affected because they have clean water at the school and hand washing practice has also been improved."

The evaluation team also observed lax sanitary practices during school observations:

- In one school, the team observed three teachers using the urinal; only one washed their hands afterward.
- Of seven pupils leaving a urinal latrine, only two washed their hands afterward.
- A WSC member in Ayidiki changing a baby's diaper did not wash his/her hands afterward.

This practice was no different in most sites the team visited in AMA and STMA.

Finding 3.7: School informants expressed satisfaction with the level of consultation WASH-UP provided. This helped ensure facilities were appropriate and locally owned.

Respondents stated that HFFG engaged in extensive outreach activities to the wider school community, including key stakeholders such as school administrators, students, teachers, coordinators, and parent-teacher associations. These consultations built local ownership and ensured that the facilities provided were needed and desired by schools, and that the education programs were aligned to existing health initiatives in the schools.

Interviews with school staff also revealed possible evidence that Global Communities continues to provide post-activity support to some schools. As one school staff member noted:

"Occasionally officials from Global Communities have been coming rounds to inspect how the facilities are functioning; they also interact with the children to find out if any of them works at the latrine to see whether or not we are using them for child labor."

Finding 3.8: There is evidence that, in at least one case, hygiene and sanitation sensitization in schools contributed to changing attitudes and practices in the broader community.

In New Takoradi, respondents described how the school program went beyond the immediate benefits to children by changing the knowledge, attitudes, and behaviors of parents, families, and people in the wider community about issues such as open defecation. A school key informant stated:

"We sensitize the parents on open defecation and personal hygiene; this was done during the project period and after the project period. When we began the WASH sensitization at the initial stages it was very difficult for parents to buy into the idea…But now things have normalized after the forums we organized to educate them about the dangers and effects of open defecation. We realized that fishmongers smoke fish when their wards would also be defecating around them; but because of our education, they started to use chamber pot for their children."

The New Takoradi respondents also credited messaging developed during and after WASH-UP with changing regulations in the community related to open defecation.

"During the project, there was a documentary so all the parents and children we invited to view; the documentary captured those who were easing themselves at the seashore and their pictures were there.

It was shown so it meant that next time if you are the one, your picture could be shown elsewhere. Because of the project, there is a fine now in the community if you are caught openly defecating; you would be charged a penalty to pay."

Finding 3.9: Open defecation continues to be a problem in communities the team visited, as beneficiaries do not have easy access to a private or public latrine. However, respondents appear to understand the risks of open defecation.

The evaluation team did not focus on assessing community knowledge of the risks of practicing open defecation, Instead, the team interviewed households that benefitted from WASH-UP supported latrines. However, as noted in EQ1, the team did encounter instances when community members were no longer using their private latrines or were deprived of the use of latrines by landlords. In these households and in large households with an insufficient number of latrine facilities, it seems likely that open defecation is practiced, although the team was unable to verify this.

The team visited one household in Ntankoful with 220 individuals, a "prayer camp" where believers of a particular faith congregate for prayers and spiritual activity and reside for as long as their spiritual issues remain unresolved. This household had two water closets (that WASH-UP provided) and six squatting toilets that were constructed by the household through contributions and self-help projects. The head of the household stated: "We have more users than the available toilets. We do not do practice open defecation though. When necessary, especially when we are away in town, we use public toilets." The team has no means of verifying if members of the household who were unable to use the latrines at peak times used the public latrine. However, this appears unlikely, as there is no public latrine nearby.

The team also encountered other instances in which it was clear that open defecation was being practiced. For instance, the team identified traces of fresh fecal matter in Avenor, where people eased themselves in the open along the banks of a big canal.

The team encountered evidence of open defecation near an open canal while piloting data collection tools in Avenor, AMA. Credit: Kay Mattson, Pragma.

Finding 3.10: Households demonstrated good understanding of and practices in sanitary solid waste management.

Twenty-five of the 28 households that responded to the team's questions about solid waste management demonstrated an understanding of good practice (e.g., solid waste should be kept in a closed container, then deposited in an appropriate place to await pick-up by the garbage company). In addition, the team observed waste receptacles (trash bins or makeshift containers used to collect garbage) in all but one household.

The team could not determine the extent to which households properly disposed of waste outside of their households. In Ntankoful, the team observed a community dump site, which poses significant

health risks for the community. While WASH-UP did address waste management in its BCC messaging, it did not address waste management systems in the targeted area. Observations such as the one below show there is a need for such systems to support BCC messaging.

Public open dump used by WASH-UP beneficiaries in Ntankoful, STMA. Credit: Maurice Ocquaye, MSI.

Finding 3.11: There was minimal collaboration with relevant agencies and stakeholders in the implementation of WASH-UP household-level interventions, which may have hindered the sustainment of outcomes.

While HFFG undertook extensive outreach with some community stakeholders such as school officials, there appears to have been little collaboration with existing government structures. Focus group discussions with AMA and STMA officials, as well as interviews with environmental health directors in STMA and AMA, revealed that WASH-UP did not effectively engage or coordinate its BCC efforts with EHOs. Respondents perceived this as a missed opportunity to take advantage of existing community knowledge, as EHOs are assigned to certain communities, know these communities well, and will continue to engage with them after the activity concludes.

For example, EHOs explained that their mandate requires them to conduct house visits to educate people on all health-related topics. Effective collaboration with WASH-UP could have ensured integration of efforts and the sustainability of WASH-related education initiatives beyond the life of the activity. HFFG could have partnered with existing institutions and local structures to deepen knowledge and affect behavior, especially at the household level. One EHO noted:

> *"Not working with existing institutions at all levels in the implementation of BCC activities was a shortfall."*

Conclusions for EQ3

Conclusion 3.1: There is mixed evidence on the extent to which current hygienic practices among WASH-UP beneficiaries can be attributed to the activity's BCC messaging (i.e., can said to have been sustained). There is slightly stronger evidence that knowledge communicated through the BCC campaign has been retained. Most respondents expressed an understanding of the importance of handwashing and open defecation practices and some could recite specific BCC messages the activity espoused (e.g., specific times for handwashing). However, evidence of adoption of hygienic practices is mixed. There appears to be more consistent adoption of solid waste management in households and food sanitation for vendors, but less consistent adoption of handwashing practices.

Conclusion 3.2: Despite the intention to incorporate BCC messaging into WSCs' forward planning, there is little evidence that sanitation and hygiene messages continue to be promoted in beneficiary communities. Many respondents could not recall the WASH-UP home visits, the messages, or the materials that the activity developed and there is little evidence of new messaging. Promotional efforts largely ceased following the end of the activity. Government respondents noted that the EHOs have a role in promoting hygiene and sanitation in their communities and some lamented the lack of coordination and collaboration between WASH-UP and government agencies, believing that this could have contributed to greater sustainment of behavior change outcomes.

RECOMMENDATIONS

As WASH-UP ended in 2016, the evaluation team's recommendations are intended to inform future USAID projects and those of other key stakeholders.

Recommendation 1: USAID should consider addressing FSM as a critical component of its urban WASH programming in Ghana, in particular for densely populated low-income communities.

FSM is a complicated issue that includes policy issues, private sector and government engagement, financing, infrastructure development, and environmental and other considerations in the sanitation market. It is critical to the long-term sustainability of sanitation interventions. FSM is a particular issue for low-income compound houses, where the volume of typical sanitation facilities (e.g. septic tanks, KVIPs) is low for the number of users, requiring even more frequent desludging that places a financial burden on households since desludging can be more expensive in hard-to-reach densely populated households. The evaluation observed these issues, which increase the potential for fecal matter to not be properly disposed of and/or lead to households reverting to open defecation practices or having to return to use of public latrines when their tanks/pits are full. While households can and do have a significant role in obtaining a latrine at their home, managing waste from those latrines requires a FSM system to ensure that that latrine can be sustained.

While Ghana has taken steps to address these issues and has a sanitation policy framework, regulations, and a growing FSM system, more work is needed to strengthen this system and to see that it is well implemented and scaled up, particularly as it relates to densely populated urban areas. USAID should consider whether it can contribute to the development and scale up of the FSM system, and whether it should require that FSM be a component of any future contracted sanitation intervention.

<u>Recommendation 2</u>: USAID should consider approaches to ensure long-term sustainability of handwashing facility infrastructure.

The handwashing facilities installed at households were not built into the physical latrine infrastructure and were moved by households to prevent them from being stolen. This may also have contributed to the facilities being weakened and eventually inoperable. Once destroyed or stolen, few if any households replaced their handwashing facility. More hardscaping of handwashing facilities (i.e., building into the physical architectural design of latrine facilities as well as continued reinforcement that such facilities are critical to maintain) would help ensure long-term sustainability of promoted handwashing practices.

<u>Recommendation 3</u>: Improve monitoring of USAID BCC interventions specific to handwashing to ensure that physical enabling environments are in place to support BCC messaging.

Few handwashing facilities were located near latrines and had both water and soap (or other cleaning products). This was true in households but also among schools observed. This suggests that as much, or perhaps more, emphasis should be placed on establishing an appropriate enabling physical environment to support BCC messages at critical times, as noted in Recommendation 2. In addition, improved methods to monitor the sustainability and use of the installed infrastructure, to better assess whether self-reported practices and knowledge are being applied, need to be developed and put in place. In particular, USAID and its implementing partners could consider working with schools and local governments to establish specific monitoring methods and practices to ensure that installed public handwashing facilities are sustained, operable (with soap and water), and placed in specific locations to support handwashing at critical times such as near latrines (after defecation) and in kitchens, markets, etc. where food is prepared. This is particularly important at schools, where behaviors young children learn often transfer to the home as well as continue into adulthood.

<u>Recommendation 4</u>: USAID should assess whether future WASH activities in Ghana need to address safe water storage when increasing household access to a safely managed water supply.

Future WASH activities must determine if water is typically stored in containers after collection and before use in the targeted areas. Many households store and use water in containers due to potential water shutoffs. If this is the case, activity BCC components must include education specific to safe water storage and use practices at the time water interventions occur, and reinforce these messages throughout the activity through onsite observations by implementing partner staff.

<u>Recommendation 5</u>: Future USAID activities should provide a longer and broader suite of support to WSCs and WASH entrepreneurs.

WASH-UP successfully supported WSCs and entrepreneurs to expand the availability of water and sanitation services in beneficiary communities. However, both WSCs and entrepreneurs have faced challenges relating to managing variable costs and pricing, and in the case of entrepreneurs, dealing with variability in levels of demand. In addition, many WSCs have continued to benefit from support provided by Global Communities. This suggests that longer-term support, especially in medium- and long-term business planning, would promote greater sustainability. USAID should consider periodic coaching and mentoring of WSCs and entrepreneurs and peer-to-peer support to sustain businesses.

<u>Recommendation 6</u>: USAID should ensure that activities engage with key government and institutional stakeholders as partners to foster sustainability after the activity ends.

The evidence suggests that WASH-UP did not engage extensively with key government institutions, even where there was an alignment of interests. For example, although EHOs are responsible for promoting hygienic practices in their communities, evidence suggests that the activity did not effectively engage or coordinate its BCC efforts with EHOs. In another context, while some WSCs lamented the lack of collaboration and support from local assemblies, the WSCs that had assembly officials as members had collaborative and supportive relationships with local government. For future activities, USAID should engage more with permanent institutional stakeholders as part of its sustainability strategy. This would include local government officials as well as national stakeholders to deliver BCC messages.

ANNEX A: EVALUATION STATEMENT OF WORK

Ex-Post Evaluation of USAID/GHANA WASH-UP Project

I. Introduction

This statement of work (SOW) is for an ex-post performance evaluation commissioned by the United States Agency for International Development's Africa Bureau, in collaboration with USAID's Bureau for Economic Growth, Education, and Environment (E3), the USAID/Ghana Mission, and the Office of Learning, Evaluation, and Research in the Bureau for Policy, Planning, and Learning. The evaluation will examine the Sustainability of the USAID/Ghana Water Access, Sanitation and Hygiene for Urban Poor (WASH-UP).

Promoting sustainability in one of the key USAID program Cycle Principles as expressed in USAID Policy Guidance-ADS 201. Sustainability of program results and the systems that contribute to these results are central to the Agency vision for country self-reliance. USAID defines sustainability as "the ability of a local system to produce desired outcomes over time." This definition is consistent with OECD/DAC definition: "sustainability is the continuation of benefits from a development intervention after major development assistance had been completed."

In addition to the Agency's focus on sustainability and self-reliance, sustainability is embedded in USAID's Water and Development Plan, in support of the 2017 Global Water Strategy. In 2013, USAID's Water and Development Strategy included a commitment to invest in evaluation beyond the life of projects.

The Bureau of Economic Growth, Education, and Environment is investigating WASH Program sustainability by conducting ex-post evaluations of WASH programs in several countries. Three evaluations have been completed and three others are ongoing or in the design stage.

In line with the Agency's sustainability and self-reliance principles and to help generate more evidence on best approaches to promote sustainability, the Africa Bureau proposes to conduct an ex-post evaluation of the Water Access, Sanitation and Hygiene for the Urban Poor (WASH-UP) program in Ghana. A WASH-UP ex-post evaluation will feed into the ongoing E3/W sustainability evaluations which also aim to examine the long-term sustainability of USAID WASH interventions in select African countries. The Africa Bureau is therefore collaborating with E3/W and AFR/SD teams to design the scope of WASH-UP ex-post evaluation.

II. Project Background

WASH-UP, funded by USAID through its African Urban Poor Improved Water Supply and Sanitation program, sought to increase equitable access to improved water supply and basic sanitation for poor urban communities in Ghana. The program was implemented from 2009-2012 in 5 urban poor/slum communities in the Accra Municipal Assembly (AMA) and the Sekondi-Takoradi Municipal Assembly (STMA) and was later expanded to 4 new urban communities from 2013-2015 and 13 rural districts from 2015-2016. The total funding for the six-year project was $12,168,660.

The goal of WASH-UP project was to improve water supply and sanitation infrastructure, as well as tackle the closely linked areas of hygiene behavior and governance. The Project aimed to achieve the following objectives:

- To increase household access to affordable, improved, and sustainable drinking water supply.
- To increase household access to improved and sustainable sanitation facilities.
- To promote innovative economic enterprises in the areas of water and sanitation.
- To improve hygiene and sanitation behaviors among the urban poor.
- To strengthen local governance for water supply, sanitation service, and hygiene promotion.
- To respond to emerging threats such as cholera and Ebola outbreaks

Project approach

In order to accomplish the above objectives, Global Communities used a participatory approach involving a broad range of stakeholders in Ghana to address critical gaps in availability and access to water and sanitation services for the urban poor.

WASH–UP worked with national level institutions such as the Ministries of Water Resources, Works and Housing and Local Government and Rural Development, Metropolitan/Municipal/District Assemblies, Development partners, NGOs and civil society groups. The program implemented several key strategic activities carried out under the five major objective areas including:

- Increased household, community and institutional (i.e. schools and clinics) access to safe water through construction of water mains, connection of households to water mains, promotion of public water kiosks, and drilling of boreholes in rural communities;
- Increased household, community and institutional access to improved sanitation through construction of latrines, promotion of ODF (particularly in rural communities), mediation of drainage and flooding problems in urban communities and encouragement of community and household sanitation events and practices;
- Supported economic enterprises through loans to support a variety of WASH-related businesses such as water kiosks, public toilet operations, waste collection and food vending. The project also provided business development and latrine artisan training; and micro-loans for household investments in latrine construction and water connections;
- Promoted hygienic and sanitary practices, using Behavioral Change Communications (BCC) messaging in communities, clinics, schools and at the household level. WASH-UP also had a large food vendor training program that provided food prep, storage and handling guidance critical for food vendors, upon whom many urban residents rely on for food outside the home;
- Strengthened WASH local governance capacity of local government, community-level Water and Sanitation Committees, and the numerous WASH-focused local NGOs with which WASH-UP partnered; and
- Provided an emergency response to the Cholera Outbreak in 2014, which focused on disinfection of affected areas, distribution of water purification tablets (Aquatabs) and provision of knowledge on Cholera prevention.

Due to the dynamics of the changing geographical scope of the program, the implementation strategy had to be varied to respond to the new challenges and opportunities of the rural areas. The program worked through intermediary partners to provide water and sanitation services in the urban as well in the rural areas. In the provision of water to rural areas, the project engaged consultants and contractors supervised by the program team to deliver water supply services to communities. In urban areas, local non-governmental organizations were engaged to connect individual households to the Ghana Water Company (GWCL) main pipelines. On sanitation delivery, WASH-UP adopted the community-led total sanitation approach in rural areas, where as the urban benefited from the subsidy approach.

To promote sustainability of WASH-UP outcomes, the implementer included the following activities: (1) development of facilities for which supplies and materials needed for repairs and on-going maintenance would be locally available, (2) training local partners and communities in behavior change and

communication (BCC) to continue encouraging the demand for WASH services and ensuring services would be provided, 3) creation of self-financing mechanisms (i.e. user fees) and management structures to ensure that beneficiary communities could maintain WASH facilities post donor assistance, and 4) use of appropriate technologies that are simple to use and easy to maintain.

In addition, there was great attention paid to institutional strengthening, including organizational structures, policies, and staff training. This entailed the formation and training of government structures and technical groups such as the Facility Management Committees (WSMTs), Care Takers, Area/Pump Mechanics for the operation and maintenance of community boreholes and small water systems, training of latrine artisans, and Natural Leaders and Environmental Health Assistants to implement CLTS. These local structures are expected to ensure that WASH services and activities are sustained (excerpt from WASH-UP Final Project Report). In addition, Hope for Future Generations (HFFG), one of WASH-UP sub-contractors, supported beneficiary communities to develop sustainability plans which included roles and responsibilities for maintaining water and sanitation facilities.

