

ROTARY INTERNATIONAL AND USAID'S WASH PARTNERSHIP IN GHANA – SUSTAINABILITY ASSESSMENT

FINAL REPORT

APRIL 2021

EXECUTIVE SUMMARY

This report presents the findings of an assessment of the likely sustainability of Rotary International and the United States Agency for International Development's (USAID's) WASH programme in Ghana (RI-USAID WASH Partnership), which ran from 2017-2020. The RI-USAID WASH Partnership programme involved:

1. Construction of community water supply, school water supply and school sanitation facilities and associated capacity development, as well as household latrine construction and hygiene and handwashing promotion.
2. Advocacy and leadership activities to address key sustainability challenges undermining WASH service provision.
3. Innovation of processes, tools, methods and partnerships in the WASH sector.

The assessment included 25 community water supply facilities, four school water supply facilities, 26 school latrine blocks, household latrine construction promotion activities in 13 communities and hygiene and handwashing promotion activities in 25 communities. Surveys were conducted at the national, district and service provider levels, and a total of 660 household surveys were also conducted. The assessment sought to:

- Assess and detail factors influencing the sustainability of RI-USAID WASH Partnership interventions.
- Outline recommendations for future RI-USAID WASH Partnership programmes in Ghana.

The primary methodology was applying a [Sustainability Index Tool](#) to evaluate actors' performance at the service provider, district and national levels across five factors: institutional, management, financial, technical and environmental. This was supplemented through further assessments to determine the functionality and service levels provided by infrastructure, the effectiveness of advocacy and leadership activities, and the impact of COVID-19 stakeholders' performance of their roles and responsibilities.

Two to three years after the implementation, an impressive percentage of interventions remain functional, often with high service levels. Only 10% of the community water supply facilities are non-functional, with 53% functioning optimally. This low non-functionality rate is a considerable improvement on past community water supply facilities implemented in Ghana under a previous variation of the RI-USAID WASH Partnership and is well below average non-functionality rates for Ghana's community water supply facilities (20-30%). A high percentage of school latrine blocks also remain functional, with just eight percent of these facilities functioning sub-optimally. However, some issues with the construction of facilities were found:

- Construction of a couple of community water supply facilities nearby existing improved water sources, resulting in limited use of the facilities.
- Construction of a community water supply facility in a low-lying, marshy area, resulting in the facility starting to sink.
- Rusting and degradation of metal components of several school sanitation facilities.
- Large cracks in floors and walls of a small number of school sanitation facilities.
- Construction of household latrines close to the community water supply facility in several communities.

There are several areas where the RI-USAID WASH Partnership programme has made improvements relative to previous USAID and Rotary International programmes, particularly by increasing service provider performance and the prospects for the sustainability of several of the assessed interventions.

This is most clearly evident by improvements to management structures and practices put in place within schools for the maintenance and safe use of sanitation facilities.

At the same time, it is important to acknowledge that there are several pressing areas or sustainability challenges – common in Ghana's rural WASH sub-sector – that the RI-USAID WASH Partnership programme did not sufficiently address. In many cases, these are projected to reduce the functionality and service levels of assessed interventions over time. These include the lack of sufficient public investment, which means that significant financial and material resource constraints severely undermine the ability of local government Assemblies to effectively perform their expansive service authority responsibilities. The impacts of this are clearly seen in the limited ability of Assembly personnel and support institutions to provide technical

support for maintenance and repairs across the different assessed interventions, as well as weakness in their monitoring of service providers and services.

Financing also represents a key barrier to ensuring the proper maintenance and repair of community water supply, school water supply and school sanitation interventions. None of the WSMTs set tariffs in line with CWSA guidelines, and just under half collect tariffs regularly, while schools lack mechanisms to cover the costs of repairs that may be required down the line (this is especially problematic for their water supply facilities). Additionally, COVID-19 has negatively impacted actors' performance in several areas, for example, reducing the transparency and frequency of WSMTs' activities.

Figure One presents the summary factor scores of the five different intervention types assessed, namely: community water supply; school water supply; school latrine blocks; household latrine construction promotion; and hygiene and hygiene and handwashing behaviours. Across the assessed intervention types, institutional and technical factors scored highest. This reflects the fact that institutional arrangements are typically well-established and implemented, as well as the comparatively good performance of assessed hardware interventions. It also highlights the generally moderate to poor performance for the financial, management and environmental factors, thereby illustrating the need for improvements in these areas.

Figure One: Factor Scores per Intervention Type

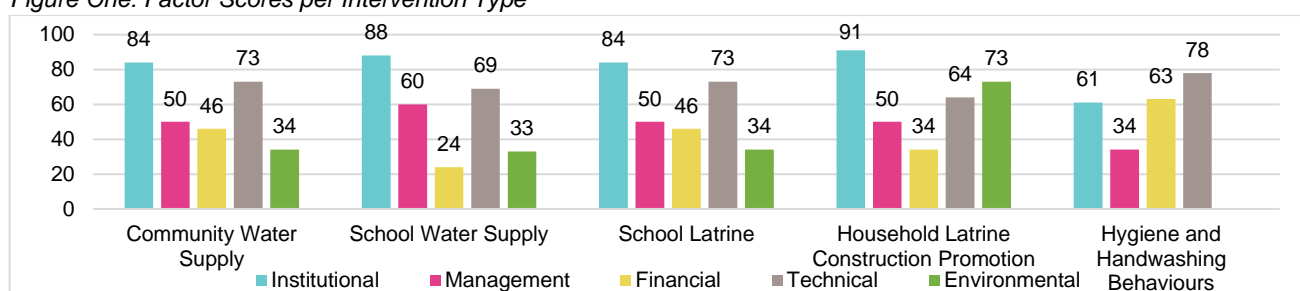
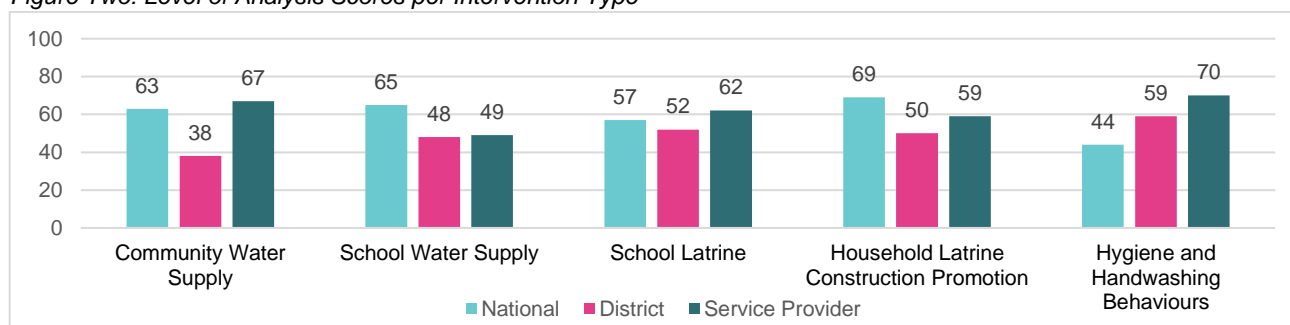


Figure Two details the top-level scores for each level of analysis (national, district, service provider) for each intervention type assessed. The district-level is generally the least well performing, and the area most in need of improvement and strengthening.

Figure Two: Level of Analysis Scores per Intervention Type



A comprehensive set of recommendations have been developed to inform future RI-USAID WASH Partnership programmes in Ghana. These include cross-cutting recommendations such as focusing future programmes on a smaller number of districts and municipalities and ensuring the greater involvement of Assembly staff in project implementation. Intervention specific recommendations have also been developed. For example, the need to implement innovative measures to ensure tariffs are set in line with national guidelines and improve water and sanitation management teams' financial management as well as fostering a national-level debate on the financial issues undermining the sustainability of school water supply services.

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ACRONYMS

BaSIS	Basic Sanitation Information System
BCC	Behaviour Change Communication
CLTS	Community-Led Total Sanitation
CWSA	Community Water and Sanitation Agency
EHSU	Environmental Health and Sanitation Unit
GES	Ghana Education Service
IH ₂ OC	International H ₂ O Collaboration
KVIP	Kumasi Ventilated Improved Pit
MMDA	Metropolitan, Municipal and District Assembly
MPN	Most Probable Number
MSWR	Ministry of Sanitation and Water Resources
RI-USAID WASH Partnership	Rotary International and United States Agency for International Development Water, Sanitation and Hygiene Partnership
SHEP	School Health Education Programme
SIT	Sustainability Index Tool
USAID	United States Agency for International Development
WASH	Water, Sanitation and Hygiene
WSMT	Water and Sanitation Management Team

1. INTRODUCTION

1.1. Rotary International and USAID WASH Partnership Interventions in Ghana

The Rotary International and United States Agency for International Development Water, Sanitation and Hygiene Partnership (RI-USAID WASH Partnership) is a global partnership between Rotary International and the United States Agency for International Development (USAID). It has supported improvements in water, sanitation and hygiene (WASH) services and behaviours through combining Rotarians' business skills and leadership with USAID's technical expertise. Ghana was one of three countries where the partnership was piloted, and two phases of interventions have been implemented in Ghana. The first of these phases was referred to as the Phase One International H₂O Collaboration (IH₂OC) and was implemented in Ghana from 2011-2013.

The RI-USAID WASH Partnership programme was a four-year WASH programme, implemented from 2017 to 2020 with US\$ 4 million of funding. Interventions were implemented in 14 municipalities and districts across seven of Ghana's 16 regions: Greater Accra; Oti; Eastern; Central; Western; Northern; Savannah.¹ The programme is seen as a unique public-private partnership as Rotary volunteers from Ghana – and globally – work with USAID and governmental agencies as monitors, advocates and instructors in target Metropolitan, Municipal and District Assemblies (MMDAs), communities, schools and clinics. The Community Water and Sanitation Agency (CWSA) and Global Communities (Ghana) were the programme's implementing partners.²

The RI-USAID WASH Partnership programme sought to reach 109,700 beneficiaries in 180 beneficiary communities and institutions. The programme comprised of three core components:

- **COMPONENT ONE: Infrastructure and associated capacity development as well as household latrine construction and hygiene and handwashing promotion.** This component focused on the construction of water supply and sanitation facilities in 180 communities and institutions (schools and health centres) and the training of service providers. It also involved substantive behaviour change communication activities (BCC) focused on household latrine construction and hygiene and handwashing behaviours. The following activities were conducted:
 - Construction of 89 boreholes with hand pumps (12 with iron removal plants), nine mechanised boreholes and two boreholes with piped water systems in communities (70), schools (15) and health centres (4).
 - Construction of 164 sanitation facilities in schools (159) and health centres (5)³.
 - Training of water and sanitation management teams (WSMTs) and facility user education / SHEP training of school health committees.
 - Facilitating the delivery of ongoing BCC messaging focused on hygiene and handwashing in all 70 communities where water supply interventions were implemented through the training of community sanitation and hygiene promoters.
 - Application of the demand-driven community-led total sanitation (CLTS) approach to trigger household latrine construction in 34 communities and the training of community sanitation and hygiene promoters.
- **COMPONENT TWO: Advocacy and leadership.** This component utilised the networks and leverage of Rotary Ghana members to influence a number of key areas, including: (i) promote increased WASH financing; (ii) enhance the sustainability of service delivery through capacity development of WASH stakeholders for effective operation and maintenance of services; and (iii) shine a spotlight on the importance of WASH. As of February 2020, these activities remain ongoing. However, towards these ends, several activities were conducted:
 - Advocacy workshops for 40 core Municipal and District Assembly staff and 46 officers from Municipal and District Education Directorates focused on financing and WASH policies and their implementation.