Project Geographic Scope

As mentioned earlier, the first phase of the WASH-UP Project (2009 – 2012) was initially implemented in five poor urban communities: Avenor, Nima East, and Ayidiki in the Accra Metropolitan Area, and Kojokrom and New Takoradi in the Sekondi-Takoradi Metropolitan Area. Following the initial project modification and extension, the benefiting communities expanded to include La Abafum-Kowe-Abese in the La-Dadekotopon Municipality, and Ntankoful and Assakae in the Sekondi-Takoradi Metropolis. The second modification further widened the project's reach into the Northern, Volta, and Central Regions, from the initial Greater Accra and Western Regions.

Appendix 1 includes a map of Ghana, showing the location of the project districts.

III. Evaluation Purpose and Use

The Purpose of the GHANA WASH-UP evaluation is to better understand whether the outcomes of this successful project have been sustained and the factors behind sustainability or lack of sustainability of project outcomes. In addition, given USAID's commitment to sustainability as identified in the Water and Development Plan, the purpose of this evaluation is to further USAID's understanding of why its completed WASH activities have been sustained or not. USAID will use the findings from this evaluation to improve the design, implementation, impact and sustainability of future activities. The evaluation will seek to identify approaches to ensure sustainability that can be institutionalized for use across USAID's WASH programming in the future.

The audiences/users will be the Africa Bureau, USAID/E3 Water Office, USAID/Ghana Mission and other Missions, PPL, and WASH implementing partners. The final report will be posted on USAID's Development Experience Clearinghouse. Ultimately, the findings from this evaluation will feed into the E3/W multi-country ex-post evaluation synthesis report which is of interest to the broader WASH sector and will be distributed broadly to inform the sector discussion on sustainability.

IV. Evaluation Questions

The GHANA WASH-UP Ex-Post Evaluation seeks to answer the following evaluation questions.

1. To what extent are the levels of service (as defined by WASH-UP) still observed 4 years after project closure?

    a. What's the level of functionality, quantity/output, quality, accessibility, reliability, and use of water schemes four years after project closure?

b. To what extent are household and shared community latrines and handwashing facilities installed by WASH-UP still functional, adequately maintained and used?

2. Which factors or approaches contributed to or impaired long-term sustainability of selected WASH-UP project outputs and outcomes?

   a. What financial management structures are in place and are they ensuring fee collection and funding to cover recurrent expenditures? What role, if any, did WASH-UP play in establishing and/or strengthening these structures?
   b. What local water and sanitation governance structures (government, non-government and private entities and groups) are in place and how are they managing and maintaining services? How did WASH-UP capacity development activities contribute to the sustainability of these structures?
   c. Have the innovative economic enterprises that were promoted grown or have they closed? If they've grown, what factor contributed to that continued growth?
   d. What other factors improved or impaired sustainability?

3. In what ways are beneficiaries in WASH-UP BCC target communities applying hygiene practices that the project supported?

V. Existing Information

Below is a list of preliminary documents the evaluation team will review, which USAID/AFR will assist the evaluation team in obtaining as needed. The Evaluation Team is encouraged to look for and use other documents that may be useful for the evaluation.

- WASH-UP Annual Reports
- WASH-UP PMP and M&E data, including GIS maps
- WASH-UP Baseline Study Report
- WASH-UP Mid-Term Performance Evaluation Report
- WASH-Up End-of-Project Evaluation Report
- E3/W Ex-Post Evaluation Reports
- USAID Water Strategy

VI. Evaluation Design and Methodology

This evaluation will be conducted by AFR Bureau MSTAS Project implemented by PRAGMA and E3 Analytics and Evaluation Project implemented by MSI. We propose apply a mixed-method approach to answer the evaluation questions, including a quantitative survey combining structured observations and semi-structured key informant interviews with beneficiaries. The survey will be complemented with a few additional key informant interviews and focus group discussions with key stakeholders to understand the factors facilitating or inhibiting sustainability of project outcomes. The evaluation will focus on WASH-UP activities implemented in the 9 urban communities in Greater Accra and Sekondi Tokoradi Municipalities listed above (see project geographic coverage). More information on these communities, including number of beneficiaries served will be provided to the evaluation team during the evaluation design phase. Only communities that didn't receive WASH interventions from USAID following the conclusion of WASH-UP will be selected to participate in this evaluation. The evaluation team will draw a sample of water and sanitation facilities to visit and key informant and focus group discussion respondents to participate in the interviews.

To avoid any community expectations of follow-on USAID WASH activities, the evaluation team will ensure that the purpose of the ex-post evaluation is properly communicated to survey and interview

participants. Data collectors and interviewers will also be trained on how to remain neutral during the interviews and how to respond to questions related to community needs and expectations. The evaluation firms responding to this SOW are requested to include in the final evaluation design approaches for addressing any community expectations of future USAID assistance.

In addition to the methods described above, the evaluation team will use existing quantitative project data and any other cost-effective data collection approaches. If available and of good quality, the instruments and criteria that were used by the project to assess the levels of water and sanitation services should be used for the quantitative survey in order to collect comparable data and measure change from previous project performance. Any relevant third-party data sources will also be used to answer some of the evaluation questions.

MSI and Pragma are highly encouraged to propose an evaluation approach and set of methods that are cost-effective and robust enough despite the limited time and budget in order to draw a good picture of sustainability of USAID/Ghana WASH-UP outcomes. The evaluation team responding to this SOW will propose specific data analysis methods on a question-by-question basis, including the appropriate mix of methods necessary to respond to the evaluation questions. Gender and other relevant beneficiary characteristics should be part of data analysis. Strengths and limitations of the proposed design and methodology should be disclosed in the final evaluation design and report.

VII. Evaluation Team Composition

USAID anticipates that the evaluation team will include three core members: a team leader and two evaluation specialists. It may also be necessary to hire a translator and/or logistician.

Team Leader

The team leader will be primarily responsible for the quality of the evaluation design and its execution.

Key qualifications expected for the Team Leader include:

- Graduate degree, preferably a Ph.D., in a relevant social science discipline
- Demonstrated ability to gather and integrate both quantitative and qualitative findings to answer evaluation questions.
- Demonstrated experience managing multinational teams and producing high-quality and timely reports for USAID or similar audiences.
- Sound knowledge of water and sanitation and related evaluation methods.

Evaluation Specialist (2)

The evaluation specialists will work in close coordination with the Team Leader and will be actively engaged in efforts to oversee and ensure the quality of data collection activities, ensure that data codebooks are clearly written, and that all data collected can be properly transferred to USAID. At least one of the 2 specialists should have a graduate degree in water engineering, or a related field, and experience in evaluation methods and the other specialist a graduate degree in a relevant social science field. He/she will have sufficient previous experience with evaluations of WASH activities and other types of relevant studies. Gender analysis experience is also desirable.

BCC and Evaluation Specialist

The BCC and evaluation specialist will support data collection, analysis and report drafting to answer evaluation question 3. The BCC and evaluation specialist will also support data collection and analysis tasks related to the other evaluation questions as necessary.

Home Office Support

Home Office support will be provided by the firms that will be implementing this evaluation, as required, including quality assurance, research and analysis support, financial management, administrative oversight, and logistics.

USAID Participation

To support the capacity development of USAID staff and enhance the quality of the evaluation, USAID/AFR anticipates a mixed evaluation team that would include both external members (the evaluation team members listed above) and two to three USAID staff. USAID staff may participate in all aspects of the evaluation except certain data collection, analysis, and reporting tasks that may present managerial obstacles, unnecessarily insert bias into the process, or pose potential conflicts of interest. The evaluation team leader may decide to exclude USAID staff from specific evaluation activities including data collection tasks if the objectivity and independence of the evaluation could be compromised. Participating USAID staff will be under the supervision of the evaluation team lead throughout the evaluation period. Participating USAID staff will also be required to attend the in-country team planning meeting. The USAID Contracting Officer's Representatives (CORs), Dr. Bhavani Pathak [E3/PLC] and Viju Ipe (AFR/SD) and Evaluation Activity Manager, Alphonse Bigirimana [USAID/AFR] will ensure that communications of participating USAID staff related to the evaluation are channeled through the evaluation team lead. The CORs and Activity Manager will also ensure smooth collaboration between USAID and evaluation team members. In its evaluation design proposal, the evaluation team should propose specific roles and responsibilities and reporting and communication channels for USAID. All logistics and travel costs for participating USAID staff will be entirely covered by USAID.

VIII. Evaluation Deliverables

The following are the key evaluation deliverables and their estimated due date

Deliverable	Estimated Due Date
1. Draft Evaluation Design Proposal	o/a 15 business days following USAID's final approval of the evaluation SOW
2. Final Evaluation Design Proposal	o/a 5 business days following receipt of all written USAID comments on the draft evaluation design proposal
3. Debriefing of Preliminary Findings	One business day after data collection and preliminary data analysis
4. Draft Evaluation Report	o/a 14 business days after debriefing of preliminary findings
5. Final Evaluation Report	o/a 5 business days following receipt of all USAID comments
6. Debriefing of final evaluation report	o/a 5 business days following submission of final report

All documents and reports will be provided electronically to USAID. All qualitative and quantitative data will be provided in electronic format to USAID in a format consistent with ADS 579 requirements.

Prior to the submission of the final evaluation design proposal, the evaluation team will discuss with USAID whether its preliminary dissemination plan for this evaluation indicates other deliverables that

should be prepared. Such additions as agreed with USAID will then be included in the final evaluation design proposal.

Evaluation Design Proposal

Prior to implementation of data collection activities for this evaluation, the evaluation team will deliver an evaluation design proposal that describes the conceptual framework for the evaluation and the justification for selecting this approach. USAID/AFR must provide its approval of the design proposal before the evaluation team begins in-country data collection. The design proposal must at least contain the following:

- Discussion of the overall approach of the evaluation, highlighting the conceptual model(s) adopted by evaluation question and demonstrating a clear understanding of the WASH-UP intervention logic. Discussion of the data collection and data analysis methods that will be used to answer each evaluation question, and the limitations for each method. To ensure the quality of the evaluation, the proposed evaluation design must use a mixed-method research and rigorous social science research methods.
- Discussion of how gender analysis will be integrated into the evaluation design.
- Detail key data sources that will be selected to inform the answer to each evaluation question.
- Detail of analysis methods to be used for qualitative and quantitative data
- Discussion of the sampling approach, including area and population to be represented, rationale for selection, and limitations of sample.
- Discussion of risks and limitations that may undermine the reliability and validity of the evaluation results, and the proposed mitigation strategies for each.
- Summarized evaluation methodology in a matrix that contains for each evaluation question: measure(s) or indicator (s), data collection method(s), data source, sampling approach, and data analysis method(s).
- Timeline showing the key evaluation phases (e.g., data collection, data analysis, and reporting) and specific deliverables and milestones.
- Responsibilities and qualifications of each evaluation team member
- Discussion of USAID staff participation in each evaluation phase and their anticipated roles, responsibilities, and reporting requirements.
- Discussion of logistical considerations for carrying out the evaluation, including specific assistance that will be required from USAID, such as providing arrangements for key contacts within the mission or government.
- Detailed estimated budget.

Draft Evaluation Report

The evaluation team will prepare a thirty-page maximum draft evaluation report (excluding Annexes) for USAID review. The draft evaluation report must contain at least the following:

- Executive Summary: This section should be up to five pages in length and describe the purpose, project background, evaluation design and methodology including the evaluation questions, and key findings, conclusions, recommendations, and lessons learned from the evaluation.
- Background: This section will provide a brief description of WASH-UP that highlights its scope, development hypothesis, and activities undertaken.
- Evaluation Design and Methodology: This section will detail the overall evaluation design and methodology and related research protocols undertaken in conducting the evaluation, including the relevant data collection and analysis methods, sampling approach, and related challenges or limitations encountered during the evaluation and mitigation approaches employed.

- Findings: This section will present findings collected from the evaluation relevant to each evaluation question. The evaluation findings must be presented as analyzed facts, evidence, and data and not be based on hearsay. The findings must be specific, concise, and supported by the quantitative and/or qualitative evidence analyzed through scientifically plausible methodologies.
- Conclusions: The evaluation report will present evaluation conclusions that are interpretations and judgments based on the findings described, and must logically follow from the gathered data and findings and be explicitly justified. If necessary, the evaluation team will state its assumptions, judgments, and value premises in presenting a conclusion so that readers can better understand and assess them.
- Recommendations: This section will concisely and clearly present recommendations that are drawn from specific findings and conclusions provided in the report. The recommendations must be stated in an action-oriented fashion and be practical, specific, and with defined target audience(s).

Final Evaluation Report

Following receipt of all USAID comments on the draft evaluation report, the evaluation team will prepare a final version that incorporates and responds to this feedback. The final evaluation report should contain the same sections as noted above for the draft evaluation report and should also include:

- References: This section should include a list of all documents reviewed, including background documentation.
- Annexes: These may include, but are not limited to, the evaluation statement of work, instruments used in conducting the evaluation, any statements of differences received, as well as other relevant sources of information.

The final report must meet the evaluation report quality criteria described in Annex A of the USAID Evaluation Policy.

VIII. Scheduling and Logistics

The following chart provides an illustrative overview of the preliminary estimated timeframe for the evaluation and key deliverables. The evaluation design proposal will include a detailed schedule and proposed delivery dates.

The following chart provides an illustrative overview of the preliminary estimated timeframe. The evaluation design proposal will include a detailed schedule and proposed delivery dates.

TASK	ESTIMATED COMPLETION DATE
Evaluation SOW finalized	June 15, 2018
Evaluation Design finalized	July 20, 2018
In-Country Work	
In-briefing with the Mission	July 30, 2018
Team Planning Meeting and Piloting Instruments	August 3, 2018
Data collection and preliminary data analysis	August 24, 2018
Mission Debriefing/Presentation of Preliminary Findings	August 27, 2018
Debriefing Follow-up	August 28, 2018
Data Analysis	September 7, 2018
Report Drafting	September 21, 2018
Final Report	September 28, 2018
Report debriefing with Washington stakeholders	October 2, 2018

The evaluation team will be responsible for all logistics for its team members, including coordinating all travel throughout the region, lodging, printing, office space, equipment, car rentals, etc. USAID staff participating in data collection activities will be responsible for their own lodging, car rentals, printing, etc. and the evaluation team will coordinate closely with participating USAID staff on field work logistics. USAID or its local partners will provide support to set up initial meetings with key stakeholders with any local government stakeholders or private sector partners

IX. Evaluation Budget

MSI and Pragma/MSTAS will propose a budget as part of the evaluation design proposal.

X. Evaluation Management/Roles and Responsibilities

MSI will propose/recruit a senior evaluation team leader and logistics specialist/translator. MSTAS will propose/recruit 2 evaluation specialists. USAID will propose 2-3 staff members to participate in the evaluation either as observers or full participants. USAD staff participation including their roles and responsibilities will be discussed and agreed upon with the two firms before the start of the evaluation.

The 2 firms will work collaboratively to produce the key deliverables of this activity which include: 1) the final evaluation design, 2) power point presentation and debrief to USAID/Ghana and key stakeholders of preliminary findings, 3) draft evaluation report, 4) final evaluation report, and debriefing/presentation of final evaluation findings to Africa Bureau and other key stakeholders in Washington.

To ensure the timely delivery and quality of evaluation deliverables, MSI will lead the evaluation and be responsible for submitting all the deliverables. Specific roles and responsibilities of each of the 2 firms and their personnel will be agreed upon by all the parties involved and described in detail in the evaluation design.

The evaluation will be co-managed by the respective CORs of the 2 projects. The Africa Bureau senior M&E advisor will serve as the Activity Manager for the evaluation.

ANNEX B: GETTING TO ANSWERS MATRIX

Evaluation Questions	Evidence Needed[29]		Data Source(s)	Data Collection Methods	Data Collection Instruments	Sampling Approach	Data Analysis Methods
1. To what extent are the levels of service (as defined by WASH-UP) still observed 4 years after project closure?	Yes/No		Project documents and relevant secondary sources <u>Component 1</u> - USAID personnel and IP staff - National and local government representatives[30] - Members of HHs that received connections to piped water - Brief point-of-service interviews with water users of public installations - GWCL representatives responsible for the management of constructed water points - Trained vendors at constructed water kiosks - Focus group discussions with WSC members - Structured observations of HH piped water connections, water points and kiosks	- Desk review - KIIs - Group interviews - Structured observations	- Data extraction template - KII guides for component 1 beneficiaries (members of HHs, GWCL staff, and trained water kiosk vendors) - KII guides for component 2 beneficiaries (heads of HHs, managers of public latrines and school staff, and sanitation board members) - Structured observations checklists for component 1	Convenience sampling depending on ability to identify and contact members of HHs that received component 1 and 2 installations. Convenience sampling of public and private stakeholders.	- Planned/actual comparisons - Pattern/content analysis - Descriptive analysis
	Yes	Description					
	Yes	Comparison					
		Explanation					

[29] This refers to the type of evidence required to answer the evaluation question. "Descriptive" implies that the evidence simply reports or summarizes the relevant evidence, "comparative" implies that evidence is presented relative to other data, and "explanation" builds on descriptive evidence to elucidate why or how relevant findings occurred.
[30] This refers to current or former staff of the Ministry of Water Resources Works and Housing personnel (national) and current or former assembly members from target communities (local) who were involved in WASH-UP.

Evaluation Questions	Evidence Needed[29]		Data Source(s)	Data Collection Methods	Data Collection Instruments	Sampling Approach	Data Analysis Methods
			Component 2: - USAID personnel and IP staff - National and local government representatives - Members of HHs where private latrines were installed - Managers of institutional latrines - Sanitation board members (those trained by the project or currently overseeing WASH-UP installations) - Staff members at schools where rain water catchment systems, toilets/ latrines, and handwashing facilities were installed - Structured observations at household and public latrines and school facilities		and 2 installations		
1a. What's the level of functionality, quantity/output, quality, accessibility, reliability, and use of water schemes four years after project closure?	Yes/No Yes Yes	Description Comparison Explanation	Project documents and relevant secondary sources Water quality tests and structured observations at functioning HH connections, water points, and kiosks - IP staff	- Desk review - Water quality tests - KIIs - Group interviews - Structured observations	- Data extraction template - Water quality tests - Respondent specific discussion guides for component 1	Convenience sampling depending on ability to identify a range of HHs that received component 1 installations.	Basic output functionality of water supply installations will be assessed if it produced water at the time of visit. Water quality tests will assess if the water supply is free of

Evaluation Questions	Evidence Needed[29]		Data Source(s)	Data Collection Methods	Data Collection Instruments	Sampling Approach	Data Analysis Methods
			- Members of HHs that received connections to piped water - GWCL representatives responsible for the management of constructed water points - Vendors at constructed water kiosks - Brief point of service interviews with water users of public installations - Focus group discussions with WSC members		beneficiaries and stakeholders (members of HHs, GWCL staff, and water kiosk vendors) - Structured observations checklists for component 1 installations	Convenience sampling of public and private stakeholders and related installations.	contamination (e.g. E. coli). Accessibility will be assessed in comparison to USAID's definition, that water collection should take no more than 30-minutes round-trip. Reliability will be compared to USAID's common indicator HL.8.1-3, which requires year-round water point access without regular supply rationing or seasonal failure. Use will be assessed through a descriptive analysis of who is/is not using the WP and to what extent.
1b. To what extent are household and shared community latrines and handwashing facilities installed by WASH-UP still functional, adequately maintained and used?	Yes/No Yes / Description Yes / Comparison Explanation		Project documents and relevant secondary sources USAID personnel and IP staff National and local government representatives Members of HHs where private latrines were installed Managers of public latrines WSC members (those trained by the project or	- Desk review - KIIs - Group interviews - Structured observations	- Data extraction template - Respondent specific discussion guides for component 2 beneficiaries (members of supported HHs, WSCs, and the	Convenience sampling depending on ability to identify and contact a range of HHs that received component 2 installations. Convenience sampling of private household and	The level of functionality and maintenance will be assessed by comparing the number of installations improved or constructed with project support that are fully functional at time of site visit. Use of sanitation facilities will be assessed through a descriptive analysis of who is/is not using the facilities

Evaluation Questions	Evidence Needed[29]		Data Source(s)	Data Collection Methods	Data Collection Instruments	Sampling Approach	Data Analysis Methods
			currently overseeing WASH-UP installations) Staff members at schools where rain water catchment systems, toilets/ latrines, and handwashing facilities were installed Structured observations at private (HH) and public latrines and school facilities		managers and users of institutional sanitation facilities - Structured observations checklists for component 2 installations	institutional stakeholders and related installations.	including comparing access by men and women
2. Which factors or approaches contributed to or impaired long-term sustainability of selected WASH-UP project outputs and outcomes? 2a. What financial management structures are in place and are they ensuring fee collection and funding to cover recurrent expenditures? What role, if any, did WASH-UP play in establishing and/or strengthening these structures? 2b. What local water and sanitation governance structures (government, non-government and private entities and groups) are in place and how are they managing and maintaining services? How did WASH-UP capacity development activities	Yes/No Yes Description Comparison Yes Explanation		Project documents and relevant secondary sources - USAID personnel and IP staff - National and local government representatives - Members of HHs that received installations - Private and publics sector stakeholders including the trained vendors and WSC members, entrepreneurs, other managers or overseers of WASH-UP installations, and staff at supported schools	- Desk review - KIIs - Group interviews	- Data extraction template - Respondent specific discussion guides	Convenience sampling of HH beneficiaries depending on ability to identify and contact a range of HHs that received component 1 and 2 installations. Convenience sampling of public and private stakeholders and related installations.	Pattern/content analysis Descriptive contextual analysis

Evaluation Questions	Evidence Needed[29]		Data Source(s)	Data Collection Methods	Data Collection Instruments	Sampling Approach	Data Analysis Methods
contribute to the sustainability of these structures? 2bii.What role, if any, has did WASH-UP played in establishing and/strengthening these structures? 2biii. How did WASH-UP capacity development activities contribute to the sustainability of these structures? 2ci. Have the innovative economic enterprises that were promoted grown or have they closed? 2cii. If they've grown, what factor contributed to that continued growth? 2d. What other factors improved or impaired sustainability?							
3. In what ways are beneficiaries in WASH-UP BCC target communities applying hygiene practices that the project supported?	Yes Yes	Description Comparison Explanation	- Members of HHs that received BCC activity messages	- Desk review - KIIs - Group interviews	- Respondent-specific KII and discussion guides	Convenience sample of beneficiaries of BCC activities who received messages in their homes, health clinics, markets, or school	Pattern/content analysis

ANNEX C: EVALUATION TEAM PROFILES

The evaluation was led by four team members whose profiles are provided below. Each team member led a sub-team for field data collection, supported by local researchers, logistics coordinators, interpreters, and drivers. Each evaluation team member signed a conflict of interest disclosure statement, which are retained by the MSI and Pragma home offices and available upon request.

Team Leader – Anh Thu T. Hoang (MSI)

Anh Thu T. Hoang is an evaluation specialist with over 20 years of experience leading, designing, and implementing evaluations, project assessments, technical reviews, and other types of research for international development programs across multiple sectors. She has designed and led multiple formative, midterm, and endline evaluations for USAID, UNDP, and UNFPA-funded projects and programs around the world. As an accomplished specialist in qualitative research, she has a strong background in conducting and supervising field research, data collection and analysis, and evaluation reporting. She has an extensive background supporting USAID-funded projects, including co-authoring a peer-reviewed article on collaboration between partners during implementation of a safe water project in Madagascar in 2001. In Ms. Hoang's most recent position with DAI, she evaluated the role of effective multi-sectoral coordination to improve global health security for USAID's Preparedness and Response Project.

Senior Evaluator – Kay Mattson (Pragma)

Kay Mattson has over 25 years of experience in international public health, program planning, and management in low-income housing, human service, and health administration/policy analysis. She has a MPH in International Health, an MSW in Planning, Administration, and Management, and a BA in Sociology. Her international work focuses on providing technical assistance and conducting assessments and evaluations on water, sanitation, and hygiene (WASH) and public health projects/systems as an independent consultant. She is also an instructor at George Washington University's Milken Institute School of Public Health. She has worked in 11 developing countries with over a dozen international organizations.

BCC and Evaluation Specialist – Maurice Ocquaye (MSI)

Dr. Maurice Ocquaye is a senior BCC and evaluation specialist with more than 20 years of experience providing monitoring and evaluation design, and management of international development programs in reproductive health, family planning, maternal, newborn, and child health, and WASH for international and domestic interventions. His expertise includes designing, managing, monitoring, and evaluating national and local social BCC campaigns. With extensive experience designing, implementing, and evaluating BCC campaigns and activities to promote WASH best practices throughout Ghana, Dr. Ocquaye is well acquainted with national and local government representatives and non-profit and private sector actors relevant to the ex-post evaluation of the USAID Ghana WASH-UP Activity. Dr. Ocquaye has a PhD in Health Education and Advocacy from Walden University, and a Master's of Fine Arts from the University of Ghana.

Local Evaluation Specialist – David Nunoo (Pragma)

David Nunoo is an accomplished WASH specialist with over 15 years of experience in providing technical assistance and conducting research and evaluation of WASH projects in Ghana. His evaluation experience ranges from formulating questionnaires, training of enumerators, conducting surveys and key

informant interviews, and data collection and analysis. Most recently, he served as WASH advisor for USAID's SPRING project, where he provided technical support and direction to the program staff on selection of water sources, protection and development of selected water sources, and access to adequate and improved sanitation facilities in Ghana.

ANNEX D: FINAL DATA COLLECTION INSTRUMENTS

Interview Informed Consent Form

This annex provides the informed Consent Statement to be used for all data collection efforts (individual KIIs, group interviews, as well as structured observations).

Hello! We are here on behalf of two independent data collection firms from the United States called Management Systems International (MSI) and the Pragma Corporation.

The purpose of this research is to evaluate a project, a USAID-funded Water Access, Sanitation and Hygiene for Urban Poor (WASH-UP), implemented from 2009-2016. We are interested in knowing if the activities and benefits from the project have continued after the end of the project. This information can help USAID improve its activities in the future throughout Ghana. Because you participated in this project, we are inviting you to help us understand these things by participating in this interview and sharing your opinions. **There are no right or wrong answers. We seek your candid opinions.**

This discussion will take about 1 hour of your time. There is no problem at all if you prefer not to participate and you can stop at any time during the interview. There is no risk to participating. There is also no direct benefit to you or your organization/household if you do choose to participate, other than knowing you may be helping to improve activities for other communities in Ghana in the future. Your participation will not influence any decisions about your involvement in any future USAID/Ghana or other donor activities.

We won't be addressing any sensitive topics, but when we make a report on our findings, we will not include your name alongside opinions you share.

Do you have any questions? Do you want to participate?

If we take any pictures we will also get your permission to take any photos.

Informed verbal consent discussion completed? Yes_____ (interviewer initials)

Do you agree to participate? Yes_____ No _____ (if no, end interview)

Permission and Waiver to Use Photograph/Image

Subject: Ex-Post Evaluation of the USAID/Ghana Water Access, Sanitation, and Hygiene for Urban Poor (WASH-UP) Activity

Location: Ghana

Thank you for welcoming us in your community today. We would like to take some pictures while we are here.

By signing this form, you grant to Management Systems International (MSI), its representatives and employees the right to take photographs and/or audio and video of you and your property in connection with the above-identified subject.

You authorize MSI, its assigns and transferees to copyright, use and publish the same in print and/or electronically. You agree that MSI may use such photographs and/or audio and video of you with or without your name and for any lawful purpose, including for example such purposes as publicity, illustration, advertising, and Web content.

Thank you for your participation, please sign/thumbprint below your consent if you understand and agree to the above.

Signature/thumb print _____

Printed name of participant _____

Organization Name (if applicable) _____

Address _____

Date _____

KII Guide/Observations for Household Water Beneficiaries

As part of this evaluation we are interviewing some households' who had water installed at their house through the WASH-UP Project. Was your Household's Water Supply at your home installed under WASH-UP? If No, thank them and continue to the next house. If Yes – we would like to ask you some questions about your water supply and take some observation of your water supply system and conduct some simple tests on your water source. We would also like to ask you some questions about any hygiene/other education you received through the WASH-UP Project. Are you interested? If Yes, proceed to the Informed Consent.

Be sure to complete the Informed Consent Protocol before starting the interview
Be sure to get complete and get consent for any pictures taken

<table>
<tr><td colspan="2">HH Interview Code:</td><td colspan="2">Team Lead Initials: ___ ___Community # ____ Survey # ___</td></tr>
<tr><td colspan="2">Photo Codes:</td><td colspan="2">Picture #(s): ____ ___ ____ Team Lead Initials: ___ ___ Community Code: ___ HH Survey #: HH ___
Date: ___-____- 2018</td></tr>
<tr><td colspan="2">Date of KII/ observation/ water quality test:</td><td colspan="2"></td></tr>
<tr><td colspan="2">Start Time:</td><td colspan="2">End Time:</td></tr>
<tr><td colspan="2">Name of Evaluator:</td><td colspan="2"></td></tr>
<tr><td colspan="2">Name of Note-Taker:</td><td colspan="2"></td></tr>
<tr><td colspan="2">Household Address:</td><td colspan="2"></td></tr>
<tr><td colspan="2">GPS coordinates of installation location?</td><td colspan="2"></td></tr>
<tr><td>Community</td><td>Municipality (Region)</td><td colspan="2">District/Sub-Metro</td></tr>
<tr><td>1. Aiyidiki</td><td>☐ AMA</td><td colspan="2">☐ Ayawaso Central</td></tr>
<tr><td>2. Nima East</td><td>☐ AMA</td><td colspan="2">☐ Ayawaso East</td></tr>
<tr><td>3. La-Abafum-Kowe-Abese</td><td>☐ La-Dadekotokpon</td><td colspan="2">☐ La-Dadekotokpon</td></tr>
<tr><td>4. Kojokrom</td><td>☐ STMA</td><td colspan="2">☐ Essikado-Ketan Sub Metro</td></tr>
<tr><td>5. New Takoradi</td><td>☐ STMA</td><td colspan="2">☐ Takoradi Sub Metro</td></tr>
<tr><td>6. Ntankoful</td><td>☐ STMA</td><td colspan="2">☐ Effia Kwesimintsim Sub-Metro</td></tr>
<tr><td colspan="2" rowspan="2">Name of Interviewee(s)?

Comments:</td><td>#1
#2</td><td>Verbal Consent Y/N
Verbal Consent Y/N</td></tr>
<tr><td colspan="2">Gender of interviewee #1 and #2 (if more than one participates)?</td><td>#1
Male _____
Female _____</td><td>#2
Male _____
Female _____</td></tr>
<tr><td colspan="2">Age range of interviewee?
(If more than one person interviewed capture ages for both)</td><td>#1
☐ 18-25
☐ 26- 34
☐ 35-49
50+</td><td>#1
☐ 18-25
☐ 26- 34
☐ 35-49
50+</td></tr>
<tr><td colspan="2">How long have you lived at this house?</td><td colspan="2">____# Years or since _____ (year)</td></tr>
<tr><td colspan="2">Is the interviewee a:</td><td colspan="2">☐ Resident/Owner Single Family
☐ Resident/Renter Single Family
☐ Owner/Landlord (non-resident)
☐ Owner/Landlord (resident)
☐ Other _____</td></tr>
</table>

How many adult male and female, children <u>renter/owner's household members</u> use this water supply point daily?	Number of male adults _____ Number of female adults _____ Number of children (<18) _____		
If the interviewee is an owner/landlord of this property <u>how many tenants</u> do they rent to <u>at this property?</u> Of those how many <u>use this water supply point daily</u>? (<u>If Not an owner/Landlord Write NA</u>)	**Current Renters**	**#**	**# Use Water Daily**
	Adult males		
	Adult females		
	Children (<18)		

WATER SUPPLY	
1. Was this water supply installation constructed/installed for this house with support from the WASH-UP project?	Yes ___/ No____ / Don't Know _____ [If no - end interview]
2. How long have they lived at this location?	# years ____ or since ____ (year)
3. When was the water point/ system at this household/compound constructed/installed ("completed")?	a) 2009 b) 2010 c) 2011 d) 2012 e) 2013 f) 2014 g) 2015 h) 2016 i) DK/NA
WASH-UP Financial Support	
4. Did your household receive financial support to install this water supply system at your house?	☐ Yes (Ask Q4a) ☐ No (Skip to Q5) ☐ Don't know (Skip to Q5)
4a. If Yes received financial support for water supply connection, What type of support did you receive and who provided it? Instructions: • Probe to identify organizational source, maybe known as WASH-UP, Global Communities or Y-SEF • Check all that apply	☐ Micro-loan ☐ Grant/Subsidy from Global Communities LNGO Partner ☐ Grant/Subsidy from other organization - specifiy: _____ ☐ Don't Know ____ ☐ Other - specify: _____
5. What was your household's <u>total contribution in Ghana Cedis</u> towards the water system installation?	☐ _____ GHC ¢ ☐ _____ Unknown/Don't remember ☐ N/A did not contribute anything
5a. Of this amount was any of it as a result of a loan you received?	☐ Yes ☐ No **If Yes** total amount of loan _____ GHC ¢

6. What percentage of the total price did your household pay for your current water installation?	% You Paid	% Paid by WASH-UP Project/NGO YSEF
	30%	70%
	40%	60%
	50%	50%
	60%	40%
	100%	0
	Other _____%	Other _____%
	☐ Don't remember	