¹ The municipalities and districts were Ga West, Ga North, Ga South, Shai Osudoku (Greater Accra); Kadjebi and Nkwanta South (Oti); Ayensuano and Kwaebibirem (Eastern); Ajuamako Enyan Essiam and Upper Denkyira East (Central); Amenfi Central and Amenfi West (Western); Karaga (Northern); and Bole (Savannah).

² Global Communities was responsible for the provision of 41 boreholes with hand pumps in 40 communities and institutions and the provision of 80 KVIP toilets in 55 institutions. CWSA was responsible for the provision of 47 boreholes with hand pumps and six mechanised boreholes in 48 communities as well as the provision of 63 sanitation facilities (49 KVIPs, eight water closets and six micro-flush toilets).

³ This comprised of 152 Kumasi Ventilated Improved Pit facilities, eight water closet and four micro-flush sanitation facilities.

- Leadership training sessions for 121 community leaders from 27 beneficiary communities in the Greater Accra, Eastern and Western Regions to empower them to advocate for their rights.
- Visits by Rotary advocacy volunteers to engage Assembly staff and service providers, with a focus on functionality and management performance, financing of WASH services, and post project monitoring.
- **COMPONENT THREE: Innovation of processes, tools, methods and partnerships in the WASH sector.** This component included implementation of the play-based hygiene behavioural change initiative WASH for Health Kick-Off in seven schools and a market assessment of micro-flush bio-fill toilets to investigate factors constraining the rapid uptake of the facilities in Ghana.

1.2. Purpose

This report presents the findings from a study assessing the prospects of the sustainability of RI-USAID WASH Partnership programme achievements. It is focused on the infrastructure and associated capacity development and – to a lesser extent – advocacy and leadership components of the programme. The study had two core objectives:

- To assess and detail factors influencing the sustainability of the RI-USAID WASH Partnership interventions, focusing on establishing aspects of the programme that have effectively reduced or mitigated the impact of key sustainability challenges and to identify factors that continue to undermine the prospects for the sustainability of the interventions moving forwards.
- Outline recommendations for future RI-USAID WASH Partnership interventions in Ghana and other stakeholders and programmes to increase the prospects for sustaining desired WASH service levels.

This report is primarily intended for RI-USAID WASH Partnership programme stakeholders: Rotary Ghana; Rotary International; Global Communities; CWSA; USAID. It is also hoped that the study's findings will be shared more broadly in Ghana's WASH sector to inform key stakeholders' activities in the WASH sector, as well as ongoing sector reforms.

1.3. Report Structure

This report is divided into six further sections. Section Two presents the study's methodology. Section Three outlines the functionality and service levels of infrastructure and household hygiene and handwashing behaviours. Section Four details the results of the application of the Sustainability Index Tool, while Section Five outlines the impact of Rotary Ghana's advocacy and leadership activities. Section Six presents the main conclusions drawn from this study, and Section Seven offers a series of recommendations for the RI-USAID WASH Partnership programme stakeholders.

2. METHODOLOGY

2.1. Sample

Five sets of WASH interventions implemented under the RI-USAID WASH Partnership programme were assessed: community water supply, school water supply, school latrine blocks, household latrine construction promotion and hygiene and handwashing behaviours.⁴ Stratified random sampling was used to select the sample of interventions assessed. Municipalities and districts where data collection was conducted were pre-selected to ensure a mixture of districts where advocacy and leadership activities were and were not conducted, ensure a representative geographic spread of interventions and avoid operating in districts where only a few interventions were implemented. The seven selected municipalities and districts were Ga South Municipality and Shai Osudoku District (Greater Accra Region); Ayensuano District (Eastern Region); Ajumako Enyan Essiam District (Central Region); Nkwanta South District (Oti Region); Amenfi Central District (Western Region) and Bole District (Savannah Region). Annex One presents background information on each of these districts and municipalities. The specific interventions assessed were then randomly selected from within each district.

Table One details the number of each intervention type assessed in each district and municipality, while Figure One maps each assessed intervention's location. The sample size for assessment was considerably larger than for previous comparable and retrospective assessments of previous machinations of the RI-USAID WASH Partnership in Ghana (2011-2013) conducted in 2013 and 2019, respectively. Of note, the assessment of 25 community water supply facilities and 26 school latrine blocks represents a substantial increase in the sample size from the 2013 and 2019 assessments when only 17 and nine of these interventions were assessed, respectively. When considering the depth of data collected, this ensures an important level of validity to the study's findings. However, the sample size of assessed school water supply facilities (4) was severely impacted by the COVID-19 pandemic.⁵

Table One: Number of Interventions to be Assessed

Region		Greater Accra		Eastern	Central	Oti	Western	Savannah	Total
District		Ga South	Shai Osudoku	Ayensuano	Ajumako Enyan Essiam	Nkwanta South	Amenfi Central	Bole	
Water	Community Water Supply	5	2	3	1	4	5	5	25
	School Water Supply	0	0	0	3	1	0	0	4
Sanitation	School Latrine Blocks	2	5	5	3	3	4	4	26
	Household Latrine ⁶	0	2	0	0	4	3	4	13
Hygiene	Hygiene and Hand Washing	5	2	3	1	4	4	6	25

The year of infrastructure construction and community and service provider (i.e., WSMT, community sanitation and hygiene promoter, school) sensitisation and training were not considered when purposively selecting districts and municipalities to operate within or randomly selecting the specific interventions to assess. However, because this assessment primarily focused on the sustainability of assessed interventions and the prospects for their continued functionality and high service levels moving forwards, the length of time between programme activities being implemented and this assessment being undertaken is an important factor. Table Two provides an overview of the year of implementation for each intervention type. It highlights that most assessed interventions were implemented from 2019-2017, implying that around 18 months to 3.5 years had elapsed since implementation before fieldwork was conducted for this study (October-November 2020). Eighteen months to 3.5 years does represent a sufficient period for typical sustainability challenges to manifest and for an assessment of the factors influencing the sustainability of the interventions to be made;⁷ however, these interventions are expected to perform better than the 'norm' or 'average' across Ghana.

Table Two: Interventions per Year of Implementation

		2020	2019	2018	2017	2016	Total
Water	Community Water Supply	1	13	3	13	0	25
	School Water Supply	1	2	1	0	0	4
Sanitation	School Latrine Blocks	1	2	12	10	0	26
	Household Latrine	0	0	0	5	8	13
Hygiene	Hygiene and Hand Washing	1	13	3	13	0	25

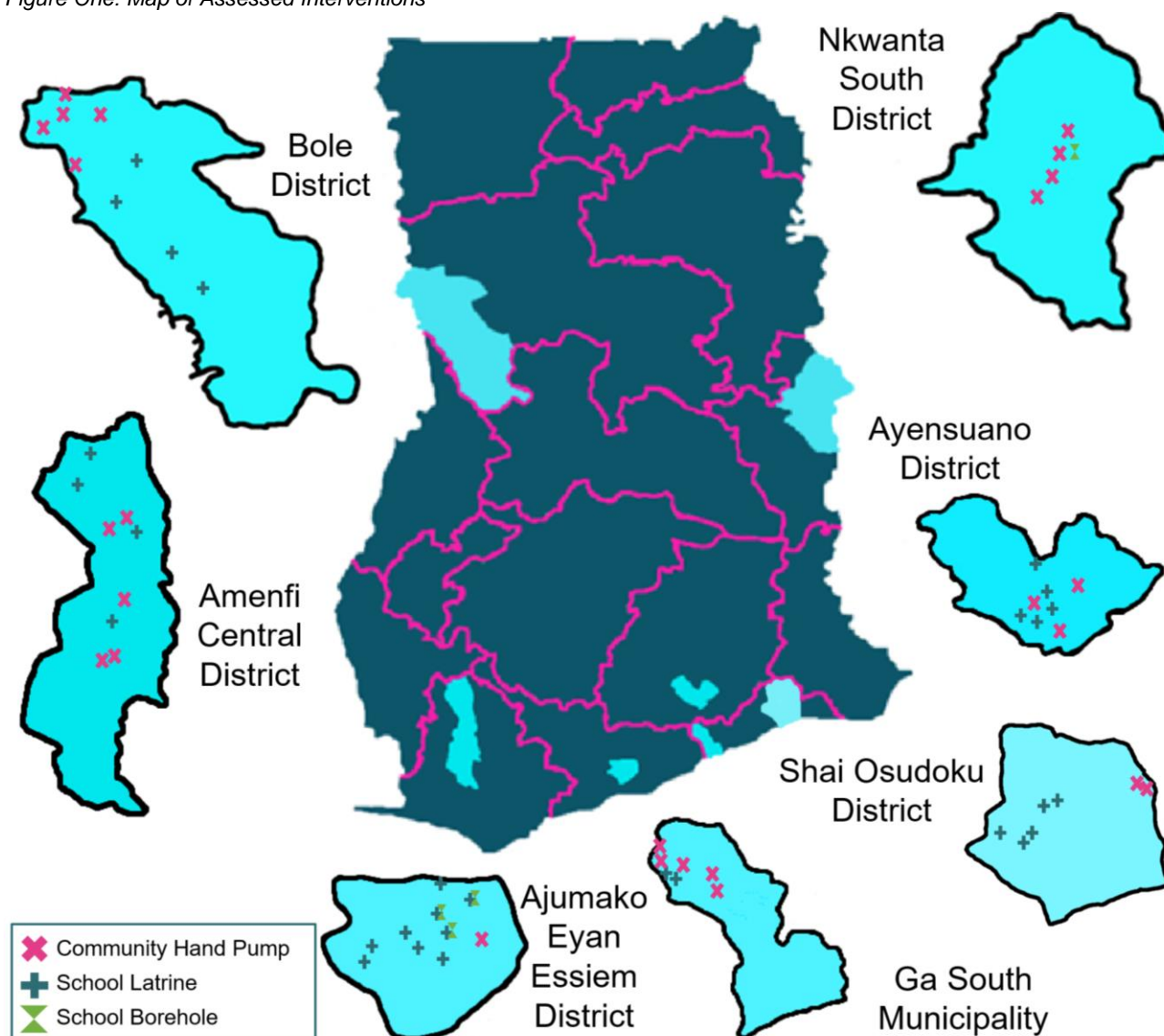
⁴ The one assessed community mechanised borehole and 24 assessed community hand pumps have been grouped together to aid analysis.