7. If you received a **micro-loan** what organization/person awarded the loan to your household?	a) Y-SEF b) Friend or family c) Other financial institutions (specify): _____ d) Other organization (specify): _____ e) Don't Know f) N/A - Did not receive a micro-loan to install HH water connection
8. If you had a loan or grant/subsidy was it for water a connection or sanitation facility or both? (check all that apply)	a) Water connection b) Sanitation facility (latrine or water closet) c) Handwashing facility d) Both (water connection and sanitation facility) e) Don't Know f) N/A - Didn't receive a loan or other subsidy to install HH water connection)
9. Did you experience any challenges in the repayment of the loan you received to install the WASH-UP supported sanitation facilities?	Yes ___ (Ask Q9a) No ___ (Skip to Q9b) Don't Know ___ (Skip to Q9b) N/A (did not have a loan) _____ (Skip to Q10)
9a. What were the challenges you experienced to repay the loan facilitated by WASH-UP? Instructions: • Circle all that apply • If none apply select "other" and describe the challenges described by interviewee	a) Short repayment period b) High interest rate c) Loss of income d) Illness or death in family e) Cost beyond ability to pay f) Other if not able to capture in above categories, specify:
9b. Did they pay back the loan in full?	Yes ___ (Ask to Q9c) No ___ (Skip to Q10) Don't Know _____ (Skip to Q10)
9c. How many months did it take to pay back the loan?	# of months_____
10. Do you have any comments about any subsidy (loans/grants, etc.) you may have received and the role it had in your household's (and for tenants if interviewee is a landlord) access to water?	
11. What was the name of the enterprise or organization responsible for construction of this water installation (circle): a) **GWCL** a) **Ayidiki Water and Sanitation Organization (AWSO) -** primarily responsible for latrine construction and training, latrine user education, and facilitation of household water connections and water kiosks in Ayidiki, AMA and La Abafum-Kowe-Abese, LaDaMA b) **Professional Network Association (PRONET)** - primarily responsible for WASH infrastructure construction (household latrine construction, facilitation of household water connections and water kiosks) in urban communities in AMA including activities in Nima West and Nima East. c) **Rural Development Network (RUDNET)** - primarily responsible for WASH infrastructure construction activities primarily in urban communities within STMA. d) **Another private company/individual construction contractor** - Enter name of individual and/or company: _____ e) Unknown/or can't recall	

12. Were there any problems during the construction process?	☐ Yes, there were problems (Describe below) ☐ No there were no problems
13. Can you talk about how the construction process went? (Probe: problems and resolution)	
Fees Paid for Water/Repairs	
14. Do you pay a fee to use your water source? **If Yes,** If there are usage fees, please describe the average fee paid.	☐ Yes, pay fees (Answer Q15) ☐ No do not pay fees (Skip to Q18) ☐ Don't know (Skip to Q18)
15. Please explain the fees you pay for water in detail. How much do you pay? Are the fees collected monthly or on a per use basis?	☐ Average Monthly fee: _____ ☐ Average Annual fee: _____ ☐ Fee per use: _____ per 10L container ☐ Fee per use: _____ 20L container/other ☐ Fee per use: _____(other size container: _____) ☐ Other fees (describe):
15a. Who do you pay this fee to?	☐ GWCL ☐ WSC/Water Board ☐ Landlord ☐ Other _____ ☐ Don't know
15b. If you have GWCL do you have an account number that you can share with us? (Ask if they have a bill and are willing to show this to you to get the #)	Account # _____ ____Declined/Doesn't have (Skip to Q17) ____N/A (No GWCL) (Skip to Q16)
15c. If able to view GWCL bill what month was the bill for and capture the following data: (Ask to take a picture and get consent) _____ Month _____ Year	__ __**,000** Liters used per month (capture number in top right corner of bill) ____ Calculate the average liters per person/per day (total liters/divided by days in the month for that bill/ divided by the total number of people in this household/compound **that USE the water**) ☐ Is there a "paid in full" stamp on the bill? Y/N ☐ Is there a balance carry over from previous month? Y/N
16. If your water is not GWCL, can you estimate approximately how many liters or gallons (be clear what they are using) per day your household uses for all purposes?	____ Liters per day ____ Gallons per day _____ Not able to provide estimate (Note: from this amount you can calculate total water used per persons per day by multiplying by 30 (average days in a month) divided by the total # of persons in household/compound USING this water source to get at **average liters** used per person per day.) If they use gallons you will need convert into liters)
17. In general, are you able to pay your fees on time? If No, why not?	Yes ____ No ___ Explain:
Maintenance and Repair	

18. If you needed to repair your water system what would you do?	
19. If you have a service provider for Operation & Maintenance for this water system who is it? Write in actual name next to code.	a) GWCL b) WSC/Water Board c) Private enterprise _____ d) LNGO _____ e) CBO _____ f) Other (specify): _____ g) N/A There is no service provider h) Don't Know
20. Have there been any changes to the service provider you have had since the system was installed?	☐ Yes ☐ No **If Yes** describe changes and how, if at all, this has affected you/your water supply.
21. Can you comment about the service provided by the company or organization that services/manages your water supply? (for quality, promptness in response to address upkeep, maintenance, repairs)	
22. Is there anything else you'd like to discuss with me about this water point or the organization that installed it? Or the quality of services you receive from you service provider?	
Governance	
23. Who is currently responsible for monitoring the functionality of this water point/household connection? (**Check all organizations mentioned by the interviewee into appropriate category. If it does not fit a category write in what they say in "other")** ☐ GWCL ☐ WSC/Water board ☐ Local representative _____ ☐ Other _____ ☐ Don't Know (Skip to Q 25) ☐ No one is responsible (Skip to Q 25) Comments:	
24. Probe: **If there is a WSC/Water Board** ask them about the current board's function. **If they do not mention WSC/Water Board,** ask them if there is one currently operating in this community (if not ask if there had been in the past) and what their role was in the past or is now. Probe: are they still functional?	Comments:
25. Can you describe the roles of the other groups you mentioned? **(If more than one group capture Roles for EACH Group by Name).**	
26. Do you have the name and contact number for the above representative/group(s) you mentioned that have a role in monitoring of water and sanitation services in your community?	Group:/ _____Name: _____ Phone number: _____

	Group _____/Name _____ Phone Number: _____
27. Can you talk about your experience in dealing with the representative/group responsible for monitoring the water system installed?	
Functioning and Reliability	
28. Is the water connection currently functional (You can get water out of your system)?	☐ Yes ☐ No Describe:
29. How would you describe how reliable is the water supply from your household water connection?	
29a. On average, about how many days per month is there no or little water flowing from the tap?	
29b. On average, about how many hours per day is there no or little water flowing from the tap?	
30. Please describe what the primary challenges, if any, you have faced in ensuring that your water system is functioning properly at all times? • If there have been no challenges write in "None"	
31. If there have been challenges, what have been the most common/frequent challenges? *INSTRUCTIONS:* • *Open ended – DO NOT MENTION any of the categories.* • *Clarify as necessary and capture what they mention into potential categories. If it does not fit specifically into these categories write in what they say into "other".* • *Check all that apply*	*Check all that apply* a) No water supplied b) Insufficient water c) Water leaks d) Broken taps e) Broken line Broken pump f) Water quality g) Don't know/unsure h) There have been no problems i) Other (describe):
32. So let's talk about any problems you may have had with your water connection. Have you had any problems and if yes, water connection can you talk about what you do to resolve your problem(s)?	
33. Is the household water connection under the WASH-UP project your only drinking water source?	☐ Yes (Skip to Q 30) ☐ No
33a. If No, what other sources of water do you use for drinking water? (open ended)	a) Water kiosk b) Sachet vendor c) Public water point - specify: _____ d) Other - specify: _____ e) N/A no other source used
33b. Why do you also use this water source for drinking water?	

34. Do you encounter any water quality issues with your primary water source?	☐ Yes (Ask Q34a) ☐ No (Skip to Q35)
34a. **If Yes,** what water quality issues are experienced? **(Circle all mentioned):**	**If Yes,** what water quality issues are experienced? **Open Ended (capture all mentioned):** a) Odor b) Salinity c) Brackish/turbid/dirty d) Fetid/bad taste e) Other: specify_____ Other comments on quality:
35. Do you do anything to the water from your primary source to make it safer for drinking?	☐ Yes ☐ No
35a. If yes, what do you do to it to make it safe?	□ Boil □ Add bleach/chlorine □ Aquatabs or other commercial disinfectant □ Strain through a cloth □ Use a filter (ceramic, composite, etc.) □ Solar disinfection □ Let it stand and settle □ Other (specify) _____ □ Don't know
Access	
36. If there are children in your household, are they able to reach the tap and use it?	
37. If there is a disabled person in your household are they able to use it?	
38. Do other households (<u>Outside of tenants who live on the compound as renters if you are a landlord</u>) use the water source here at your house?	☐ Yes ☐ No ☐ Don't Know
Adequacy and Use	
39. Does the amount of water you are able to access meet the daily needs of your family? Why/Why not? (Probe: are there any changes with different seasons?	
40. What do you use this water for? **Open Ended** (Check all that are mentioned and probe for the others not mentioned. Probe to see if household is doing anything new or differently as a result of their having this water connection for any of these areas or other things they mention?) __ drinking__ Cooking __ bathing/hygiene__ hygiene/handwashing __ cleaning__ garden __ income generation activities __ Other describe:	

41. Since WASH-UP ended activities in this community, do you think that overall access to clean drinking water in your community has gotten better or worse or stayed the same? Instructions: • Ask interviewee to explain, "what makes you say that?"	☐ Better ☐ Worse ☐ Stayed the same ☐ Don't Know Explain:
Questions on whether the beneficiary is aware of or interacted with other donor activities	
42. Have there been other donor funded activities to support expanded access to clean drinking water or improved sanitation facilities implemented in your community since WASH-UP ended in September 2015/16?	• Yes ___ (Ask 42a) • No____ **(**Skip to Q43)
42a. If Yes, can you please describe what the activities have been. (Probe): • Who from community is involved? • Who is the donor? • Who has benefitted? • How have the benefitted? • When did these activities start? • When did these activities end? Or are they still on-going?	
43. Do you have any questions for us or anything else you want to share with us about your water services?	
44. Now we would like to ask you a few questions about any hygiene education/messages you may have been part of, or received, as part of the WASH-UP Project. Instructions: • Ask if they are the person in their household/family that participated/involved in these efforts. It may be appropriate to interview another family member – e.g. if the male head of household answered the water questions, the female head of household may have been more involved/engaged in the BCC efforts. • If the Household does not want to answer these questions, Check box accordingly and ask if you can observe their water connection.	☐ Agreed ☐ Refused to answer BCC Questions Comments:
45. During the last part of this site visit, we would like to observe your water point and take a water sample to test some parameters of your water. Is that o.k. with you?	☐ Yes Allowed ☐ No Refused

HYGIENE EDUCATION QUESTIONS

Questions to validate participation in WASH-UP BCC Activities

1. When was the last information, education, or training about proper sanitation and hygiene behaviors you	

received? (Probe: what message(s), where received, and channels/methods) Instructions: • Probe to determine if the interviewee received any messages during the project time line (October 2009 - September 2016) • Ask if the interviewee can recall an event that happened around that time to help estimate the month and year.	
2. Who provided you with this information? Instructions: • Probe to identify if they received messages from government public health agents, a local NGO, and/or other projects	
MESSAGE RECALL	
3. What messages did you recall receiving from the WASH-UP project?	
Knowledge About Hand Washing with Soap (HWWS) at Critical Times	
4. Can you recall what the critical times or situations for when it is important to wash your hands with soap? **This is an open-ended question - do not read responses. Only capture those they mention.** *For each time below mark "1" if the respondent recalled this specific time, mark "0" if the Respondent did not mention this time. Write in any other times they mention that do not fall into the areas provided, or if you are unsure if it falls into one of the options provided.* ***After the respondent stops sharing the times that are critical* about when it is important to wash their hands,** ask "Are there any other situations where it is important to wash your hands?" *Keep asking this question until the respondent indicates there are no other situations for washing hands*	
4a. After toileting	1…Yes ___0… No___
4b. After defecation	1…Yes___0… No___
4c. Before eating	1…Yes___0… No___
4d. Before preparing/cooking food	1…Yes___0… No___
4e. Before feeding a child	1…Yes___0… No___
4f. After changing diapers of babies/cleaning child's bottom	1…Yes___0… No___
4g. Other times mentioned Describe:	1…Yes___0… No___
Knowledge Proper Disposal of Liquid and Solid Waste	
5. Can you tell me the proper ways to dispose of waste? (open ended) Proper – in a container and put in a place where the garbage company takes it away. (Don't read) If this is described check Yes.	Yes ___/ No_____ If No _____Stop
6. Do you have any containers designated for disposing of refuse, whether full or not? Can you show me?	Yes ___/ No_____ Observed: Y/N

7. What did you learn, if anything, from WASH-UP about waste management? What, if any, current challenges do you face managing your households waste now?			
HANDWASHING FACILITY OBSERVATION			
8. Do you have a special place for handwashing? If yes, can you show me?	☐ Yes ☐ No (Skip to Question 12)		
9. If observed – was this the facility implemented under the WASH-UP project?	☐ Yes ☐ No ☐ Don't Know ☐ N/A No facility implemented under WASH-UP		
10. Location of observed handwashing facilities Instructions: • Check all materials observed to be available	☐ Latrine (close proximity) ☐ Kitchen (close proximity) ☐ Other - describe location: ☐ N/A Not able to observe		
11. Observe presence of water at the specific place for handwashing. (Verify by checking the tap/pump, or basin, bucket, water container or similar objects for presence of water) Instructions: • Check only one	☐ Water is available ☐ Water is not available		
12. Observe and record if soap or detergent or other material is preset at the specific place for handwashing. Instructions: • Check all materials observed to be available	☐ Bar Soap ☐ Powder (detergent, liquid, paste) ☐ Liquid Soap ☐ Ash / Mud / Sand ☐ Other		
SELF-REPORTED HANDWASHING WITH SOAP AT SPECIFIC CRITICAL TIMES 13. Ask the interviewee: Please be honest – what is your usual practice?			
13a. After you use the latrine/defecate you _____ wash your hands with soap:	☐ Always	☐ Sometimes	☐ Never
13b. Before you eat, you _____ wash your hands with soap	☐ Always	☐ Sometimes	☐ Never
14. To what degree do you think the WASH-UP project had an impact on your handwashing behaviors?			
14a. Probe what would you say about how you wash your hands now after using the latrine (defecating) compared to how you washed your hands before the WASH-UP project? Probe for challenges in continuing the practice and what is in place to support it.			
14b. Probe what would you say about how you wash your hands now before eating compared to how you washed your hands before the WASH-UP project? Probe for challenges in continuing the practice and what is in place to support it.			

15. Anything else you want to share with us about what you learned from WASH-UP or anything else about the project?	
16. Thank you for your time. This is the end interview. We now want to observe your water point and take some samples. Do you agree for us to observe your water connection and take samples for testing?	☐ Yes Allowed (complete structured observation and water quality test) ☐ No Refused (End of Interview)

Structured Observation Checklist for Household Water Connection

HH Interview Code:	**Team Lead Initials: ___ ___Community # ____ Survey # ___**
Observations	
1. Source of water supply?	a) GWCL piped water b) Other - specify:
2. Type of water supply connection: Piped water into dwelling or piped into the yard?	Piped water into dwelling _____ Piped into the yard ____
Functioning and Safety	
3. Is the water point currently dispensing water? Describe	Yes ___/ No____ Describe:
4. Level of maintenance? Describe any apparent repair or maintenance needs?	____ High ___ Moderate ___ Low ____ Poor Describe:
5. Condition of structure/pipes/taps (if relevant):	___ High ___ Moderate ___ Low ____ Poor Describe:
6. Capture the severity of any apparent water leakages (or standing water)?	__ No leaks indicated __ Moderate leakage __ Significant leakage Describe:
7. Describe any hazards, risks, challenges or potential threats for contamination? Risk of contamination into leaking pipe?	
8. What is the level of cleanliness? Describe how clean is the installation? Is there evidence of rubbish, waste, mud, or mold around/ on/ near it?	____ High ___ Moderate ___ Low ____ Poor Describe:
Water Quantity	
9. If handpump: Note the number of strokes it takes for water to initially flow?	Number of strokes ____ N/A (not a handpump) _____
10. Fill a ____liter/gallon container and use a stopwatch to measure the time it takes to fill the container with water. If this is a handpump, also count the number of strokes it takes to fill it.	Number of seconds to fill ___ liters/gallons: _____ Number of strokes to fill ____liters/gallons: _____
Water Quality	
11. Is the water clear or dirty?	a) Clear b) Discolored c) Visible particles in the water d) Other - specify:
12. Does water smell bad? If yes explain	Yes ___/ No____ Describe:
13. Remember to take a photo of the water supply installation - Photo taken?	Yes ___/ No____

Household Water Quality Test Results

HH Interview Code: (Be sure to have the same code here as on the HH KII (front page)!	**Team Lead Initials: ___ ___Community # ____** **HH Water KII/SO # ___**	
CBT/e coli	**Date and time > after results can be read?**	**Results Data**
Collection Data		
Date Collected:		**Date of reading results:**
Time of Collection:		**Time of reading results:**
Water temperature at collection in C°		**Water temperature at results in C°**
		MPN Result:
Comments:		

KII Guide/Observations for Sanitation Beneficiaries

As part of this evaluation we are interviewing some households' who had latrines installed at their house through the WASH-UP Project. (Was your Household's latrine at your home implemented under WASH-UP? If No, thank them and continue to the next house). If Yes – "We would like to ask you some questions about your latrine, waste management and handwashing facilities and observe them. We would also like to ask you some questions about any hygiene/other education you received through the WASH-UP Project. Are you interested?"
If Yes, proceed to the Informed Consent.

Be sure to complete the Informed Consent Protocol before starting the interview
Be sure to get complete and get consent for any pictures taken
INTERVIEWER ALL QUESTIONS ARE OPEN ENDED UNLESS STATED OTHERWISE
(Capture Response into Categories Only if it fits. If it does not – write what they say into other)

HH Interview Code:		**Team Lead Initials: __ __Community # __ Survey # __**	
Photo Codes:		**Picture #(s): ____ ___ ____ Team Lead Initials: ___** **Community Code: ___ HH Survey #: HH ___** **Date: ___-____- 2018**	
Date of KII/ latrine/HW observation:			
Start Time:		**End Time:**	
Name of Evaluator:			
Name of Note-Taker:			
Household Address:			
GPS coordinates of installation location?			
Community	**Municipality (Region)**	**District/Sub-Metro**	
1. Aiyidiki	☐ AMA	☐ Ayawaso Central	
2. Nima East	☐ AMA	☐ Ayawaso East	
3. La-Abafum-Kowe-Abese	☐ La-Dadekotokpon	☐ La-Dadekotokpon	
4. Kojokrom	☐ STMA	☐ Essikado-Ketan Sub Metro	
5. New Takoradi	☐ STMA	☐ Takoradi Sub Metro	
6. Ntankoful	☐ STMA	☐ Effia Kwesimintsim Sub-Metro	
Name of Interviewee(s) (if more than one)? Comments:		**#1**	**Verbal Consent Y/N**
		#2	**Verbal Consent Y/N**
Gender of interviewee #1 and #2 (if more than one participates)?		**#1** **Male _____** **Female _____**	**#2** **Male _____** **Female _____**
Age range of interviewee? (If more than one person interviewed capture ages for both)		**#1** ☐ **18-25** ☐ **26- 34** ☐ **35-49** **50+**	**#1** ☐ **18-25** ☐ **26- 34** ☐ **35-49** **50+**
1. Is the interviewee a:		☐ Resident/Owner Single Family ☐ Resident/Renter Single Family	

		☐ Owner/Landlord (non-resident)* ☐ Owner/Landlord (resident)* ☐ Other - specify:		
2.	How long have you lived at this house?	____# Years or since _____ (year)		
3.	When was the WASH-UP Supported latrine or WC (at/for this household/compound) constructed/installed ("completed")?	☐ 2009 ☐ 2010 ☐ 2011 ☐ 2012 ☐ 2013 ☐ 2014 ☐ 2015 ☐ 2016 ☐ DK		
4.	What type of latrine was constructed at your house?	a) Kumasi Ventilated Improved Pit (KVIP) b) Ventilated Improved Pit (VIP) e) Water closet (WC) (Pour flush or flush?) f) Biofil g) Elevated Compost Latrine g) Other (describe):		
5.	Where is this latrine/toilet located?	a) In own dwelling b) In own yard/plot c) Elsewhere - Please specify:		
	Latrine Users			
6.	How many adult male and female, children renter/owner household members use the latrine at this house daily?	Number of male adults _____ Number of female adults _____ Number of children (<18) _____		
	*1a. If the interviewee is an owner/landlord of this property how many tenants do they rent to at this property? Of those how many use this latrine daily? (If Not an owner/Landlord Write NA)	**Current Renters**	**#**	**# Use Latrine Daily**
		Adult males		
		Adult females		
		Children (<18)		
	1b. Do other people other than those in your family and renters (if relevant) use this latrine on a daily basis?	☐ Yes ☐ No	#	**If Yes** capture the average total # of other people who use daily.
7.	Can you describe who the users of the latrine (that was constructed/supported under the WASH-UP Project) where when it was first completed compared to now? Open Ended	**Probe:** Are they the same, if a landlord – have there been any changes in their tenants use of the latrine, other new users, etc.		
	Hand Washing Facility			
8.	Was a hand washing facility installed at the same time the latrine was constructed with WASH-UP support?	☐ Yes ☐ No		
	8a. If Yes, what type of handwashing facility was installed?	☐ Prefabricated (bucket w/ a lid and a tap_) ☐ Tippy Tap ☐ Other Describe:		
	WASH-UP Financial Support			
9.	Did your household receive financial support to install this latrine/WC at your house?	☐ Yes (Ask 9a) ☐ No (Skip to Q10)		

	☐ Don't know (Skip to Q10)
9a. If Yes received financial support for sanitation facilities, what type of financial support did you receive and what organization provided it? Instructions: • Probe to identify organizational source, maybe known as WASH-UP, Global Communities or Y-SEF • Check all that apply	☐ Micro-loan ☐ Grant/Subsidy from Global Communities LNGO Partner ☐ Grant/Subsidy from other organization - specify: _____ ☐ Don't Know _____ ☐ Other - specify: _____
10. What was your household's <u>total contribution in Ghana Cedis</u> towards the latrine installation?	☐ _____ GHC ¢ ☐ _____ Unknown/Don't remember ☐ N/A did not contribute anything
10a. Of this amount was any of it as result of a loan you received?	☐ Yes ☐ No If Yes total amount of loan _____ GHC ¢
11. What percentage of the total price did your household pay for this latrine installation?	% You Paid / % Paid by WASH-UP 30% / 70% 40% / 60% 50% / 50% 60% / 40% 100% / 0 Other _____% / Other _____% ☐ Don't remember
12. If you received a micro-loan what organization/ person awarded the loan to your household? Instructions: • Check all that apply	a) Y-SEF b) Friend or family c) Other financial institutions (specify): _____ d) Other organization (specify): _____ e) Don't know f) N/A Did not receive a micro-loan
13. If you had a loan or grant/subsidy was it for the latrine, a water connection or both? Instructions: • Circle all that apply • If none apply select "other" and enter what the interviewee says was the purpose of the received loan or grant/subsidy	a) Water connection b) Sanitation facility c) Handwashing facility (latrine or water closet) d) Both water connection and sanitation facility e) Don't know/ N/A f) Other - specify:
14. Did you experience any challenges in the repayment of the loan you received to install the WASH-UP supported sanitation facilities?	Yes ___ (Ask Q14a) No ___ (Skip to Q14b) Don't Know ___ (Skip to Q14b) N/A (did not have a loan) _____ (Skip to Q15)
14a. What were the challenges you experienced to repay the loan facilitated by WASH-UP? Instructions: • Circle all that apply	a) Short repayment period b) High interest rate c) Loss of income d) Illness or death in family e) Cost beyond ability to pay f) Other if not able to capture in above categories, specify:

• If none apply select "other" and describe the challenges described by interviewee	
14b. Did they pay back the loan in full?	Yes ___ (Ask to Q14c) No ___ (Skip to Q15) Don't Know ____ (Skip to Q15)
14c. How many months did it take to pay back the loan?	# of months_____
15. Do you have any comments about any subsidy (loans/grants, etc.) you may have received and the role it had in your household's (and for tenants if interviewee is a landlord) access to a latrine?	
16. What was the name of the WASH-UP sub-grantee or enterprise or organization responsible for construction of this latrine installation (circle): b) **GWCL** c) **Ayidiki Water and Sanitation Organization (AWSO) -** primarily responsible for latrine construction and training, latrine user education, and facilitation of household water connections and water kiosks in Ayidiki, AMA and La Abafum-Kowe-Abese, LaDaMA d) **Professional Network Association (PRONET)** - primarily responsible for WASH infrastructure construction (household latrine construction, facilitation of household water connections and water kiosks) in urban communities in AMA including activities in Nima West and Nima East. e) **Rural Development Network (RUDNET)** - primarily responsible for WASH infrastructure construction activities primarily in urban communities within STMA. f) **Another private company/individual construction contractor** - Enter name of individual and/or company: _____ g) **Unknown/or can't recall**	
17. Can you talk about how the construction process went (Probe: problems and resolution) o Yes, there were problems (Describe below) o No, there were no problems	
18.	
Latrine Use	
19. Do your family members use the latrine provided through WASH-UP support daily for all purposes (defecation/urination)?	☐ Yes ☐ No Describe:
18a. IF NO, your family does not use the latrine provided through WASH-UP support daily, why not? **[enter N/A if interviewee responded yes to the question above]**	
18b. If your family/other residents does not use the latrine provided through WASH-UP support daily, what kind of toilet facility do members of your household usually use each day?	☐ Public Latrine ☐ Other Household/Private Latrine ☐ No facility, HH uses field/open defecation ☐ Other - specify:

20. If there are children in your household, are they able to use the latrine?	☐ Yes ☐ No
21. If there is a disabled person in your household are they able to use the latrine?	☐ Yes ☐ No
22. Is there anything that keeps you or your family or renters (if a landlord) from using your latrine now? Have you ever not been able to use this latrine because something was wrong with it since it was installed?	
Maintenance and Repair	
23. Is the latrine currently working as it was designed to be used?	☐ Yes ☐ No If No, explain why it is not working?
24. How would you describe the condition of the latrine compared to when it was built?	
Maintenance and Fecal Management (Waste) Removal	
25. If you needed to repair your latrine what would you do? Probe: Have you had any problems or had to make any repairs to your latrine since it was constructed? If Yes, what repairs, who did them, when, how long did it take to get the repairs done? Have you had any challenges getting repairs?	
24a. What about to the hand washing facility implemented under WASH-UP – have you had any problems with the facility? If you needed to make any repairs what would you do? Have you had to make any repairs to your hand washing facility since it was constructed? If Yes, what repairs, who did them?	
26. Has your latrine filled up to the point that you needed to empty your latrine since it was installed?	Yes _____ No ___ Don't Know ___ N/A ____ (Not applicable to this type of latrine **Skip to Q 29)**
25a. If Yes, what did you do about it when it was full?	
27. Are you aware of a service provider for waste removal services from your latrine, if applicable, who is it? **(Open Ended)**	a) Government agency _____ b) Private enterprise _____ c) LNGO _____ d) CBO _____ f) Don't know g) N/A _____ h) Other - please specify:
28. Have you contacted a service provider yet to remove the waste from the latrine installed with WASH-UP support?	Yes____ (Ask Q27a) No____ (Skip to Q28) Don't know _____ (Skip to Q28) N/A (pit hasn't become full or have WC not latrine) ____ (Skip to Q28)

27a. If Yes, when was the last time you had waste removed?	____ Mo/ _____ Year ____ Don't know (Skip to Q28) ____ Not removed yet (Skip to Q28) Comments:
27b. If yes, did they respond to your request and remove the waste?	a) Yes, the service provider responded and removed waste completely b) Yes, the service provider responded but was unable to remove waste completely c) No response from service provider d) Don't know e) Other (describe):
29. How often do you think you will need to have waste removed from this latrine in the future? Do you anticipate any problems getting the waste removed in the future?	
Functioning and Reliability	
30. Please describe what, if any, are the primary challenges, if any, to keep the latrine functioning properly at all times? Instructions: • Open-ended**:** Ask probing questions and record response verbatim: o Have you experienced any problems with flushing (if WC), pit full/removal services, smell, flies, infrastructure (walls, floor, seat etc.), privacy? o How have you addressed any problems? o Is there is anything about your latrine that you are concerned about that might prevent the use of the latrine into the future?	
Household Reported Cleanliness	
31. How often do you typically clean the latrine? (**Open Ended** capture what they say as appropriate, if not listed write in what they say in other)	☐ Daily ☐ Every other day ☐ Weekly ☐ Monthly ☐ Rarely ☐ Never ☐ Don't know ☐ Other - describe:
31. Is the level of cleanliness acceptable to you?	___ Yes ____ No
32. Is the odor acceptable to you?	___ Yes ___ No
33. Is the number of flies acceptable to you?	___ Yes ___ No
Questions on whether the beneficiary is aware of or interacted with other donor activities	
34. Have there been other donor funded activities to support expanded access to clean drinking water or improved sanitation facilities implemented in your community since WASH-UP ended in September 2015/16?	Yes ___ No____ (Skip to Q 35)

34a. If Yes, can you please describe what the activities have been. (Probe): • Who from community is involved? • Who is the donor? • Who has benefitted? • How have the benefitted? • When did these activities start? • When did these activities end? Or are they still on-going?	
35. Do you have any questions for us or anything else you want to share with us about your latrine?	
46. Now we would like to ask you a few questions about any hygiene education/messages you may have been part of, or received, as part of the WASH-UP Project. Instructions: • Ask if they are the person in their household/family that participated/involved in these efforts. It may be appropriate to interview another family member – e.g. if the male head of household answered the water questions, the female head of household may have been more involved/engaged in the BCC efforts. • If the Household does not want to answer these questions, Check box accordingly and ask if you can observe their water connection.	☐ Agreed to answer BCC Questions ☐ Refused to answer BCC Questions
36. During the last part of this site visit , we would like to observe your latrine and handwashing station (if present). Is that o.k. with you?	☐ Yes Allowed ☐ No Refused

HYGIENE EDUCATION QUESTIONS

Questions to validate participation in WASH-UP BCC Activities

9. When was the last information, education, or training about proper sanitation and hygiene behaviors you received? (Probe: what message(s), where received, and channels/methods) Instructions: • Probe to determine if the interviewee received any messages during the project time line (October 2009 - September 2016) • Ask if the interviewee can recall an event that happened around that time to help estimate the month and year.	
10. Who provided you with this information? Instructions:	

• Probe to identify if they received messages from government public health agents, a local NGO, and/or other projects			
MESSAGE RECALL			
11. What messages did you recall receiving from the WASH-UP project?			
Knowledge About Hand Washing with Soap (HWWS) at Critical Times			
12. Can you recall what the critical times or situations for when it is important to wash your hands with soap? **This is an open-ended question - do not read responses. Only capture those they mention.** *For each time below mark "1" if the respondent recalled this specific time, mark "0" if the Respondent did not mention this time. Write in any other times they mention that do not fall into the areas provided, or if you are unsure if it falls into one of the options provided.* ***After the respondent stops sharing the times that are critical* about when it is important to wash their hands,** ask "Are there any other situations where it is important to wash your hands?" *Keep asking this question until the respondent indicates there are no other situations for washing hands*			
12a. After toileting	1…Yes___0… No___		
12b. After defecation	1…Yes___0… No___		
12c. Before eating	1…Yes___0… No___		
12d. Before preparing/cooking food	1…Yes___0… No___		
12e. Before feeding a child	1…Yes___0… No___		
12f. After changing diapers of babies/cleaning child's bottom	1…Yes___0… No___		
12g. Other times mentioned Describe:	1…Yes___0… No___		
Knowledge Proper Disposal of Liquid and Solid Waste			
13. Can you tell me the proper ways to dispose of waste? (open ended) Proper – in a container and put in a place where the garbage company takes it away. (Don't read) If this is described check Yes.	Yes ___/ No_____ If No _____Stop		
14. Do you have any containers designated for disposing of refuse, whether full or not? Can you show me?	Yes ___/ No_____ Observed: Y/N		
15. What did you learn, if anything, from WASH-UP about waste management? What, if any, current challenges do you face managing your households waste now?			
SELF-REPORTED HANDWASHING WITH SOAP AT SPECIFIC CRITICAL TIMES 16. Ask the interviewee: Please be honest – what is your usual practice?			
16a. After you use the latrine/defecate you _____ wash your hands with soap:	☐ Always	☐ Sometimes	☐ Never
16b. Before you eat, you _____ wash your hands with soap	☐ Always	☐ Sometimes	☐ Never
17. To what degree do you think the WASH-UP project had an impact on your handwashing behaviors?			

17a. Probe what would you say about how you wash your hands now after using the latrine (defecating) compared to how you washed your hands before the WASH-UP project? Probe for challenges in continuing the practice and what is in place to support it.	
17b. Probe what would you say about how you wash your hands now before eating compared to how you washed your hands before the WASH-UP project? Probe for challenges in continuing the practice and what is in place to support it.	
18. Anything else you want to share with us about what you learned from WASH-UP or anything else about the project?	
19. During the last part of this site visit , we would like to observe your latrine and handwashing station (if present). Is that o.k. with you?	☐ Yes Allowed ☐ No Refused (End of Interview)

------- NOW MOVE TO OBSERVE FACILITIES -------

Structured Observation for Handwashing Facility

1. Do you have a special place for handwashing? If yes, can you show me?	☐ Yes ☐ No (Skip to Question 15) If Yes, Observed ___ Yes ___ No (Skip to Question 15)
2. If observed – was this the facility implemented under the WASH-UP project?	☐ Yes ☐ No ☐ Don't Know ☐ N/A No facility implemented under WASH-UP
3. Location of observed handwashing facilities (Check all that are observed)	☐ Latrine (close proximity) ☐ Kitchen (close proximity) ☐ Other (Describe location :) ☐ N/A Not able to observe
4. Observe presence of water at the specific place for handwashing. (Verify by checking the tap/pump, or basin, bucket, water container or similar objects for presence of water)	☐ Water is available ☐ Water is not available
5. Observe and record if soap or detergent or other material is preset at the specific place for handwashing. **Circle what materials were observed to be available**	☐ Bar Soap ☐ Powder (detergent, liquid, paste) ☐ Liquid Soap ☐ Ash / Mud / Sand ☐ Other

Structured Observation for Latrine/WC

1. Is the construction of the latrine basically functional? If not Please explain why not? For example: • Are the cover slabs, in place, free from cracks? • Is the vent pipe stable, without wiggling? • Is there a fly screen firmly in place? • Is the door in place, can be opened and closed? • Are the walls, free from cracks that can be seen through? • Capture as well any significant infrastructure failures and take photos of it.	
2. Does the construction look safe? Please explain why not? What are the specific safety hazards? For example: Is the slab secure? Are the walls crumbling? Is the roof in disrepair or missing? Capture as well any significant infrastructure failures and take photos of it.	
3. Is there clear evidence latrine is being used? Note odor, contents of pit, observed use, availability of materials for anal cleansing (paper or water container?	
4. Does latrine offer full privacy (are there surrounding walls and doors that can fully close. Are you able to lock the door from the inside, etc.)?	
6. the latrine easily usable for individuals with physical disabilities? Explain why or why non - What disability friendly features are missing or present? For example: Are there stairs or a ramp? Are there handrails or devices inside for support? Is the seat at a lower height?	
5. Can the latrine be used by young children? Explain why/why not? E.g., is the seat too high or at the right height for school-age children?	
6. Is the cleanliness of the latrine acceptable? Are the latrine, floor, walls soiled with urine, feces, or littered with used paper?	
7. How is the odor and number of flies? Is it acceptable?	
Remember to take a photo and code # of picture on your camera here on page 1:	