⁵ Most of these interventions were implemented in primary schools that were shut throughout the study and could not be assessed.

⁶ The numbers in this row refer to communities not individual households.

⁷ It would not, for example, be appropriate to apply the Sustainability Index Tool immediately after the implementation of a WASH programme as this would not allow a sufficient period for sustainability challenges to emerge and the results would likely be heavily positively skewed.

Figure One: Map of Assessed Interventions



2.2. Sustainability Index Tool

The primary methodology for this study was the application of the Sustainability Index Tool (SIT), which was developed during an evaluation of the Phase One IH₂OC programme. Sustaining WASH services is complex and dependent not only on hardware components (i.e., pumps, latrine blocks) but a wide range of software elements (i.e., reliable management entities, long-term external support and monitoring, adequate financing). The SIT focuses on software and hardware components and moves the analysis beyond the physical condition of infrastructure by assessing institutional, management, financial, technical and environmental factors at the household, service provider, district and national levels. This approach critical in providing a detailed understanding of the factors that are likely to impact the functionality status and service levels provided by WASH infrastructure, as well as determining the extent to which a set of WASH interventions have managed to overcome pressing sustainability challenges. In turn, this enables a more accurate assessment of whether improvements in WASH service levels can be expected to be sustained over time, and for measures to be developed and implemented to address the challenges identified. The SIT assesses whether WASH interventions are meeting critical software and hardware elements by providing a framework for collecting qualitative and quantitative data on indicators for five factors:

- **Institutional** indicators look at the extent of national policies and guidelines for the WASH intervention, whether institutional frameworks have been implemented at the district-level and that service providers are in place and constituted in line with national guidelines.

- **Management** indicators focus on whether there is a national-level monitoring database, if MMDAs receive enough support in areas such as training, if WASH services are monitored and whether service providers understand and perform their functions.
- **Financial** indicators probe whether service providers have enough financial resources to sustain desired service levels, whether mechanisms exist to support service providers in meeting these costs and if MMDAs have sufficient human and financial resources to fulfil their service authority functions.
- **Technical** indicators primarily focus on the functionality and service level provided by the WASH facility, but also assess the availability of spare parts and technical support from private operators and whether Assembly staff can support service providers in repairing WASH facilities.
- **Environmental** indicators look at national environmental protection standards and whether natural resources are managed to support sustainable WASH services.

The SIT provides an analysis beyond the household or service provider levels by analysing conditions and performance at four levels:⁸

- At the **household** level, it assesses the services that households receive, households' WASH habits and practices, as well as their assessment of service providers' performance.
- At the **service provider** level, the functionality and service level of the infrastructure is assessed, and the capacity and performance of the service provider evaluated. In some instances, the performance of the local private sector is also investigated.
- At the **district** level, the conditions and capabilities of local government actors responsible for providing important oversight and support functions are assessed. MMDAs are the central actors evaluated, but the performance of District and Municipal SHEP Coordinators are also assessed.
- At the **national** level, the SIT assesses the extent of relevant policies, guidelines and standards for each intervention as well as levels of coordination and support down to the district level.

Sets of specific WASH interventions carried out by the programme (i.e., community water supply facilities or school latrine blocks) were analysed. For each type of WASH intervention assessed, the SIT provides a large framework comprising indicators grouped under the five factors noted above. These indicators are made up of sub-indicators that directly relate to questions asked to stakeholders at the household, service provider, district and national levels.⁹ Annex Two presents the indicators assessed for each intervention type as well as the aggregate scores across each of the interventions assessed.

This methodology, with detailed and rigorous sets of sub-indicators and indicators provides a systemic framework, combining both quantitative and qualitative aspects, allowing for an in-depth assessment of WASH programming. No WASH programme would be expected to fully meet all criterion. However, it is important that the progress made in addressing these challenging aspects is assessed to enable a greater understanding of the factors undermining the sustainability of WASH interventions and improve programming moving forward.

At the highest level, the SIT's outputs are sustainability scores for the institutional, management, financial, technical and environmental factors, for each intervention type assessed. Annex Three provides a detailed outline of how the SIT scoring works. Briefly, for each intervention type, the factor scores are formulated by averaging the scores for each of the indicators that make up the factor. The indicator scores are arrived at by adding up the sub-indicators' scores that make up that indicator (these sub-indicators directly relate to questions asked at the household, service provider, district and national levels). For instance, if three of an indicator's four sub-indicators scored positively, it would receive an indicator score of 75 out of 100.

Scores can be viewed for each individual intervention (i.e., a score for a specific community water supply facility or school latrine block) or aggregated across all assessed interventions to determine overall performance against a given sub-indicator, indicator or factor. Additionally, scores can be aggregated by institutional level (e.g., service provider, district or national) to gain insights and determine conditions and performance at each of these levels. Areas performing strongly and specific sustainability challenges that pose the greatest risk to functionality status and service levels provided by a set of WASH interventions can be more easily identified by analysing these scores.

⁸ In Ghana, a variety of organisations play an important role at the regional level. The SIT does not assess the performance of regional-level organisations in isolation; however, their performance of their functions has a significant bearing on the national level scores.

⁹ The community water supply SIT framework is made up of 89 sub-indicators, the school water supply framework 67, the school latrine framework 69, the household latrine construction framework 61 and the hygiene and handwashing promotion framework 36.

The benchmarking of SIT scores presented below is used throughout this report; however, when viewing these scores, it is necessary to consider the indicators and sub-indicators investigated, which will highlight further nuances in performance and outcomes.

- 80-100: Very good.
- 60-79: Good.
- 40-59: Moderate.
- 20-39: Poor.
- 0-19: Very poor.

Projecting the sustainability of WASH interventions is far from an exact science. However, the 2019 retrospective application of the SIT to the IH₂OC Phase One programme in Ghana established that the top-level SIT scores from a comparable study conducted on the same WASH interventions in 2013 predicted the future functionality of the interventions relatively accurately.¹⁰

2.3. Further Areas of Analysis

In addition to the application of the SIT, several other assessments were carried out as follows:

- **Functionality and service levels.** Several of the SIT's technical indicators and sub-indicators focus on the service levels provided by the assessed intervention as judged against CWSA standards. However, a more explicit assessment of these – along with the functionality of the interventions – was conducted.
- **Water quality (bacteriological).** Aquagenx® Compartment Bag Test E. coli kits were used to assess water quality from community and school water supply interventions by quantifying the most probable number (MPN) of E. coli in a 100 ml sample.
- **COVID-19.** The COVID-19 pandemic has substantially impacted many actors' (i.e., households, WSMTS, Assembly staff) performance of their roles and responsibilities and the conditions under which they operate. As these represent core aspects of the SIT assessment, questions specifically focused on the impact of COVID-19 on actors' performance were added.
- **Advocacy and leadership activities.** A series of advocacy activities are an important and ongoing feature of the RI-USAID WASH Partnership programme in Ghana (programme, which are expected to improve the sustainability prospects of interventions. Accordingly, four additions were made to the study's methodology to enable an assessment of these advocacy activities: (i) development of a short survey on Municipal and District Assemblies budgetary resource mobilisation, allocation, and release of WASH funds; (ii) additions to the existing assembly-level surveys;¹¹ (iii) additions to the service provider level survey for the community water supply interventions to assess the level of engagement between communities and District and Municipal Assemblies and gauge the further impacts of advocacy activities in a more qualitative manner; and (iv) additions to the service provider level survey for the school latrine block interventions to probe further into issues that were part of the advocacy activities (i.e., management performance, financing of WASH services, post-project monitoring) and determine any further impacts of advocacy activities in a more qualitative manner. A further means of triangulating the effectiveness of advocacy activities was to compare the data and scores from the SIT between interventions where advocacy activities were and those where no such activities were carried out.

2.4. Stakeholders Consulted

Table Three details the stakeholders consulted for each set of interventions assessed at the household, service provider, district and national levels. Key sector documents were reviewed at the national level, with missing information subsequently collected from CWSA, the Ministry of Sanitation and Water Resources (MSWR) and the National School Health Education Programme (SHEP) Coordinator. At the district-level, relevant Assembly personnel answered surveys, with District and Municipal SHEP Coordinators also consulted for the school water supply and school latrine block surveys. Data was collected from all the available WSMT members for

¹⁰ Of note, the community hand pumps with the three lowest SIT sustainability scores from the 2013 SIT application were non-functional when visited in 2019. The scores for the financial factor were particularly accurate projection of the functionality of community hand pumps – the facilities with four of the five lowest scores for this factor were non-functional when visited in 2019.

¹¹ These centred on three areas: (i) assessing the level of engagement between communities and District / Municipal Assemblies; (ii) further probing issues that were the focus of advocacy activities at the assembly-level (i.e., development / updating of district / municipality water and sanitation plans and more specific information on post-project follow-up support to service providers); (iii) and gauging further impacts of advocacy activities in a more qualitative manner.

community water supply interventions at the service provider level. At the same time, School-Based Health Coordinators and Headteachers were consulted for interventions in schools and sanitation and hygiene promoters (who were also WSMT members) for household latrine construction and hygiene and handwashing promotion. Household-level data was collected from household heads for all interventions not in schools.

Table Three: Stakeholders Consulted

Level of Analysis	Community Water Supply	Hygiene and Handwashing	Household Latrine Construction	School Latrine Blocks	School Water Supply
National	CWSA/ MSWR			CWSA/MSWR/National SHEP Coordinator	
District	Assembly Staff			Assembly Staff & SHEP Coordinator	
Service Provider	WSMT	Sanitation and Hygiene Promoter on WSMT		School SHEP Focal-Person / Headteacher	
Household	Household			Not Applicable	

Table Four details the number of surveys conducted at each level of analysis for each intervention type.¹²

Table Four: Surveys Conducted per Intervention Type

Level of Analysis	Community Water Supply	Hygiene and Handwashing	Household Latrine Construction	School Latrine Blocks	School Water Supply
National	1	1	1	1	1
District	7	7	4	12	4
Service Provider	25	12	7	26	4
Household	482	482	188	Not Applicable	Not Applicable

¹² There is a notable disparity in the number of service provider surveys conducted for hygiene and handwashing promotion and household latrine construction promotion and the number of communities in which these interventions were assessed. This is because, in some communities, the sanitation and hygiene promoters have already vacated their positions.

3. FUNCTIONALITY AND SERVICE LEVELS

This section details the functionality and service levels of the surveyed community water supply infrastructure, school water supply facilities, and school latrine blocks. Table Five presents a top-level summary of these interventions' functionality at the time of inspection. **The top-level functionality rates for the assessed community and school infrastructural interventions are promising, with higher functionality rates than the average across Ghana for comparable interventions.** Key indicators showing the quality of constructed household latrines and household hygiene and handwashing behaviours are also detailed.

Table Five: Overview of the Functionality of Community and School Interventions

Intervention Type	Number Assessed	Functional	Partially Functional	Non-Functional
Community Water Supply	30	16 (53%)	11 (37%)	3 (10%)
School Water Supply	4	3 (75%)	0 (0%)	1 (25%)
School Latrine Blocks	26	24 (92%)	2 (8%)	0 (0%)

3.1. Community Water Supply

The functionality of the 30 community water supply facilities (29 hand pumps and one mechanised borehole) was determined by whether the facility provided water at the time of inspection as well as by conducting stroke and leakage tests.^{13 14 15} Each assessed community water supply facility has a functionality score, based on the simple colour coded system presented below.





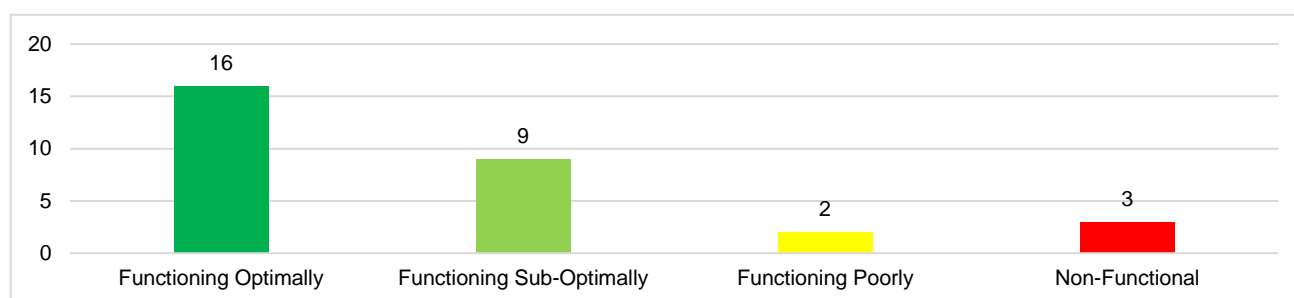
	Non-functioning: The hand pump does not provide water
	Function poorly: The hand pump provides water; however, it failed both the stroke and leakage tests
	Functioning sub-optimally: The hand pump provides water but failed one of the stroke or leakage tests
	Functioning optimally: The hand pump provides water and passed both the stroke and leakage tests

Figure Two presents the functionality of the 30 assessed communal water supply facilities. It highlights that only three of the 30 assessed facilities (10%) were non-functional.

Figure Two: Community Water Supply – Functionality



This high percentage of functional water points represents a considerable improvement on past community water supply facilities implemented in Ghana under Phase One of the IH₂OC. It is also well below average non-functionality rates for Ghana's communal water supply facilities (20-30%).¹⁶ However, when comparing against typical functionality rates found in Ghana, it is necessary to consider that these facilities were implemented relatively recently, with most of the water points being constructed in 2019 (13) or 2017 (13). Accordingly, they should have better functionality rates than the national average. Figure Three illustrates the importance of this by presenting the functionality of facilities according to year of construction. **It highlights a general decrease in functionality rates, with the percentage of interventions functioning sub-optimally, poorly or being non-functional doubling from 2019 (31%) to 2017 (62%).**

¹³ For the stroke test, the number of hand pump strokes required to fill an 18-20-litre bucket was determined. To pass the stroke test, a community hand pump must take a maximum of 40 strokes – administered within one minute – to fill the bucket. For the leakage test, pumping is resumed five minutes after the stroke test. If water flows from the hand pump within five strokes, the pump has passed the test.

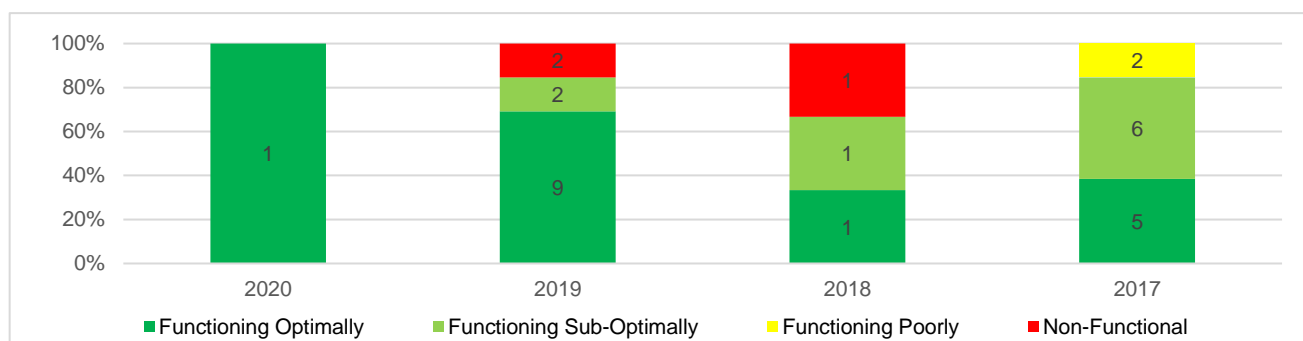
¹⁴ In several instances, an iron remover had been fitted to the hand pump meaning the stroke and leakage tests could not be performed. Additionally, the stroke and leakage tests were not performed for the one mechanised borehole.

¹⁵ The study had planned to assess 26 community hand pumps; however, 29 community hand pumps were assessed for their functionality. In three instances, multiple hand pumps were implemented in the same community and were being managed by one WSMT.

¹⁶ There is a lack of up-to-date data on this for comparison; however, several data sources are available from 2013 through to 2015. A large 2014 study of 1,470 water sources across Ghana found that 20.3% of boreholes were non-functional at the time of inspection (Fisher, et al., 2014), while a 2013 IRC and CWSA study found that 27% of water points were functioning optimally, 39% functioning sub-optimally; nine percent functioning poorly and 28% being non-functional (IRC & CWSA, 2013). Additionally, a larger 2014/15 CWSA dataset from 119 districts across six regions shows that 26% of hand pumps were non-functional at the time of inspection.

Precise data on the functionality and service levels of community water supply facilities in Ghana according to year of construction is not available.¹⁷

Figure Three: Community Water Supply – Functionality per Year of Construction

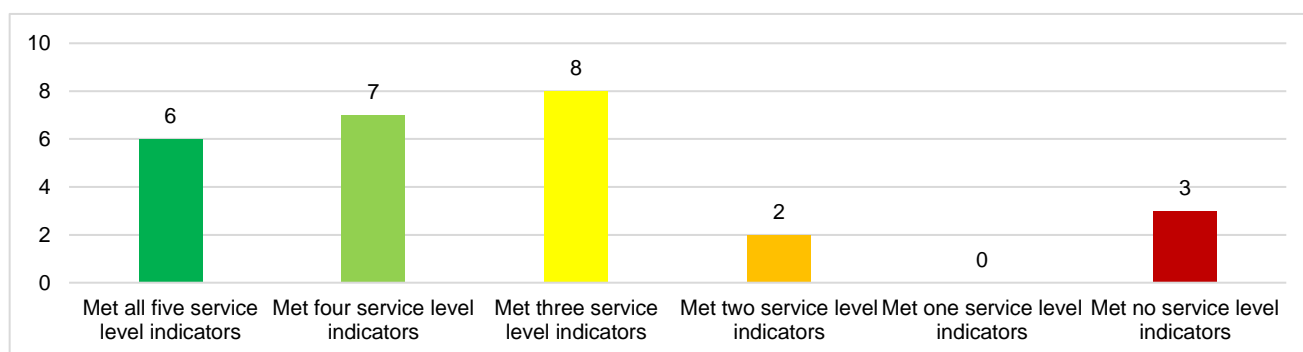


Twenty-six community water supply facilities were given a service level score derived from the following CWSA standards:

1. Community water supply facility was functional 95% of the time (347 days) over the last year.
2. Hand pump provides 20 litres (60 litres for the one mechanised borehole) of water per capita per day.
3. Water from the facility is not contaminated with E. coli.
4. The facility is not overcrowded (does not serve more than 300 people).
5. The facility is accessible (at least 80% of users are located within 500 meters of the facility).

Figure Four provides an overview of the service level scores. Although most interventions do not meet all service level indicators, these results are still relatively positive. **Twenty-three percent of assessed RI-USAID WASH Partnership community water supply interventions (six of 26) provide a 'basic' service level.** For comparison, a large 2013 CWSA and IRC study using a comparable methodology and indicators found that only 13% of rural water facilities provided a 'basic' service level (IRC & CWSA, 2013). Quantity and reliability service level indicators scored comparatively positively, with 22 and 19 of the 26 assessed community water facilities meeting these criteria, respectively. Conversely, the water quality, crowding and accessibility indicators scored relatively poorly, with only 21 facilities meeting the water quality requirement and 13 facilities meeting each of the crowding and accessibility criteria.

Figure Four: Community Water Supply – Service Levels



3.2. School Water Supply

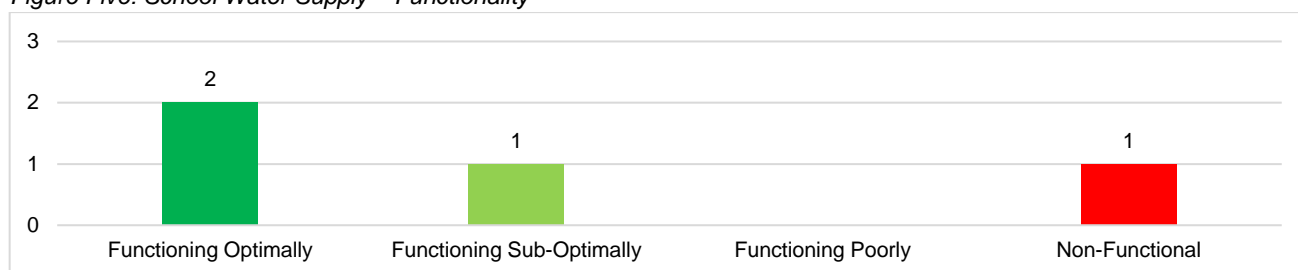
The functionality of the four assessed school water supply facilities was determined by whether they provided water at the time of inspection, as well as by conducting stroke and leakage tests.¹⁸ The limited sample size means it is not possible to draw firm conclusions in relation to the functionality or service levels of these school water supply facilities. Each school water supply facility was given a functionality score with the same colour-coded system used for the community water supply facilities. Figure Five presents the results of this. It highlights

¹⁷ A 2013 IRC and CWSA study does provide data on this; however, it does not provide a precise enough breakdown to enable a comparison with this study's findings. As would be expected, it highlights a clear trend of whereby the proportion of non-functional hand pumps rises the longer it has been since implementation. The study found that one to two years following construction, 10% of point sources were broken down, 10-12 years 25% were, 13-22 years 33% were and over 22 years 21% were (IRC & CWSA, 2013).

¹⁸ One of four school water supply facilities had been mechanised, therefore, the stroke and leakage tests were not performed.

that two school water supply facilities (50%) were functioning optimally, one (25%) was functioning sub-optimally and another (25%) was non-functional.