[THIS IS THE END INTERVIEW & OBSERVATIONS. <u>THANK YOU FOR YOUR TIME!</u>

KII/Group Interview Guide for Water Kiosk Vendors Managers of Community Water Supply Systems, Public Latrines or Private Water and Sanitation Service Providers

Water Point/Latrine Interview Code:		**Team Lead Initials: ___ ___Community # ____ Survey # ___ Water/Latrine: W/L**
Photo Codes:		**Picture #(s): ____ ___ ____ Team Lead Initials: ___ ___ Community Code: ___ Survey #: Date: ___-____- 2018**
Date of KII/ observation/ water quality test:		
Start Time:		**End Time:**
Name of Evaluator:		
Name of Note-Taker:		
Household Address:		
GPS coordinates of installation location?		
Community	**Municipality (Region)**	**District/Sub-Metro**
7. Aiyidiki	☐ AMA	☐ Ayawaso Central
8. Nima East	☐ AMA	☐ Ayawaso East
9. La-Abafum-Kowe-Abese	☐ La-Dadekotokpon	☐ La-Dadekotokpon
10. Kojokrom	☐ STMA	☐ Essikado-Ketan Sub Metro
11. New Takoradi	☐ STMA	☐ Takoradi Sub Metro
12. Ntankoful	☐ STMA	☐ Effia Kwesimintsim Sub-Metro
Name of Interviewee(s)? **Comments:**		**Verbal Consent Y/N**
Position(s) of persons interviewed		
Gender of interviewees?		**Male _____ Female _____**
Age range of interviewee(s)? (If more than one person interviewed capture ages for both)		☐ **18-25** ☐ **26- 34** ☐ **35-49** **50+**
Location/Type of Water Point		
Location of Business/Water Installation		
Name of business/organization		
Type of water or sanitation installed or services provided		
If Water Supply What is the Source of Water		☐ **Borehole** ☐ **GWCL** ☐ **Other**
Start date of organization or Business:		
Still operating?		**Yes ___ No ___**
Start and End Dates of WASH-UP Project Support		**Start:** **End:**

Background

1. Have you heard of the WASH-UP Project? (Probe may be known by other	☐ Yes ☐ No

names by LNGO or Global Communities)	
2. What activities were carried out in your community by the WASH-UP Project?	
3. What was your role in the WASH-UP Project?	
EQ 1 Functionality	
Now we want to ask you some questions about the functionality of your water supply or sanitation installation or services which the project supported.	
4. What types of support did you receive from the WASH-UP Project to establish your water supply or sanitation related business?	
5. How did this support help you to expand or establish your water or sanitation related business(es)?	
6. Are you still involved or managing the water supply or sanitation-related business which the WASH-UP project helped you to establish? ____Yes/ ____ No Why or Why not?	
7. Would you say that your WASH-UP-supported water or sanitation related business has expanded or reduced since project support ended? ____Yes/ ____ No How so? What makes you say that?	
8. Would you say that your WASH-UP-supported water or sanitation related business has been able to provide better services since project support ended? ____Yes/ ____ No How so? What makes you say that?	
9. Describe the functionality of water services or installations at the end of project (September 2016)? Specify type (e.g., water kiosk, water sachet vendor, community stand pipe vendor or community water supply system) or enter N/A	
10. Describe the functionality of sanitation services or installations at the end of project (September 2016)? Specify type (e.g., waste removal or public latrines) or enter N/A	
11. Describe the current functionality of water services or installations? Specify type (e.g., waste removal or public latrines) or enter N/A	
12. Describe the current functionality of sanitation services or installations? Specify (e.g., waste removal or public latrines) or enter N/A	
13. Have you had any issues in maintaining the quality or level of service levels that you achieved with WASH-UP support since the project ended? ____Yes/ ____ No Probe for the areas below. How so? What makes you say that?	

	Yes	No	Don't know	N/A	**4a. If answered Yes to any** issues in maintaining the quality or level of service levels that you achieved with WASH-UP support since the project end**,** how were the issues addressed, who addressed the issue, and do you think the response was adequate? (Capture responses.)
a) Quantity/output of water systems?					
b) Water quality					
c) Accessibility					
d) Reliability					
e) Maintenance & Repairs					
f) Latrine waste removal					
g) Other - specify:					

14. Can you describe the issues you have had maintaining the water or sanitation supply quality or levels of service you achieved with WASH-UP support?

EQ2 Factors/approaches contributing/impairing sustainability of WASH-UP results **Now we want to ask you some questions about sustainability of the WASH-UP Project.**	
15. What was your understanding, if any, of the <u>sustainability approach</u> of the WASH-UP project to improved water supply in your community?	
16. What, if any, <u>actions were taken</u> during implementation that you are aware of to <u>improve the long-term sustainability</u> of the WASH activities or benefits to improve water supply? Please Describe:	
17. Are other donors or the GoG supporting your efforts?	Yes ___ (If yes ask Q17a) No____ (If no, Skip to Q18**)**
17a. If yes please name these donors or other entities?	
14b. If no, do you think your water or sanitation business needs further support to continue to operate? (Yes/No)	Yes ___ No____
17c. If yes, please explain why you need any additional support?	
18. Do you have plans for expansion? (Yes/No) Why/Why Not?	Yes ___ No____ Explain:

19. What steps do you take to ensure that the water you provide to the community is safe? (Enter N/A for sanitation related businesses)	
20. What are the challenges you face in providing services to the community?	
21. What are the steps you have taken to address these challenges?	
22. Can you tell me if anyone supervises your activities? How often does this happen?	
Questions on whether the beneficiary is aware of or interacted with other donor activities	
23. Have there been other projects related to improving access to clean drinking water or improved sanitation facilities implemented in your community since the end of the project, September 2015/16?	Yes ___ (If yes ask Q20a) No____ (If no, Skip to Q21**)**
20a. If Yes, can you please describe what the activities have been. (Probe): • Who from community is involved? • Who is the donor? • Who has benefitted? • How have the benefitted? • When did these activities start? • When did these activities end? Or are they still on-going?	
EQ 3 Sanitation and Hygiene Behavior Change Communication	
24. When information, education, or training about proper sanitation and hygiene behaviors did you receive from the project? Probe**:** a) What message(s), where received, and channels/methods used? Probe: how was this related to this water point/latrine you manage or operate? b) What did you learn if anything about handwashing at critical times? c) What did you learn, if anything, about waste disposal? d) Did what you learn change your/your businesses/management of this facility/water point at all? Have you integrated those messages into your business/management of this facility/water point at all? **e)** Is there anything on this subject of behavior change with respect to hygiene or waste management that you think the project could have done differently?	

For Public Water Supplies Please Conduct Water Quality Tests At This Time as Relevant to the type of water supply (Borehole or GWCL/Other Source)

Thank you for your time!

KII Guide for Community Water and Sanitation Users

As part of this evaluation we are interviewing some users of public available latrines or water points that were implemented/constructed under WASH-UP. As your using such a facility would you mind answering some questions about this water supply or sanitation system you are using right now? If Yes, proceed to the Informed Consent.
Be sure to complete the Informed Consent Protocol before starting the interview

Record info about the related KII with the Service Provider responsible for management of installation		**Response**
Date of KII		
Name of Evaluator:		
Name of note-taker:		
Address for installation location:		
GPS coordinates of installation location?		
Community	**Municipality (Region)**	**District/Sub-Metro**
Aiyidiki	AMA	Ayawaso Central
Nima East	AMA	Ayawaso East
La-Abafum-Kowe-Abese	La-Dadekotokpon	La-Dadekotokpon
Kojokrom	STMA	Essikado-Ketan Sub Metro
New Takoradi	STMA	Takoradi Sub Metro
Ntankoful	STMA	Effia Kwesimintsim Sub-Metro
Name of Interviewee		Verbal Consent _____ Yes _____ No
Gender	Male ___ Female ___	Age Range of interviewee ☐ 18-25 ☐ 26- 34 ☐ 35-49 50+
What is the water point you are at:		☐ Public Tap ☐ Public Kiosk ☐ Public Borehole ☐ Other _____ ☐ N/A
What is the public latrine location you are at:		Name/Location:

Access to Water/Sanitation

1. How far is this service from your house? (Probe: km or time to walk)

2. What is usual amount of time you have to wait to use the service? (Does the typical/average wait time differ according to time of day, day, or season?)

3. Typically how often do you use this service?

Per day
Per week
4. Why did you say that? (Probe: barriers to use)

5. What do you think about the cost of this service (water or latrine) is it o.k. for your household?
(Probe affordability now compared to what they used before this became available under WASH-UP)

Functionality of Water/Sanitation

6. Can you describe how functional this service is?

Most of the time
Some of the time
Rarely

Other comments/explanations

7. Do you feel that upkeep is sufficient (for example, cleanliness for sanitation)?

8. Do you have any suggestions for their maintenance?

9. What did you use before this was installed by WASH-UP? How has this service affected your/your family's life, if at all? Have there been any challenges since it was installed with using this service?

Structured Observation Checklist and Water Quality Test for Community Water Systems/Water Kiosks

Use this tool for Community Water Points and Water Kiosks. This includes the Water Quality Tests.

Be sure to complete the Informed Consent Protocol before starting the interview

Water Point Observation Code:		**Team Lead Initials: ___ ___Community # ____ Survey # ___ Community Water Observation Point:**
Photo Codes:		**Picture #(s): ____ ___ ____ Team Lead Initials: ___ ___ Community Code: ___ Survey #: Community Water Observation Point: _____ Date: ___-____- 2018**
Date of KII/ observation/ water quality test?		
Start time of observation:		End time of observation:
Name of Evaluator?		
Name of note-taker?		
Address for installation location?		
GPS coordinates of installation location?		
Community	**Municipality (Region)**	**District/Sub-Metro**
☐ Aiyidiki	☐ AMA	☐ Ayawaso Central
☐ Nima East	☐ AMA	☐ Ayawaso East
☐ La-Abafum-Kowe-Abese	☐ La-Dadekotokpon	☐ La-Dadekotokpon
☐ Kojokrom	☐ STMA	☐ Essikado-Ketan Sub Metro
☐ New Takoradi	☐ STMA	☐ Takoradi Sub Metro
☐ Ntankoful	☐ STMA	☐ Effia Kwesimintsim Sub-Metro
Name and mobile number of the interviewee from the service provider for this installation site (if able to interview)?		Name: _____ Number: _____
Is the interviewee an operator?		Yes _____ No _____
Gender of interviewee?		Male _____ Female _____
Age range interviewee?		☐ **18-25** ☐ **26- 34** ☐ **35-49** **50+**
What is the name of the current service provider?		Name _____ Organization _____ Don't know_____
Is the current service provider that manages this water supply connection a private or public (GWCL or another government agency) organization?		Private _____ Public _____ Don't Know _____

Characteristics	
Location: Please describe the location of the water point in the community -	School _____ Health Clinic _____ Market _____ House compound (private) _____ Other - specify: _____ Notes:

Source of water supply?	a) GWCL water mains b) Borehole Well c) Other - specify:
What is the type of community water service provided?	Water Kiosk Sachet Water Community Stand Pipe Other - specify: _____
If Community Stand Pipe how many standpipes are there on this system and what is the location/identifier for the standpipe you are observing? Describe:	
Functioning and Safety	
Is the water point currently dispensing water? Describe (observation)	Yes ___/ No____ Describe:
Are there any apparent/visual water leaks? Describe the severity of any apparent water leakages?(observation)	Yes ___/No Describe:
Level of maintenance? Describe any apparent repair or maintenance needs. (observation)	____ High ___ Moderate ___ Low ____ Poor Describe:
Condition of structure/tanks/pipes/taps/pumps (if relevant)? Describe condition. (observation)	___ High ___ Moderate ___ Low ____ Poor Describe:
Are there any contamination risks? Describe any hazards, risks, challenges or potential threats for contamination, including risk of contamination into leaking pipe. (observation)	Yes ___/No ____ Describe:
What is the level of cleanliness (rate)? Describe. Is there evidence of rubbish, waste, mud, or mold around/ on/ near water point? (observation)	____ High ___ Moderate ___ Low ____ Poor Describe:
Is system protected from animals/insects (RWH)? Describe systems in place? (observation)	Yes ___/ No____ Describe:
Water Quantity	
If handpump: Note the number of strokes it takes for water to initially flow? (observation)	Number of strokes ____ N/A (not a handpump) _____
Fill a _____ container and use a stopwatch to measure the time it takes to fill the container with water. If this is a handpump, also count the number of strokes it takes to fill it. (Test)	Number of seconds to fill ____ liters: _____ Number of strokes to fill ____ liters: _____

Water Quality	
What is the clarity of the water? (observation)	a) Clear b) Discolored c) Visible particles in the water d) Other - specify:
Does water have an odor? If yes explain (observation)	Yes ___/ No____ Describe:
Access: How many people are waiting at the water point? Note their age and gender (observation)	Number of males _____ Adult # ___ /Child# __ Number of females _____ Adult # ___/Child# __
If a water kiosk, what is the price for water based on volume of container (Question to user/Vendor)	__ 50 liter/ Price per unit _____ __ 20 liter/Price per unit ___ __ 10 liter/Price per unit __ Other _____ /Price per unit
How many customers typically buy water from the kiosks each day? (Question)	
What is the typical total average volume of water sold each day? (Question)	
Take several pictures of the water supply connection	Capture picture #/code/save accordingly

Community Water Quality Test Results

Water Point Interview Code: (Be sure to have the same code here as on the KI Water Manager/Observation Instrument (front page)!	**Team Lead Initials: ___ ___Community # ____ Survey # ___** **Community Water Observation Point:**	
CBT/e coli	**Date and time > after results can be read?**	**Results Data**
Collection Data		
Date Collected:		**Date of reading results:**
Time of Collection:		**Time of reading results:**
Water temperature at collection in C°		**Water temperature at results in C°**
		MPN Result:
Notes:		
~~pH Result:~~		
Notes		
~~Fluoride Result (Only for Boreholes):~~		
Notes		
Arsenic (Only for Boreholes)		
Time of collection_____ Water temp at collection in C° _____ **Time of testing _____ Time of reading result _____** **MPN Result _____** **Notes:**		

Structured Observation Checklist for Institutional (School) and Community Public Latrines and KII Guide for School Staff

Work with the Global Communities staff, members of the WSC to verify/identify which latrines were constructed by institution (school) and public locations due to participation in WASH-UP with USAID funding, and when each was constructed. Complete the following observations for each latrine location visited

Be sure to complete the Informed Consent Protocol before starting the interview

School/Public Interview Code:	**Team Lead Initials: __ __School_____ Interview # __** **Team Lead Initials: __ __ Public Latrine ____ Interview #**
Photo Codes:	**Picture #(s): ____ ___ ____ Team Lead Initials: ___** **School: _____ Interview #: ___** **Date: ___-____- 2018**
Date of KII/observation:	
Start Time:	**End Time:**
Name of Evaluator:	
Name of Note-Taker/Interpreter	
GPS coordinates of School/Public Latrine?	
School Name/Address:	
Type of School:	**Public ___ Private ___**
What are the Class/Form for students that attend this school?	**___ # of Primary (Class ___ to ___)** **___ # of Junior High Students (Form 1 to 3) students** **___ # Other** **___ Total # of students currently enrolled**
Students Gender (Of total students how many are boys/girls)?	**___ # Boys ___ # Girls**
How many total staff/teachers	**____ # Male ____ # Female ____ # Total Male/Female**
Public Latrine Address:	
How many people use the public latrine in a typical day?	
Is there a charge per use for this latrine? If yes what is the amount?	