Figure Five: School Water Supply – Functionality

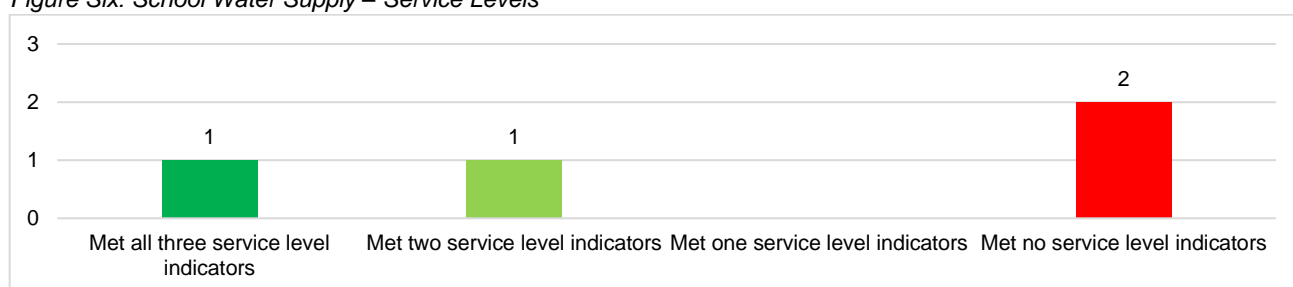


The service levels provided by assessed school water supply facilities were judged against three parameters:

1. Facility was functional 95% of the time (347 days) over the last year.
2. Facility provides five litres of water per school child per day.
3. Water from the facility is not contaminated with E. coli.

Figure Six details the service levels provided. The sample size of school water supply facilities is too small to make informed inferences. However, it is noteworthy that half of the assessed facilities did not meet any of the service level indicators – this was due to one of the facilities being non-functional and another being taken over by community members when the school shut down because of the COVID-19 pandemic.

Figure Six: School Water Supply – Service Levels



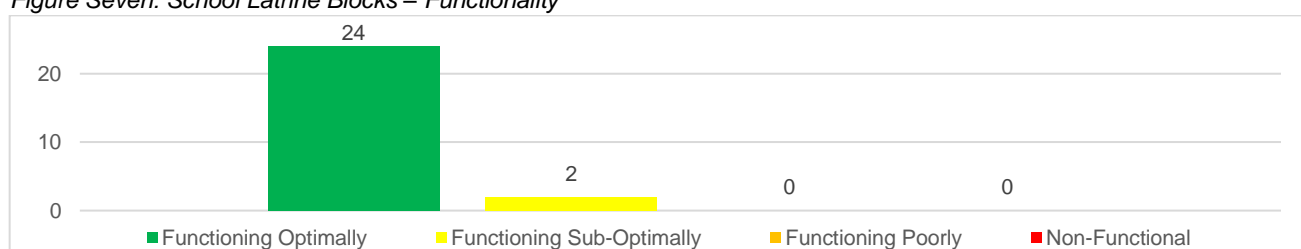
3.3. School Latrine Blocks

The functionality of the 26 school latrine blocks surveyed was determined according to the percentage of the latrine blocks' pits that were functional and in use at the time of inspection. The school latrine blocks were classified using the colour-coded system below.

	Non-functioning: None of the latrine blocks' pits are functional
	Functioning poorly: Less than half of the latrine block's pit are functional
	Functioning inadequately: Half or more of the latrine block's pits are functional
	Functioning optimally: All the latrine blocks' pits are functional

Figure Seven highlights that, to date, a very high percentage of the implemented school latrine blocks are functional, with all pits in use. However, a couple of pressing issues were identified that are not highlighted by only looking at the functionality or service levels of school latrines. Of note, four facilities have large cracks running across the floor or down the walls, which, in one instance, have dissuaded school children from using the facilities, due to fears that it will collapse. Additionally, issues were identified pertaining to the rusting and degradation of metal components (primarily doors, gates, and protection cages around the water storage tanks for collecting water) for many facilities. Box Eight illustrates several of these challenges.

Figure Seven: School Latrine Blocks – Functionality



The school latrine blocks' service levels were evaluated against three criteria:

1. Facility has a handwashing station with a dedicated cleaning agent (i.e., soap) available.
2. Facility complies with crowding standards (at least one pit per 50 school children).
3. Facility is in a sanitary condition with anal cleansing material available.¹⁹

Figure Eight details the number of these service level indicators that were met by the school latrine blocks. It highlights a mixed picture, with most (12) facilities meeting two of the three service level indicators. **In both cases where the school latrine block met none of the service level indicators, there was either no dedicated committee or administrative body managing sanitation issues at the school or no school health club.**²⁰ Common challenges undermining school latrine service levels were the lack of a functioning handwashing station with a dedicated cleansing agent and the overcrowding of facilities. Five of the schools (20%) no longer had a functioning hand washing station within 10 metres of the facility, while 10 (40%) of the schools' facilities did not have a dedicated cleansing agent. Twenty-one (21) of the 25 assessed facilities (84%) were in a sanitary condition (free of urine, faeces and used toilet paper, and generally odour free) at the time of inspection.

Figure Eight: School Latrine Blocks – Service Levels

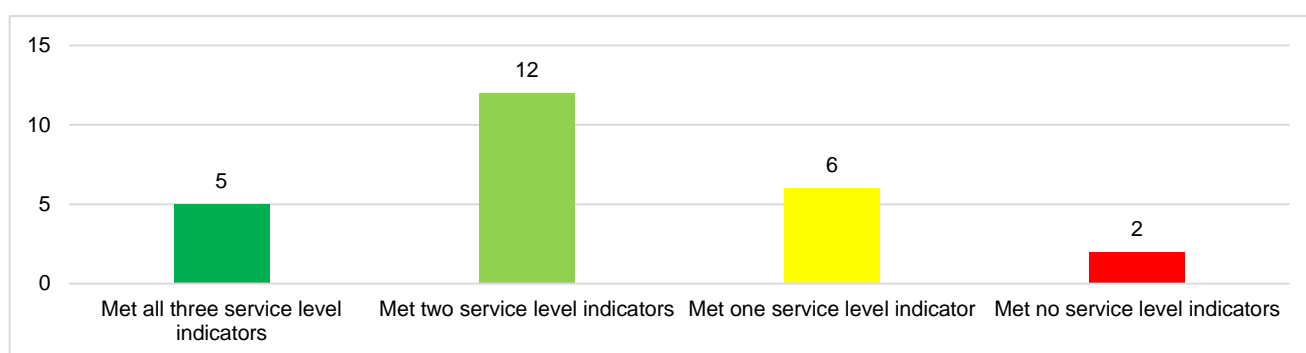
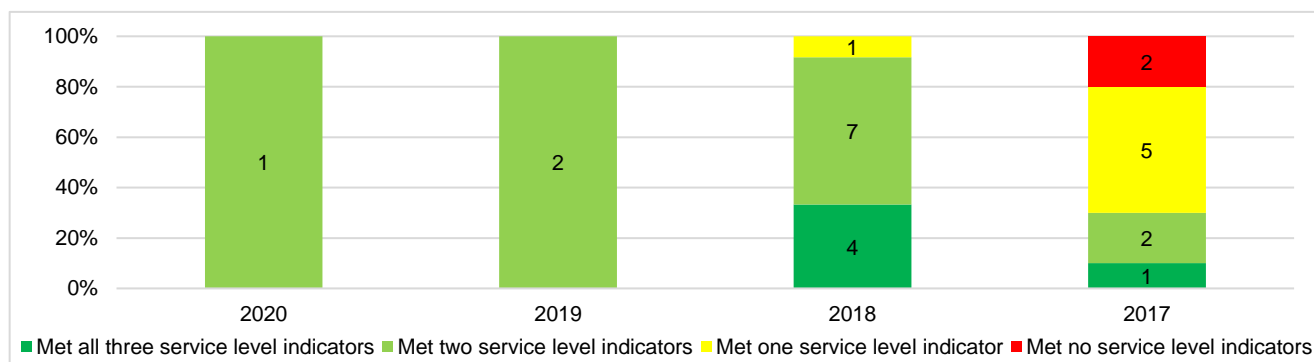


Figure Nine details the service level scores according to the year that the school latrine block was implemented. **It highlights deteriorating service levels according to the year of implementation, which raises concerns about the service levels provided by the school latrine blocks over time.**

Figure Nine: School Latrine Blocks – Service Levels per Year of Construction



3.4. Household Latrine Construction Promotion

The quality of the 188 household latrines surveyed in this assessment was determined against five criteria:

1. Facility has a slab with cover.
2. Facility has a vent with fly screen.
3. Facility has a superstructure.
4. Facility has a handwashing station located within 10 metres of the facility.
5. Facility is not utilised by other households.

¹⁹ Data on the service level provided by one of the school latrine blocks could not be collected because it has not yet been operationalised.

²⁰ While based off a small sample size, this point is illustrative as only three of the 26 surveyed schools did not have a dedicated committee or administrative body managing sanitation issues at the school and only one did not have a school health club.

Table Six details the number of household latrines meeting each of these criteria. It is important to note that this data is based on self-assessments made by heads of households rather than a physical inspection by enumerators.²¹ Overall, all five indicators score moderately to highly. However, the overall number of household latrines meeting all five criteria is low (30%) and, in none of the communities, did more than 50% of household sanitation facilities meet all five criteria.

Table Six: Quality of Assessed Household Latrines

Assessed	188
Slab with Cover	143 (76%)
Vent with Fly Screen	146 (78%)
Superstructure	173 (92%)
Handwashing Facility Located within 10 Metres of the Facility	122 (65%)
Facility is not Utilised by Other Households	125 (66%)
Facility Meets all Five Criteria	57 (30%)

3.5. Hygiene and Handwashing Promotion

Hygiene and handwashing behaviours were assessed in four-hundred and seventy-nine (479) households in 26 communities across seven municipalities and districts and six regions. Behaviours were assessed in different ways, including the following six key moments that adult and child household members wash their hands:

1. After using the toilet.
2. After cleaning infant's bottom.
3. Before eating.
4. Before feeding infants.
5. Before preparing food.
6. After social gathering.

Table Seven presents the results of these surveys, but it is important to note that this was a self-assessment. Enumerators did not monitor household behaviours directly, rather heads of households provided information on adult and child household members' hygiene and handwashing behaviours. **Overall, comparatively good handwashing behaviours were found. In many cases, households and community sanitation and hygiene promoters noted that the COVID-19 pandemic had led to improvements in handwashing behaviours through increased general awareness of the importance of hygiene practices.** There is, however, a notable disparity in the handwashing behaviours between adult and child household members.

Table Seven: Households' Hygiene and Handwashing Behaviours

	Adult Household Members	Child Household Members
Assessed	479	479
After Using the Toilet	476 (99%)	471 (98%)
After Cleaning Infant's Bottom	305 (64%)	143 (30%)
Before Eating	459 (96%)	454 (95%)
Before Feeding Infants	274 (57%)	138 (29%)
Before Preparing Food	319 (67%)	168 (35%)
After Social Gathering	349 (73%)	223 (47%)
Percentage Wash Hands at 4 of 6 Key Moments	326 (68%)	160 (33%)

²¹ As outlined in the inception report, it was decided not to physical inspections of household latrines because of the COVID-19 pandemic.

4. SUSTAINABILITY INDEX TOOL

This section presents the results of the application of the SIT to the RI-USAID WASH Partnership interventions. It details the factors influencing the sustainability of the assessed interventions, focusing on aspects of the RI-USAID WASH Partnership programme that worked well and outlining key areas that are likely to weaken the sustainability of the WASH interventions over time. In several instances throughout this section, a comparison is made to specific indicators and sub-indicators that were assessed as part of a comparable assessment conducted in 2012 that applied the SIT to the Phase One IH₂OC programme in Ghana. This is done to highlight areas where the RI-USAID WASH Partnership programme has improved upon the Phase One IH₂OC programme, as well as areas where greater progress still needs to be made.

4.1. Cross-Cutting

Figure 10 presents the summary factor scores of the five different intervention types assessed, namely: community water supply; school water supply; school latrine blocks; household latrine construction promotion; and hygiene and hygiene and handwashing behaviours. Across the assessed intervention types, institutional and technical factors scored highest. This reflects the fact that institutional arrangements are typically well-established and implemented, as well as the comparatively good performance of assessed hardware interventions. It also highlights the generally moderate to poor performance for the financial, management and environmental factors, thereby illustrating the need for improvements in these areas.

Figure 10: Factor Scores per Intervention Type

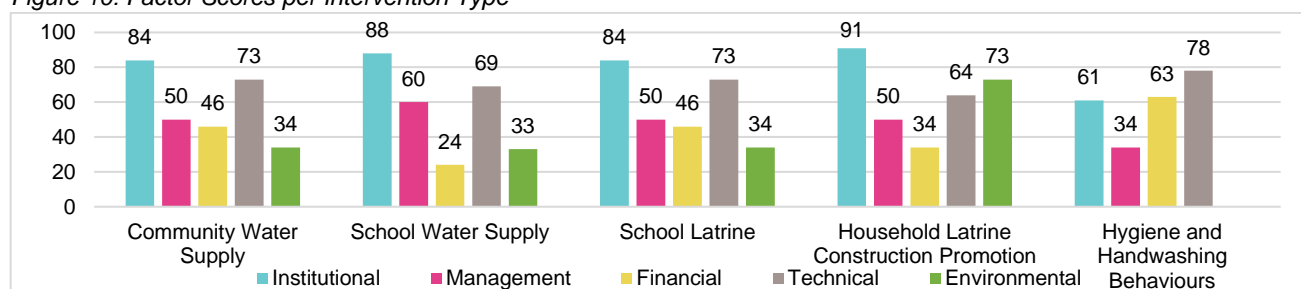


Figure 11 details the top-level scores for each level of analysis (national, district, service provider) for each intervention type assessed. The district-level is generally the least well performing, and the area most in need of improvement and strengthening.

Figure 11: Level of Analysis Scores per Intervention Type

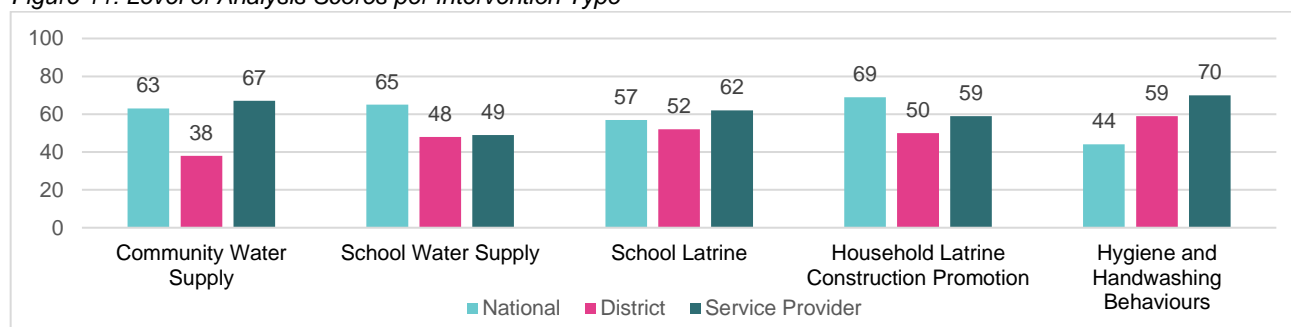
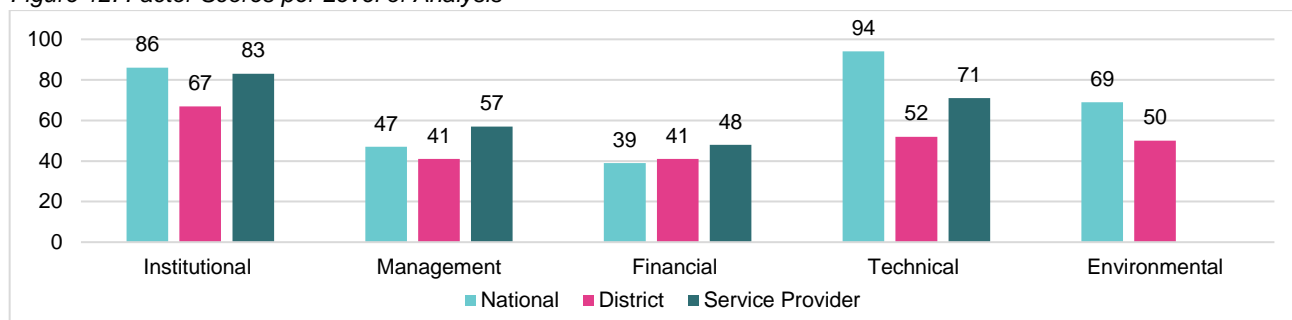


Figure 12 presents the factor level scores across all five sets of interventions assessed according to each level of analysis: national, district, service provider.²² This is a high-level of aggregation and does not provide any comparison between intervention types. Regardless, this level of aggregation highlights several areas performing well across all the assessed interventions, as well as key areas where improvements are required. It also illustrates many of this study's main cross-cutting findings. For example, high scores at the national level for the institutional (86) and technical (94) factors shows that policies and institutional arrangements for the rural WASH sub-sector are well developed and that standards are in place for service levels, equipment standardisation and spare part provision. Conversely, Figure 12 shows comparatively low scores for the

²² Each intervention type has been given equal weighting here. For example, the scores for the four assessed school water supply interventions have the same value or weighting as the scores for the 26 school latrine blocks.

management and financial factors at the district level (41), reflecting the resource constraints at this level and the challenges facing MMDAs in performing vital support functions for all five intervention types assessed.

Figure 12: Factor Scores per Level of Analysis



4.2. Community Water Supply

Seventy community water supply facilities were constructed as part of the RI-USAID WASH Partnership programme. Twenty-five of these were assessed for this study from across all seven municipalities and districts that the visited. Figure 13 presents the factor level scores for the application of the SIT to these interventions. It highlights impressive scores for the institutional (84) and technical scores (73), moderate scores for the management (50) and financial (46) factors and a poor score for the environmental factor (34).

Figure 13: Community Water Supply – Factor Level Scores

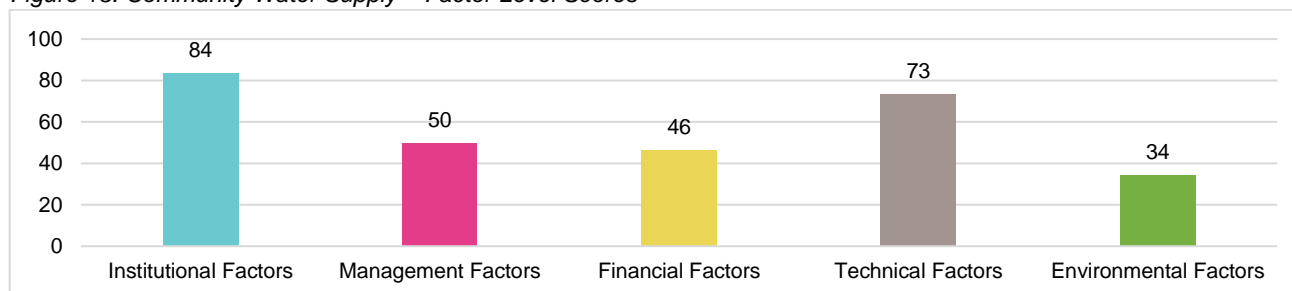


Figure 14 plots these factor level scores for each of the 25 community water supply facilities.