Location Information		
Community	**Municipality (Region)**	**District/Sub-Metro**
1. Aiyidiki	☐ AMA	☐ Ayawaso Central
2. Nima East	☐ AMA	☐ Ayawaso East
3. La-Abafum-Kowe-Abese	☐ La-Dadekotokpon	☐ La-Dadekotokpon
4. Kojokrom	☐ STMA	☐ Essikado-Ketan Sub Metro
5. New Takoradi	☐ STMA	☐ Takoradi Sub Metro
6. Ntankoful	☐ STMA	☐ Effia Kwesimintsim Sub-Metro

Name of Interviewee(s) (if more than one)? **Comments:**	**#1**	**Verbal Consent Y/N**
	#2	**Verbal Consent Y/N**
	#3	**Verbal Consent Y/N**
1. When was the WASH-UP Supported latrine (at/for this school) or (public community location) constructed/installed ("completed")?	☐ 2009 ☐ 2010 ☐ 2011 ☐ 2012 ☐ 2013 ☐ 2014	

	☐ 2015 ☐ 2016 ☐ DK/NA
2. What type of latrine was constructed at the School/Public Community Location?	a) Kumasi Ventilated Improved Pit (KVIP) b) Ventilated Improved Pit (VIP) e) Water closet (WC) (Pour flush or flush?) f) Biofil g) Elevated Compost Latrine g) Other (describe):

Name of Persons Interviewed for School KI or Name of Person Guide Observation of School Facilities				
Name (first, last)	Position during time of WASH-UP	Current position at school, if different	Gender of interviewee (M/F)	Consent Y/N

****For Public Latrines Please Use Tool 3 for Vendor/Operator KI Questions****

School Staff KII Guide	
3. Can you share with me your responsibilities at the school?	
4. Does the school have a parent or other group/organization at the school that is involved in any water, sanitation or hygiene education activities? (If Yes Describe) and Probe: 2a. If yes, how was this group involved in the WASH-UP Project? 2b. If yes, have they continued to conduct hygiene education activities after WASH-UP has ended? If yes please describe:	
5. What was constructed by WASH-UP at this school?	☐ Latrines ☐ Water Supply ☐ Handwashing facilities ☐ Other_____
5a. If **latrines** what type of latrines were constructed here? Describe the latrines and when the work was completed?	a) Kumasi Ventilated Improved Pit (KVIP) b) Ventilated Improved Pit (VIP) e) Water closet (WC) (Pour flush or flush?) f) Biofil g) Elevated Compost Latrine g) Other (describe):

5b. If a **water supply** was installed what type of water supply was installed? Describe System and when the work was completed. How reliable is the water supply? In a typical school week how many days do they have water? Does the water last the entire school day?	a) Connection to GWCL b) Rain Water Catchment (RWC) c) Borehole Well d) Other
5c. If **hand washing facilities** describe the type of handwashing facilities installed. When was this work completed?	
6. Of all the facilities constructed are they still working the same as they did when the project was completed? If not, what is not working?	
7. What hygiene education/promotion activities were conducted at this school through the WASH-UP project? Probe: How were these activities conducted (methods)? Who was involved? Frequency? Are these activities still be conducted now that WASH-UP is over?	
8. What would you say about the hygiene education efforts undertaken to bring about behavior change in students by WASH-UP? (Probe what changes they've seen and if those changes has been sustained, etc.)	
9. How often is latrine cleaned? Who is responsible for cleaning?	___ daily ___ multiple times during the week ___ every other week ___ Monthly ___ Other ___ Don't know

Structured Observation Checklist for School and Public Latrines

School/Public Latrines Stalls	Condition			TOTAL	Most Doors Lock (Y/N)	Cleanliness of majority of latrines (Scale 1-3)
	# Functional	# Partially functional (Comment)	# Not Functional (Comment)			
Latrines						
Girl/female only latrines (labeled)						1 2 3
Boy/male only latrines (labeled)						1 2 3
Student/adult communal latrines						1 2 3
Total Student/Adult latrines						1 = 2= 3=
Teacher/Staff Latrines*						
Female teacher/staff only						1 2 3
Male teacher/staff only						1 2 3
Teacher/staff communal only						1 2 3
Total Teacher/staff latrines						

*If WASH-UP implemented teacher latrines. If they did not implement capture in general availability of separate latrines for teachers/staff:

10. If any of the stalls above are not functional or only partially functional (from above observations) capture why they are not functional or only partially functional?	
11. What is the overall general condition of the latrines? Observe: Probe: Are the cover slabs, in place, free from cracks? Is the vent pipe stable, without wiggling? Is there a fly screen firmly in place? Is the door in place, can be opened and closed? Are the walls, free from cracks that can be seen through?	
12. Does the construction look safe? Please explain why not? What are the specific safety hazards? For example: Is the slab secure? Are the walls crumbling?	Yes ___/ No____ Notes:

Is the roof in disrepair or missing?	
13. Is there clear evidence latrines are being used *(note odor, contents of pit, observed use)*?	Yes ___/ No_____ ___ Not able to observe Notes:
14. Do the latrine stalls offer full privacy (are there surrounding walls and doors that can fully close)?	Yes ___/ No_____
15. Are the latrines easily usable for individuals with physical disabilities? Explain why or why not? What disability friendly features are missing or present? For example: Are there stairs or a ramp? Are there handrails or devices inside for support? Is the seat at a lower height?	Yes ___/ No_____ ___ Not able to observe Notes:
16. Can the latrine be used by young children? Explain why or why not? For example, is the seat too high or at the right height for school-age children?	Yes ___/ No_____ ___ Not able to observe Notes:
17. Is the cleanliness of the latrine acceptable? (latrine, floor, walls are not soiled with urine, feces, or littered with used paper)	Acceptable level of cleanliness_____ Lack of cleanliness is intolerable_____ __ Not able to observe
18. Odor: what is the level of the smell from the latrine??	No smell _____ Acceptable smell_____ Intolerable smell_____ ___ Not able to observe
19. Is there an acceptable number of flies (fewer than 3 flies) present?	No flies _____ Acceptable presence of flies___ Intolerable presence of flies_____ ___ Not able to observe
20. Are materials for anal cleansing (paper or water container) available in or near any stalls?	Yes ___/ No_____ ___ Not able to observe
21. Is there a handwashing station in close proximity to the latrines/on site? (If yes, Describe location and complete observation sheet below)	Yes ___/ No_____
Take Pictures of the Latrines	

Structured Observation Checklist for Handwashing Facilities

Questions and Observations	Response
1. Describe hand-washing station:	a) Sink with piped water and a drain b) Tippy-tap c) Containers d) Other (describe)

2. How many hand washing facilities are at the school/public latrine constructed by WASH-UP (Or at WASH-UP constructed latrine facilities)? ___ (Observe and Define below)

Location of facility	# of taps/ stations*	Functional*		Water Available*		Soap Available*	
		# Y	# N	# Y	# N	# Y	# N
Inside or near latrines							
In classrooms (for schools)							
Within school grounds (for schools)							
Other (describe)_____							
Total*							

*Total needs to equal all the way across for each category (Functional, Water Available and Soap) and in each column

3. Access: Is the handwashing station easily usable for students/persons with physical disabilities? Explain why or why not? What disability friendly features tare missing or present? For example: Are there stairs or a ramp? Are there handrails or devices for support? Is the basin at a lower height?	Yes ___/ No____ Notes:
4. Access: Can the handwashing station be used by young children? Explain why or why not? For example, is the basin at a lower height?	Yes ___/ No____ Notes:
5. Use: Is there evidence that handwashing is happening today (e.g. ground or soap is wet)?	Yes ___/No /___ Not able to observe Notes:
6. Use: Did you observe anyone using the latrine and not washing their hands today?	Yes ___/No /___ Not able to observe Notes:

Take a picture of the handwashing station

KII Guide for WASH-UP Supported Entrepreneurs

As part of this evaluation we are interviewing some beneficiaries who were recipients of micro-loans to support water or sanitation related business or businesses that need water to operate their businesses. You've been identified as one of those entrepreneurs. Does this describe what you/your business was involved in through the WASH-UP project? If No, thank them and continue. If Yes – we would like to ask you some questions. Are you interested? If Yes, proceed to the Informed Consent.

Be sure to complete the Informed Consent Protocol before starting the interview

Be sure to get complete and get consent for any pictures taken

Entrepreneur Interview Code:			
Photo Codes:		**Picture #(s): ____ ___ _____Sub-Team: _____** **Region Code: _____Community Code: ___** **Date: ___-____- 2018 HH Code: _____**	
Start Time:		**End Time:**	
Name of Evaluator:			
Name of Note-Taker:			
Entrepreneur Household Address:			
GPS coordinates of interview?			
Community	**Municipality (Region)**	**District/Sub-Metro**	
1. Aiyidiki	☐ AMA	☐ Ayawaso Central	
2. Nima East	☐ AMA	☐ Ayawaso East	
3. La-Abafum-Kowe-Abese	☐ La-Dadekotokpon	☐ La-Dadekotokpon	
4. Kojokrom	☐ STMA	☐ Essikado-Ketan Sub Metro	
5. New Takoradi	☐ STMA	☐ Takoradi Sub Metro	
6. Ntankoful	☐ STMA	☐ Effia Kwesimintsim Sub-Metro	
Name of Interviewee(s)? Comments		**Verbal Consent Y/N**	
Gender of interviewee		**Female _____**	**Male _____**
Age range of interviewee?		☐ **18-25** ☐ **26- 34** ☐ **35-49** **50+**	

1. Describe the business/work that you had during 2009-2016?

2. How has your business changed since then? (Probe growth, increased clients etc.)

3. Why were you selected to work with the organization?

4. Describe how the Y-SEF supported your business?

5. What kind(s) of training did you receive? (Skills developed or strengthened)

6. What did you do with the knowledge/skills you gained?

7. What about after 2015 until now? Do you think that the skills learned/gained has helped you currently in your business?

8. Have you shared/taught your peers (who also own businesses) some of these skills?

9. What challenges did you face working with this organizations between 2009 and 2016?

10. How were these challenges addressed? Who helped you solve X problem? Get an example or two.

11. What would you do differently to make your business more sustainable? (business continuation, make money, grow etc.)

12. What would you recommend to others like you make business more profitable and sustainable?

KII/Group Interview Guide for Global Communities Staff

Read Evaluation Statement of Purpose and the Back Ground on WASH-UP
Purpose: To better understand whether selected outcomes have been **sustained** and the factors that contributed to or impeded **the sustainability** of these outcomes. To identify approaches to **ensure sustainability** that can be institutionalized for use across future USAID WASH programming.
Audience: Our main clients are the USAID Africa Bureau, Ghana Mission, E3 Bureau Water Office
Uses: USAID will use the findings from this evaluation to improve the design, implementation, impact, and sustainability of future activities.

Read Informed Consent Statement/Obtain Consent from All Participants Before Proceeding
Consent to record Interview: Yes No
This will be a semi structured interview – with questions focused on the evaluation question areas – review them. Cover the general areas so that participants get a sense of what is coming, so can work to direct responses to the appropriate questions. Explain that this is a qualitative interview, but we'll be using a participatory voting/rating process, which I will explain in more detail later. This method is used to illicit response from everyone and to gage overall where GC staff responses are to the evaluation questions.

Date of KII:	
Start Time:	**End Time:**
Name of Evaluator?	
Name of note-taker (s)?	
Address for location of interview?	

Name (first last)	Position during time of WASH-UP	Current position at organization, if different	Gender of interviewee (M/F)	Start Date with GC WASH-UP (Mo/Year)	End Date with GC WASH-UP (Mo/Year)	Consent Y/N

Background

1. What was your role with the WASH-UP project? (Capture for each person)			
1a. What was the extent of your involvement with the WASH-UP project? Would you say that you: (Read options and capture responses votes/rating for each person in interview.	No to Very Little Direct Involvement (1)*	Moderately Involved (2)	Highly Involved (3)
	#	#	#
1b. *If not involved directly with the project probe what is the basis of their knowledge of the project for their answering questions today? (**Open ended. Circle all that are mentioned**)	1- Written reports 2- Presentations/Discussions with other staff/agencies directly involved 3- Discussions with project beneficiaries 4- Discussion with project entrepreneurs 5- Observation of facilities		

	6- Other (describe): _____
1c. *If not directly involved of the things you mentioned, which were most relied on sources?	Write Number(s) (from above here):

Evaluation Q 1 (Functionality)

Now we want to ask you some questions about the functionality[31] of the water, sanitation and handwashing facility infrastructure implemented under WASH-UP. (Explain voting process – see separate sheet. Do a practice run on a fun unrelated to the evaluation question.)

2. Please rate (vote) what your knowledge of the general functionality of the project's implemented infrastructure (water, sanitation and handwashing facilities) in peri-urban and urban areas of the WASH-UP at the end of the project (September 2016).
   (After they have rated for end of project) Ask them to rate for the current level of functionality.

   - After rating (voting) on each area ask why they rated it the way they did and capture responses.
   - After each set of questions (**end of project**) and (**current level**) ask them what their primary basis of knowledge for their ratings.

2a. End of Project (September 2016) Functionality of:	D/K (0)	Not functioning (1)	Mostly not functioning (2)	Somewhat functional (3)	Very functional (4)	100% functional (5)
Household Water systems	#	#	#	#	#	#
Why rated:						
Public Water systems						
Why rated:						
Household Sanitation (toilets/latrines)	#	#	#	#	#	#
Why rated:						
Public Sanitation (toilets/latrines)	#	#	#	#	#	#
Why rated:						
Handwashing facilities	#	#	#	#	#	#
Why rated:						

2b) What is your primary basis of knowledge for these ratings at the end of the project?	Assumption/no data/information	Secondhand (reports/information from others)	Firsthand knowledge/observation
	#	#	#

[31] By functional we mean working as intended in the design and capable of being used by the targeted beneficiaries as designed.

Comments:						
2c) <u>Current</u> Functionality:	(0)	(1)	(2)	(3)	(4)	(5)
Household Water systems	#	#	#	#	#	#
Why rated:						
Public Water Systems	#	#	#	#	#	#
Why rated:						
Household Sanitation	#	#	#	#	#	#
Why rated:						
Public Sanitation	#	#	#	#	#	#
Why rated:						
Handwashing facilities	#	#	#	#	#	#
Why rated:						

2d) What is your <u>primary</u> basis of knowledge for these ratings?	Assumption/no data/information	Secondhand (reports/information from others)	Firsthand knowledge/observation
	#	#	#
Comments:			

3. Were there any issues that arose during the project that raised concerns about the infrastructure implemented specific to the following areas that could affect their long term functionality? (Note - this ended up being more opened ended)

	Yes	No	Don't know	**3a. If Yes to any,** How were the issues addressed, if at all, and do you think the response was adequate? **Did these continue to be an issue after the project ended/lead to having an impact on sustainability of the water interventions**? (Capture responses.)
a) Quantity/output of water systems?	#	#	#	
h) Water quality	#	#	#	
i) Accessibility	#	#	#	
j) Reliability	#	#	#	
k) Maintenance	#	#	#	
l) Use	#	#	#	

4. Can you describe the results you recall seeing from the implemented infrastructure activities among households and in the communities targeted and do you think those results have been sustained?

Evaluation Q 2 (Factors/approaches contributing/impairing sustainability of project goal of "increasing equitable access to improved water supply and basic sanitation for poor urban communities in Ghana")
Now we want to ask you some questions about sustainability of the WASH-UP Project.

5. What was your understanding, if any, of the sustainability approach of the WASH-UP project?
6. What, if any, actions were taken during implementation that you are aware of to improve the long-term sustainability of the WASH activities or benefits? Please Describe:

7. Please rate the overall effectiveness of the project's implemented infrastructure in "providing **long-term sustainable WASH Services** in urban/peri-urban areas of Ghana", particularly in the communities targeted by the project. Please also share what you think contributed to or inhibited to the sustainability of these interventions. First we'll vote, then discuss.

Area	D/K	Effective	Somewhat Effective	Neutral	Effective	Highly Effective
a) Household Water Infrastructure	#	#	#	#	#	#
b) Public Water Infrastructure	#	#	#	#	#	#
Contributed to sustainability						
Inhibited Sustainability						
c) Household Sanitation Infrastructure	#	#	#	#	#	#
d) Public Sanitation Infrastructure						
Contributed to sustainability						
Inhibited Sustainability						
e) Handwashing Infrastructure	#	#	#	#	#	#
Contributed to sustainability						
Inhibited Sustainability						
f) Were there any factors at any of the communities, individual settings or installations that contributed to them being more or less sustainable? (e.g. located in households, communal spaces or schools)?						

8. Among USAID's three pillars for the provision of sustainable WASH services is the "**Creation of an enabling policy/institutional environment (including governance structures, financing, monitoring, local ordinances, regulations.)"**. Use voting. Can you indicate whether

the following the degree that you know they are still in place and (8b) the degree that these area were effective towards supporting long term sustainability of WASH-UP's interventions (8c)?

Area	8a. Degree known to still be in place now (1 low likelihood to 3 high)	8b. Degree that the area was effective towards supporting long term sustainability of WASH-UP's interventions					
		D/K	Not Effective	Somewhat Effective	Neutral	Effective	Highly Effective
Government Policy or Structure Changes	1# 2# 3#	#	#	#	#	#	#
Governance Structures (e.g. WASH Committees)	1# 2# 3#	#	#	#	#	#	#
Capacity Development	1# 2# 3#	#	#	#	#	#	#
Monitoring	1# 2# 3#	#	#	#	#	#	#
Operation and Maintenance measures	1# 2# 3#	#	#	#	#	#	#
Financing	1# 2# 3#	#	#	#	#	#	#
Private Sector engagement (e.g. economic enterprises, microloans)	1# 2# 3#	#	#	#	#	#	#
8d) Any Comments on your ratings and overall your thoughts on the WASH-UP enabling/institutional environment?							

8e) What contributed/facilitated to sustainability of these efforts (Probe deeper for areas that were seen as particularly integral/effective)	
8f) What inhibited/challenged sustainability of these efforts (Probe deeper for areas that were seen as particularly not integral/not effective.)	

Evaluation Q 3 (Application of hygiene practices promoted by the project's BCC among beneficiaries)

Now we want to ask you some questions about the hygiene promotion aspects of the project

9. What BCC messages did the WASH-UP project focus on?						
9a. What determined the project's focus on these particular messages?						
9b. What methods (as well as frequency) were used to deploy these messages?						
10. Are you aware of other WASH messages deployed during the project same time period by other groups or since the project ended? If yes, what?						
11. How effective do you think WASH-UP's message/methods were to **support adoption** of improved hygiene behaviors the targeted populations?	DK	Not Effective	Somewhat Effective	Neutral	Effective	Highly Effective
	#	#	#	#	#	#
12. How effective do you think that WASH-UP's messages/methods **were to sustain these improved hygiene behaviors** among the targeted population over the long term?	#	#	#	#	#	#
Tell me more why you rated these the way you did? What information are you basing these conclusions on (How do you know this)						
13. What if anything, particularly contributed to/facilitated the effectiveness of the BCC interventions?						
14. What do you think, if anything, were the challenges and would have made BCC interventions more effective/lead to more sustainable improved behaviors?						