Figure 14: Community Water Supply – Factor Scores per Intervention

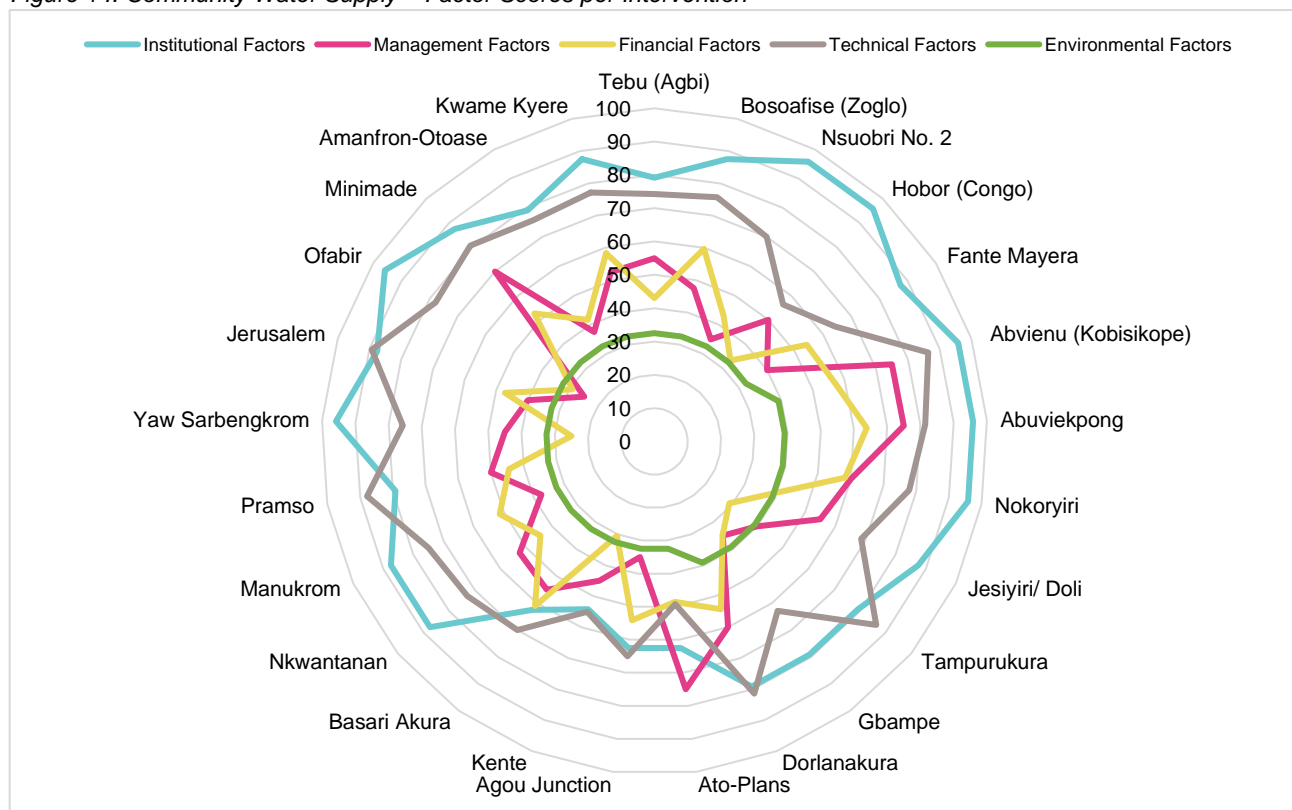
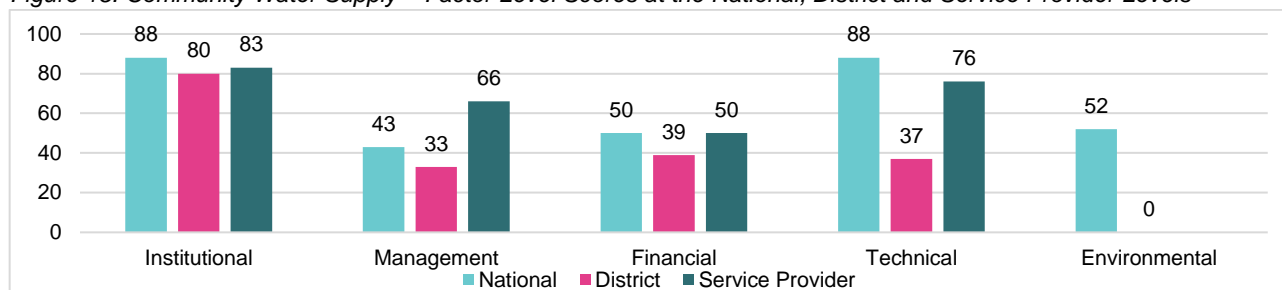


Figure 15 presents the factor levels scores aggregated according to the national, district and service provider levels. It highlights strong performance at the national level for the institutional (88) and technical (88) factors, at the district level for the institutional factor (80) and the service provider level for the institutional (83), management (66), and technical (76) factors. It shows the moderate performance at the national level for the management (43) and environmental (52) factors as well as the service provider level for the financial factor (50). It also shows the generally poor performance of – and need to strengthen – the district level, which scored poorly for the management (33), financial (39), technical (37) and environmental (0) factors.

Figure 15: Community Water Supply – Factor Level Scores at the National, District and Service Provider Levels



4.2.1. Institutional

The institutional factor scored strongly at all three levels of analysis: national (88); district (80); and service provider (83). **This reflects the fact that national policies and guidelines for community-managed water supply and enabling legislation are in place.** The national-level scored well as the 2007 National Water Policy recognises community management and gives it legal standing, while the CWSA Framework for Assessing and Monitoring Rural and Small-Town Water Supply Services in Ghana details clear standards for WSMTs' constitution and governance. An aspect requiring improvement in this area concerns the incomplete nature of the national registries and database of water facilities managed by WSMTs. This is only partially done through the District Monitoring and Evaluation System, which is incomplete and updated infrequently.

The district-level institutional indicator focused on whether MMDAs' roles and responsibilities are clearly defined and understood. This indicator performed strongly, with most MMDAs having formalised roles and responsibilities that were written down and understood by relevant Assembly personnel. Nkwanta South District is a major exception in this, with staff acknowledging that the Assembly's roles and responsibilities were not formalised, written down or understood by relevant staff in the Assembly. While 17 of the 25 surveyed WSMTs (68%) understood their MMDA's core roles and responsibilities, WSMTs' understanding of their Assembly's roles and responsibilities was significantly lower (25%) in Nkwanta South District.

Two to three years after most RI-USAID WASH Partnership community water supply interventions were implemented, all 23 functional interventions had WSMTs in place. This reflects the quality of sensitisation and training activities conducted and is an important area of success. For comparison, the 2012 assessment of the Phase One IH₂OC interventions found that 93% of community hand pumps had a functional WSMT, while an IRC and CWSA study found that just 71% of point water sources in Ghana had a functional WSMT (IRC & CWSA, 2013). **Twenty-two of the 25 WSMTs (88%) were constituted in line with CWSA guidelines for composition (having between five and nine members, including a chairman, treasurer or financial clerk, and caretaker).** However, this drops to 17 of 25 (68%) when the requirement to have at least 30% female members on the WSMT is added. By comparison, the same IRC and CWSA study found that just 43% of assessed point water sources were constituted in line with CWSA guidelines.²³ Finally, 16 of the 25 surveyed WSMTs (64%) reported that the WSMT was democratically elected with the involvement of the entire community. Seven WSMTs stated that they were elected by community leaders, one by Assembly staff and one by the partner organisation (NGO) staff.

4.2.2. Management

The management indicator scored moderately at the national level (43), poorly at the district level (39) and well at the service provider level (66). Two national-level indicators were assessed. These focused on the existence and utilisation of an updated national monitoring system or database as well as the provision of support to

²³ When comparing figures from this study to those of the IRC and CWSA study, it is important to consider that that study covered all water points in several districts, while this study only looked at water points that were mainly implemented in the last two-three years (2019-2017).

MMDAs, including refresher training. The moderate score on the management indicator at the national level can be attributed to the non-existence of an updated database on water systems in the country. The District Monitoring and Evaluation System (DiMES) is set up to capture data on a wide range of information concerning water infrastructure in rural areas. This includes coverage, specifications, the communities where they are located and the projects that financed them, amongst others. However, it has not been updated since 2014. Another contributory factor to the moderate management score is the insufficient support from the national to the district level. Support for training and refresher training for staff at the district level responsible for supporting community-managed facilities is largely dependent on project funding. As such, districts that do not benefit from donor or development partner projects rarely receive any form of training.

The district-level management indicator investigated the extent to which there is regular monitoring of water services and WSMTs' performance. All the sub-indicators in this criterion scored poorly, and this is a key area where improvements are required. **Just 10 of the 25 surveyed WSMTs (40%) reported that their Assembly monitored their performance, and only seven of these (28%) reported being visited every six months.** Additionally, only seven WSMTs stated that monitoring included periodic financial audits. There was a notable disparity in performance between districts. Ga South Municipality performed moderately well, and Shai Osudoku District performed exceptionally well,²⁴ while the other five districts performed very poorly. The Assemblies' overall poor performance of their monitoring and follow-up support functions is closely linked to their pressing financial resource constraints (see Sub-Section 4.2.3.).

Two management indicators were assessed at the service provider level. The first of these scored positively (87) and focused broadly on whether WSMTs understood and performed their technical, administrative and financial duties. All WSMTs in the survey understood their primary responsibilities. Eighty, 76 and 92 percent of WSMTs stated that they were performing their technical, administrative and financial duties, respectively. Data collected at the household-level backed up this positive picture, except for three communities (Pramso and Jerusalem in Amenfi Central District and Ofabir in Ajumako Enyan Essiam District) where communities were not happy with aspects of the WSMTs performance.

The second service provider level management indicator focused on the frequency of WSMT meetings and the transparency of decision-making. This only scored moderately (45); however, the COVID-19 pandemic significantly impacted performance in this area. Only six WSMTs (24%) were conducting WSMT meetings quarterly, with a further four (16%) conducting meetings every six months. Additionally, only 14, 11 and 12 WSMTs were sharing technical, administrative and financial records with the community every six months, respectively. **COVID-19 reduced the frequency of WSMT meetings and the transparency of decision-making processes. If not for COVID-19, this indicator's score would have been impressive and represented a substantive improvement on the findings from the Phase One IH₂OC.** Ten WSMTs stated that COVID-19 resulted in them reducing the frequency of WSMT meetings or caused them to stop holding meetings entirely. Linked to this, seven WSMTs stated that they had stopped sharing records with community members because of the reduced frequency of their meetings.

4.2.3. Financial

The financial indicator scored moderately at the national (50) and service provider (50) levels, and poorly at the district level (39). At the national level, there was a line item for rural water supply in the 2020 budget. **However, the budget for rural water supply was not formulated considering total life-cycle costs.** Additionally, neither national nor district-level mechanisms are in place to fill the large financing gaps that often exist between the revenues collected by WSMTs and the life-cycle costs of ensuring reliable and safe water supply services. The 2007 National Water Policy addresses equity and non-discrimination issues, with improved and sustainable water access by the poor for their basic needs as a key policy objective. The adoption of a tariff structure is included as one of several policy measures suggested in this area.

Two district-level financial indicators were assessed. **There is a substantial – and significant – discrepancy in the scores for the two indicators, which highlights a key issue undermining the sustainable provision of community water supply services.** The first district-level indicator focused on the human resources in the seven assessed MMDAs. This indicator scored well (76), with the District Works Department of four of the seven Assemblies' having at least the requisite number of staff outlined by government standards. Personnel in all seven Assemblies reported that these staff have the requisite skills and qualifications.

²⁴ For example, four of the five WSMTs surveyed in Ga South Municipality and both WSMTs surveyed in Shai Osudoku District reported that their Assembly monitored their financial, administrative and technical performance.

The second district-level financial indicator scored alarmingly poorly (1) and is a crucial area of concern. **Assembly personnel in all seven Assemblies reported that their Assembly has neither sufficient material capacity (i.e., vehicles, computers, mobile data collection devices) nor budget allocations to support WSMTs properly.** Moreover, in six of the seven Assemblies (86%), personnel reported that budget allocations are not released when required for supporting WSMTs. The inadequacy of the financial and material resources available to Assemblies to fulfil their functions represent key factors undermining service delivery. The impacts of this are seen in Assemblies' poor performance of many of their management and technical responsibilities (see sub-sections 4.2.2. and 4.2.4.).

Several financial indicators were investigated at the service provider level. **Positives results were found for the financial factor at the service provider level; however, several pressing issues were identified that undermine the prospects for the sustainability of interventions moving forward.** The first indicator focused on whether tariff setting complied with national guidelines – it scored poorly (29). **A water tariff had been set by 17 of the 25 WSMTs surveyed (68%).**²⁵ However, none of the WSMTs had set a tariff in line with CWSA guidelines (i.e., covering costs of spare parts, cost of area mechanic services, water quality, tariff collection expenses (vendors), allowance for caretaker and allowance for WSMT members). Only four WSMTs (16%) had a tariff structure in place that explicitly made provision for the most impoverished members of the community. The second financial indicator investigated whether WSMTs were effectively managing their revenues, which scored well (69). Notably, 21 of the surveyed WSMTs (84%) reported that they kept financial records, and 20 (80%) had a bank account. However, only 13 (52%) shared financial records with the community every six months and only 14 (56%) WSMTs reported that their Assembly had ever audited their financial accounts.