Final Question
15. Anything else you wish to share with the evaluation team specific to WASH-UP sustainability

Thank you for your time!

KII/Group Interview Guide for Implementing Partners

Read Evaluation Statement of Purpose on WASH-UP
Read Informed Consent Statement/Obtain Consent from All Participants Before Proceeding

Record info about the KII	**Response**
Date of KII/ observation/ water quality test?	
Evaluator	
Notetaker	
Location Address of interview:	

What communities did your organization work in for the WASH-UP Project: (check all that apply)

Community	**Municipality**	**District/Sub-Metro**
☐ Aiyidiki	☐ AMA	☐ Ayawaso Central
☐ Nima East	☐ SAMA	☐ Ayawaso East
☐ La-Abafum-Kowe-Abese	☐ La-Dadekotokpon	☐ La-Dadekotokpon
☐ Kojokrom	☐ STMA	☐ Essikado-Ketan Sub Metro
☐ New Takoradi	☐ STMA	☐ Takoradi Sub Metro
☐ Ntankoful	☐ STMA	☐ Effia Kwesimintsim Sub-Metro

Background

1. What was your role with/in relation with the WASH-UP project? (Capture for each person)	
1a. What was the extent of your involvement with the WASH-UP project? Would you say that you:	
1b. *If not involved directly with the project probe what is the basis of their knowledge of the project? (**Open ended. Circle all that are mentioned**)	1- Written reports 2- Presentations/Discussions with other staff/agencies directly involved 3- Discussions with project beneficiaries 4- Discussion with project entrepreneurs 5- Observation of facilities 6- Other (describe): _____
1c. *If not directly involved of the things you mentioned, which were most relied on sources?	Write Number(s) (from above here):
2. How were you supported by the WASP-UP project?	
3. What kind of support have you received after the project was completed to continue your activities, if any? Who/what organization has provided you with this support?	

4. What knowledge / skills did you acquire from the WASH UP project Implementation?	
5. What knowledge/skills do you feel remain a need for the area of work that your organization had a role in (see checklist)	
Evaluation Q 1 (Functionality) **Instructions: Ask these questions to all implementing partner organizations except BCC and Micro-Finance LNGO**	
6. Describe the functionality of water and/or sanitation services/ installations at the end of project (September 2016)? Instructions: • Ask for functionality of each following tyopes pf installations and ask the interviewee"Why? What makes you say that?" • If interviewee is unaware of the end of project status of a particular type of installation, enter, "N/A"	
6a. Extended GWCL mainlines and HH water connections that WASH-UP supported in urban communities	
6b. Public Water Systems (i.e., the community water systems established in East Nima, AMA and Ntankoful STMA)	
6c. Household Sanitation (toilets/latrines)	
6d. Public Sanitation (i.e., latrines in public places)	
6e. Handwashing facilities (specify whether interviewee is referring to household or institutional handwashing facilities)	
7. Describe the current functionality of water and/or sanitation services/ installations? Instructions: • Ask for functionality of each following tyopes pf installations and ask the interviewee"Why? What makes you say that?" • If interviewee is unaware of the end of project status of a particular type of installation, enter, "N/A"	
7a. Extended GWCL mainlines and HH water connections that WASH-UP supported in urban communities	
7b. Public Water Systems (i.e., the community water systems established in East Nima, AMA and Ntankoful STMA)	
7c. Household Sanitation (toilets/latrines)	
7d. Public Sanitation (i.e., latrines in public places)	
7e. Handwashing facilities (specify whether interviewee is referring to household or institutional handwashing facilities)	
8. Can you describe the results you recall seeing from the implemented infrastructure activities among households and in the communities targeted and do you think those results have been sustained?	

9. Was USAID involved in observing implemented infrastructure during WASH-UP's implementation? If yes, describe what was observed	
10. Were there any issues, concerns or specific successes with respect to functionality identified during these observations? If concerns were raised, were these addressed and if yes, how?	
11. What were some issues that arose during the project that raised concerns about the infrastructure implemented specific to the following areas that could affect their long-term functionality? Probe for these if not mentioned: • Quantity/output of water systems? • Water quality? • Accessibility? • Reliability? • Maintenance? Use	
Evaluation Q 2 (Factors/approaches contributing/impairing sustainability of project goal of "increasing equitable access to improved water supply and basic sanitation for poor urban communities in Ghana")	
12. What was your understanding, of the sustainability approach of the WASH-UP project?	
13. What, if any, actions were taken during implementation that you are aware of to improve the long-term sustainability of the WASH activities or benefits? Please Describe:	
Now we are going to ask some questions about the **overall effectiveness** of the supported installations in achieving the WASH-UP goal, "to provide long-term sustainable WASH Services in urban/peri-urban areas of Ghana" (in the communities targeted by the project).	
14. How would you describe the effectiveness of household water connections	
14a. What were the enabling factors and potential barriers to the sustainability of these installations?	
15. How would you describe the effectiveness of public water systems and water kiosks?	
15a. What were the enabling factors and potential barriers to the sustainability of these installations?	
16. How would you describe the effectiveness of Household Sanitation installations (latrines and water closets)?	
16a. What were the enabling factors and potential barriers to the sustainability of these installations?	

17. How would you describe the effectiveness of public latrines?	
17a. What were the enabling factors and potential barriers to the sustainability of these installations?	
18. How would you describe the effectiveness of household or school handwashing facilities?	
18a. What were the enabling factors and potential barriers to the sustainability of these installations?	
19. Among USAID's three pillars for the provision of sustainable WASH services is the "Creation of an enabling policy/institutional environment including governance structures, financing, monitoring, local ordinances, regulations." Can you explain which these structures are still in place, to the best of your knowledge? Could you explain the degree that these areas were effective towards supporting long term sustainability of WASH-UP's interventions ?	
19a. Government Policy or Structure Changes	
19b Governance Structures such as the WSCs	
19c. Capacity Development of government partners in Monitoring or Operation and Maintenance?	
19d. WASH-UP supported Private Sector engagement (e.g. economic enterprises, microloans)	
20. What factors contributed/facilitated to sustainability of these efforts? Probe deeper for areas that were seen as particularly integral/effective)	
21. What factors inhibited/challenged sustainability of these efforts Probe deeper for areas that were seen as particularly not integral/not effective.	
22. Can you explain/describe how the Project technical assistance has helped your organization to sustain efforts in infrastructure/BCC etc.? If it didn't, why not?	
Questions to Ask GWCL Representatives only	
23. Can you describe the billing system at GWCL? (If not capture above)	
24. Given that the Project communities were in poorer areas, was bill collection an issue? Why/Why not?	
25. What was the strategy used to deal with this issue?	
26. Is collection still an issue in the community? Still same strategy?	

27. Were there other challenges in installing water systems to HHs in the community? How did GWCL deal with this problem? Probe: • Were there delays in installations • Data needs • Data on users paying their bills on time etc w/ act numbers provided? • Data to show increases in users in the 3 communities	Yes ___ No ____ Explain:
Ask all Partners that are knowledgeable about WASH-UP BDCC activities **Evaluation Q 3 (Application of hygiene practices promoted by the project's BCC among beneficiaries)**	
28. What is your perception of the BCC approach used by WASH-UP?	
29. What BCC messages did the WASH-UP project focus on?	
30. What determined the project's focus on these particular messages?	
31. What were the different channels used were used to disseminate these messages? How often?	
32. Are you aware of other WASH messages deployed during the project same time period by other groups or since the project ended? If yes, what?	
33. How effective do you think that WASH-UP's messages/methods were to sustain these improved hygiene behaviors among the targeted population over the long term? 34. What information are you basing these conclusions on (How do you know this)? What information are you basing these conclusions on?	
35. What was particularly, if anything, contributed to/facilitated to the effectiveness of the BCC interventions?	
36. What do you think, if anything, would have made BCC interventions more effective/lead to more sustainable improved behaviors?	
37. Anything else you wish to share with the evaluation team specific to WASH-UP sustainability?	

Group Interview Guide for WSC Members

***Explain** evaluation purpose, Read and obtain Informed Consent Statement before proceeding*
Be sure to complete the Informed Consent Protocol before starting the interview

Record info about the FGD	**Response**
Date	
Start Time:	End Time:
Name of Evaluator	
Name of note-taker	
Address for location of FGD	

Community	**Municipality**	**District/Sub-Metro**
☐ Aiyidiki	☐ AMA	☐ Ayawaso Central
☐ Nima East	☐ SAMA	☐ Ayawaso East
☐ La-Abafum-Kowe-Abese	☐ La-Dadekotokpon	☐ La-Dadekotokpon
☐ Kojokrom	☐ STMA	☐ Essikado-Ketan Sub Metro
☐ New Takoradi	☐ STMA	☐ Takoradi Sub Metro
☐ Ntankoful	☐ STMA	☐ Effia Kwesimintsim Sub-Metro

Name (first last)	Title or role in WSC	Current position and organization	Gender of interviewee (M/F)	Date joined this WSC? (Mo/Year)	Consent Y/N
1.					
2.					
3.					
4.					
5.					
6.					

1. When and how was this committee formed?

Probing questions:

- Was is established by through community participation in WASH-UP activities?
- Was there some sort of water and sanitation working group in this community before WASH-UP?
    - If yes please explain?

2. What is the start date of WASH-UP support to this WSC? (Month/Year): _____

3. What is the end date of WASH-UP support to this WSC? (Month/Year): _____

4. What has changed in the way this committee functions since the end of the WASH-UP Project?
Probing:

    - Has there been any changes in the way you recruit and train new members?
    - Is there any turnover on the committee?
    - Do you still have the same number of members that you had in the beginning?

5. During WASH-UP were people in the community supportive of this committee?
   - How so or why not?

6. Has community support for the WSC changed since WASH-UP ended?

Yes/No

   - How so or what makes you say that?

7. How often do you meet as a WSC now compared with during WASH-UP?
   - During WASH-UP did you meet weekly, monthly, quarterly, annually?
   - Since the project ended do you meet weekly, monthly, quarterly, annually?

8. Did WASH-UP support the construction of a water supply installation in this community for this WSC to manage?

Yes/No

   - Also ask how many of each type of installation the WSC manages and enter the location of each installation if not in a public space [*select all that apply and enter the number of each type of installations that the WSC manages*]
     a) Community water supply system - enter #_____ and location if not in public: _____
     b) Borehole(s) - enter #_____ and location if not in public: _____
     c) Community stand pipe(s) - enter #_____ and location if not in public: _____
     d) Water kiosk(s) - enter #_____ and location if not in public: _____
     e) Public latrines - enter #_____ and location if not in public: _____
     f) Handwashing stations - enter #_____ and location if not in public: _____
     g) Oher - specify: _____ - enter #_____ and location if not in public: _____

EQ1 To what extent are the levels of service (as defined by WASH-UP) still observed 4 years after project closure?	
EQ1a What's the level of functionality, quantity/output, quality, accessibility, reliability, and use of water schemes four years after project closure?	
EQ 1 (Functionality) Now we want to ask you some questions about the <u>functionality</u> of your water supply or sanitation installation or services which the project supported.	
9. Please describe the end of project support status of the functioning of your water supply services or installation? [enter N/A if interviewee is referring to a sanitation installation or business]	
10. Please describe the current functioning of your water supply business or installation? [enter N/A if interviewee is referring to a sanitation installation or business]	

11. Please describe the end of project support status of the functioning of your sanitation services or installations? enter N/A if interviewee is referring to a water supply installation or business]	
Please describe the end of project support status of the functioning of your sanitation services or installations? enter N/A if interviewee is referring to a water supply installation or business]	
Installation O&M and fee collection	
Do you manage any water supply or sanitation infrastructure/ installations in this community? If responded No skip to "**Functioning of WASH-UP supported three-party agreements"** *If responded yes ask participants series of questions*:	
Describe the installation?	
How many people in the community use it daily?	
Describe the condition of the sanitation facilities or water supply installation? *Probing:* • If you say it is in good working condition, what do you mean? • If it is not or partially functioning, when did this happen? How long has it been out of order? How did this happen? What are your plans for repairing it?	
Does the committee regularly collect fees to cover repair and maintenance costs? How do you collect fees? Probing: Is it pay per use or a weekly/ monthly/ annual fee?	
What recurrent costs can you cover with your fee collection system?	
What kinds of recurrent costs are you not able to pay through fee collection?	
Is your committee able to collect and pay fees on time? Why or why not?	

If you can't cover everything you need to, how do you or what are your plans to cover these costs?	
Are households still benefitting from any type of subsidy (if relevant), or are they now paying full market rate (full cost)?	
<u>Functioning of WASH-UP supported three-party agreements</u>	
During WASH-UP, did the project help facilitate agreements between your committee, Local Government and the Ghana Water Company Ltd.? *If yes ask::* • Are all of the agreements still in force? o How so or why not?	
What parties (institutions/ groups/ organizations) were involved in this? [confirm the level of government participation and if GWCL was involved]	
Are all these parties still in compliance with the agreement? • How so or why not?	
Role in Enforcing local government water-related by-laws	
Does your committee have a role in enforcing local government water-related by-laws? • If so, how effective are you at enforcing these by-laws? o What makes you say that?	
Did the project support your committee to develop a sustainability plan or strategy? • If yes, are you still applying or using these plans/ strategies? o How so or why not?	
<u>Participation in WASH-UP BCC Activities</u>	
Did this committee participate in the WASH-UP Health, sanitation and hygiene behavior change communication campaigns or education activities? If yes describe how you were involved in these activities?	
Did the project involve you in developing hygiene BCC plans or strategies? If yes, are you still applying or using these plans/ strategies? How so?	
Who or what organizations or groups of people do you involve in this (open ended)? (e.g., ask did you involve community members, chiefs, government representatives service providers like the GWCL or NGOs, etc. if not mentioned and how.)	
What were the BCC messages delivered through WASH-UP support?	
What was the result or outcomes of these activities?	

How effective were these activities in changing the sanitation and hygiene behaviors or practices of community members? What makes you say that?	
Who were targeted with these BCC messages?	
In what ways are community members still using these practices? • How do you know this is so?	
Questions on whether the WSC s aware of or interacted with other donor activities	
Have there been other donor funded activities to support expanded access to clean drinking water or improved sanitation facilities implemented in your community since WASH-UP ended in September 2016?	Yes ___/ No____
If responded yes to the question above ask, can you please describe what are these activities? Who from community is involved? Who is the donor? When did these activities start? When did these activities end? Or are they still on-going? [*If responded no to the question above End FGD*]	
If aware of other donor funded WASH activities in the community, have you participated in or interacted with these activities? And if Yes how?	Yes ___/ No____
If aware of other donor funded WASH activities in the community, have you or members of the community benefitted in any way from these efforts?	Yes ___/ No____
If yes to the question above, how have you or members of your community benefitted from these activities? P*robe*: Did these activities improve the sustainability of the WASH-UP supported water supply or sanitation installations in your community in any way?	
If you or members of the community didn't benefit from other donor funded WASH activities, why do you think this is so? *Probe*: Did these activities negatively impact you or members of your community in any way? Did they negatively affect the sustainability of the WASH-UP supported water supply or sanitation installations in your community in any way?	
Thank you for your time - do you have any suggestions and questions for us? **[END FGD]**	

KII Guide for EHOs on WASH-UP GIS/GPS Capacity Building Activities

Be sure to complete the Informed Consent Protocol before starting the interview

1. Can you describe the training/support you received from the WASH-UP Project? Probe for usefully, application.

2. Was there any follow up from the Project to support your application?

3. How has the skills gained from the training helped you on your job? (Probe: Did the skills help you monitor/track access and quality of water in the communities? Explain.)

4. Did you use the maps/data to improve and guide implementation? How?

5. Describe any challenges in applying what you learned.

6. Can you share with us any suggestions in terms of training/support as well as tracking access/quality of water AND using GIS/GPS data?

7. If you are interviewing at their offices, ask to have a look at their maps for the communities (project sites).

ANNEX E: KEY INFORMANTS INTERVIEWED

The list below provides the government officials and implementing partners the evaluation team interviewed during field data collection.

Name	Position/Responsibilities	Institution/Organization/ Community
Public Sector		
Rev. Daniel Augustus Adjei Samuel Annor.	District Manager Artisan Pipefitter/ New Service Estimator	GWCL – AMA and STMA
Mark Teiko Codjoe	Regional Chief Manager	GWCL – STMA
Ahmed Sulley	EHO - retired	STMA
Josephine	EHO – NE during WASH-UP	AMA
Abdul-Karim Hudu	MEHO	STMA
Evans Mark Andoh	Metro Budget Analyst	
Rexford Arthur	Asst. Desk Planning Officer	
Azubila Salam Emma	Public Works Dept	
Salifu Karim	EHA (Environmental Health Assistant)	
Mark Mintah Sarkodie	ADIIA	
Global Communities		
Alberto Wilde	COP	AMA
Dominic Osei	DCOP	
Emefa Badoo	Business Development Officer	
Munirat Tawiah	M&E Officer	
Augustine Adams	Knowledge Management Officer	
Francis Xavier	WASH Engineer	
Emmanuel	GIS Expert	
Moses Arkoh	Water and Sanitation Officer	STMA
Local Implementing Partners		
Oduro Donkoh	Director	PRONET
Richard Cromwell	Director	RUDNET
George Donkoh Patricia Ataafa	Accounts Officer Credit Officer	Y-SEF
Rosina Gadzekpo	Director	AWSO
Peter Owusu Antwi	Responsible for WASH-UP activities	Biofil
Not identified	Coordinator	HFC Boafa

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