The final – and most illustrative – financial indicator at the service provider level looked at whether tariff collection is regular and sufficient. It scored moderately (52). **While 17 of the 25 surveyed WSMTs (68%) had a tariff in place, only 13 of these (52%) collected funds regularly (i.e., pay-as-you fetch or monthly household levy).** The COVID-19 pandemic has impacted tariff collection, with four WSMTs reporting that they stopped charging the tariff that was in place before the start of the pandemic. Only seven WSMTs (28%) reported that over 80% of users paid the tariff in place, while four (16%) stated that 50%-79% of users paid the tariff. COVID-19 had minimal impact on users' willingness to pay for water and the enforcement of tariffs. The WSMTs that had decided to stop charging for water were all in communities where there had always been low payment rates. Overall, 15 of the assessed WSMTs (60%) had accrued greater revenues than expenditures for 2019, with seven WSMTs having managed to accrue revenues of over 500 Ghanaian Cedi's (equivalent to US\$ 85.00) in 2019 and three over 1,000 Ghanaian cedi's (equivalent to US\$ 170.00).

Box One: Fante Mayera WSMT illustrates good financial management:

The Fante Mayera (Ga South Municipality) WSMT was one of 12 WSMTs to implement a pay-as-you fetch tariff. This tariff is not based on CWSA guidelines and was instead determined according to what users were willing to pay. However, the tariff of GHC 0.2 per 18 litre jerry can is paid by a high percentage of households (reportedly 80-99%) and is higher than the average pay-as-you fetch tariff amongst assessed facilities of GHC 0.1 per 18 litre jerry can. This comparatively high-level of willingness to pay is linked to the fact that this was a mechanised borehole and has enabled the WSMT to accrue a revenue of GHC 1,500 (equivalent to US\$258). Repairs have not yet had to be performed on the facility; however, this accrued revenue provides an important safety-net for if these are required.



²⁵ The surveyed community water facilities in Bole District (Savannah Region) performed especially poorly here, with only one of the five surveyed WSMTs having set a tariff.

When viewing the findings for the financial factor, it is important to note that the 2019 retrospective application of the SIT to the Phase One IH₂OC in Ghana found that WSMTs' failure to collect sufficient tariff revenues was a primary driver of the high non-functionality rate of assessed community hand pumps.²⁶ A comparison of this study's results for the financial factor at the service provider level with those of the 2012 application of the highlights that the WSMTs for the RI-USAID WASH Partnership community water supply facilities performed better for the indicator focused on financial management and accounting (an average indicator score of 38 compared to 69). However, significantly, it also highlights much lower performance for the two other assessed indicators. In the first instance, for the indicator focused on whether tariff setting complied with national standards, the 2012 SIT application scored the community water supply interventions moderately (50), while this 2020 SIT scored facilities poorly (29). Secondly, for the indicator focused on whether tariff collection is regular and sufficient, the 2012 SIT application scored the Phase One IH₂OC well (60), while this 2020 SIT scored the assessed Phase One IH₂OC community water supply interventions moderately (52).²⁷ **Accordingly, the issues detailed above should be viewed as key elements undermining the sustainability of the community water supply interventions and can be expected to reduce the rates of functionality and service levels provided over time if not adequately addressed now.**

4.2.4. Technical

Positive scores were found at the national (88) and service provider (76) levels for the technical factor; however, the district level again scored poorly (37). **The national level scored highly because national standards defining desired service levels as well as equipment standardisations and spare parts exist and are widely applied.** The CWSA Framework for Assessing and Monitoring Rural and Small-Town Water Supply Services in Ghana clearly outlines national standards for quantity, accessibility and crowding. However, it does not have national standards for affordability – although some guidelines exist, they are rarely utilised, with WSMTs being free to propose tariffs for approval by their Assembly. National standards also exist for equipment standardisation and providing spare parts and water point construction (i.e., drainage, borehole apron or platform). These guidelines are available and widely disseminated, and clear mandates exist for their enforcement.

Assemblies struggle to support WSMTs to conduct maintenance and perform repairs on request. The indicator focused on this scored poorly (37). In five of the seven MMDAs visited, Assembly staff acknowledged that they were only occasionally able to provide WSMTs with maintenance support. One district (Ajumako Enyan Essiam) stated that they could provide support with maintenance when required, and another (Ayensuano) stated that they were unable to. More alarmingly, three districts and municipalities stated that they could not support WSMTs with repairs when breakdowns occur – only one district (Ajumako Enyan Essiam) noted that they could regularly provide support for repairs to WSMTs. This is because of the presence of a staff of the District Works Department who doubles as an area mechanic. **These challenges illustrate the impact of the resource constraints that Municipal and District Assemblies face and represent a key challenge that prevents water supply infrastructure from being repaired when breakdowns occur.**

Four indicators were assessed at the service provider level, all of which scored positively. **This reflects the quality of construction whereby two to three years following the implementation of most community water supply interventions, facilities continue to meet most CWSA guidelines.** The first service provider indicator focused on whether the community water supply facilities are functional and provide a basic service level. It scored well (73). Sub-Section 3.1. provides a more detailed breakdown of the functionality and service levels of assessed community water supply facilities, including a comparison with the results of other studies; however, key takeaways from this indicator are:

- 20 of the 25 assessed facilities (80%) provided 20 litres of water per capita per day.
- 19 facilities (76%) were functional 95% of the time (347 days) over the last year.
- 18 facilities (72%) passed the Aquagenx® E. coli water quality test.
- 13 facilities (52%) met the accessibility criteria (80% of users being within 500 metres of the facility).

²⁶ Additionally, this retrospective assessment also found that the prediction of likely sustainability from the 2012 SIT application to the Phase One IH₂OC the financial factor provided a particularly accurate projection of the sustainability of the community hand pumps. The community hand pumps with four of the five lowest scores for this factor were found to be non-functional in 2019.

²⁷ When comparing the results of the 2012 and 2020 applications of the SIT to IH₂OC Phase One and RI-USAID WASH Partnership community water supply interventions it is important to consider that in 2012 the SIT was applied to interventions around six to 18 months following their implementation, while this 2020 application was generally applied to interventions around two to three years following their implementation.

- 12 facilities (48%) were not being utilised by more than 300 users.

Additionally, 22 of the facilities (88%) were constructed to ensure ease of use by potentially marginalised populations (i.e., persons with disabilities).

The second technical indicator looked at whether community water supply facilities complied with siting and public health risk guidelines. Overall, this performed well (70); however, pressing issues were identified in this area. In the first instance, 24 of the 25 community water supply facilities (96%) are in areas that the WSMTs reported are prone to flooding. WSMTs for 19 of the 23 functional facilities (83%) are ensuring the proper drainage of standing water around the facilities, and 17 of the functional facilities (74%) were being kept in a sufficiently sanitary condition by the WSMT. **An important area for improvement is the location of community water supply facilities to mitigate or limit the risk of water contamination.** Eight of the 25 assessed facilities (32%) were found to not comply with national siting guidelines and were located within 50 metres of the nearest latrine or open water source. In six of the eight cases, the communities that received the water supply intervention were also triggered to construct household latrines as part of the RI-USAID WASH Partnership programme.²⁸ In two cases, water supply facilities located within 50 metres of a latrine or open water source did not pass the water quality test performed.

Box Two: Tebu (Agbi) illustrates some WSMTs' ability to organise repairs:

Tebu (Agbi) community water supply facility serves about 200 people, over a comparatively large area (less than 50% of users are located within 500 metres of the hand pump). The WSMT has the tools and skills to conduct preventive maintenance, which is performed quarterly. Nevertheless, the hand pump has broken down three times since its installation in December 2018 and was non-functional for 50 days in 2020. On each occasion, the WSMT has, with the Assembly's support, been able to access a local area mechanic to perform repairs. However, each time this has been a protracted process. The hand pump is currently functioning optimally – it passed the stroke and leakage test, and while the WSMT complained that the water was salty, it is not contaminated with *E. coli*.

It is worth noting that this was the WSMT with the highest pay-as-you-fetch tariff in place of all WSMTs surveyed as GHC 0.25 per 18 litre jerry can (equivalent to US\$ 0.043) and a high user willingness to pay, with 80-99% of users reportedly paying the tariff.



²⁸ In particular, in Ato-Plans (Nkwanta South District), Basari Akura (Nkwanta South District), Kente (Nkwanta South District), and Manukrom (Amenfi Central District), significant proportions of the households consulted for the household latrine promotion construction reported that their household sanitation facility was located within 50 metres of the near water source (i.e., hand pump).

The impressive scores for the technical factor at the service provider level also reflect the fact that the knowledge and equipment were found to generally be in place to perform preventative maintenance and repairs.²⁹ Twenty-one of the 25 surveyed WSMTs (84%) reported that they included a member with the skills to perform preventative maintenance, and 18 of the WSMTs (72%) stated they had the necessary tools to perform preventative maintenance. **Ultimately, 15 of the WSMTs reported performing preventative maintenance on the water supply facility at least every six months.** Twenty-three of the 25 WSMTs (92%) reported that the local private sector or an area mechanic was available to support the WSMT in the event of a breakdown. Moreover, 18 of the 25 consulted WSMTs (72%) noted that the services of the local private sector or area mechanic could be obtained within three days of a breakdown, and 19 of the 25 WSMTs (76%) stated that they would be able to source spare parts within three days of a breakdown. Box Two provides an example of a WSMT's good performance of its technical responsibilities.

A couple issues of not investigated as part of the SIT were found during the field visits, both of which relate to the siting of community water supply facilities. Key issues identified for several communities and districts are inadequate community / stakeholder engagement prior to the provision of the interventions, and the absence of thorough engagement with Assembly officials. In a couple of communities (Basari Akura in Nkwanta South District and Amanfrom-Otoase in Ayensuano District), this has led to instances where the community does not value the facility and all but a small number of community members utilise other improved water sources or local streams. Moreover, the Agou Junction community water facility constructed in Nkwanta South District is sited in a low-lying area about 500 metres from the community. As Box Three elaborates, this issue around site selection is connected to the insufficient involvement of community members and the WSMT in the implementation of the community water supply facility.

Box Three: Poorly sited community water supply facility at Agou Junction, Nkwanta South District:

The Agou Junction community water supply (Nkwanta South District) is poorly cited. It is in a low-lying, marshy area, which can be expected to have a higher water table. This is a possible cause of the water from the pump's cloudy colour and salty taste. The site is lower than the road, so there is also a high chance of runoff water coming from the road and neighbouring plots. As the pictures below indicate, soils around the pump do not drain water properly and the facility has become covered in a large amount of soil. Additionally, the facility is around 500 metres from community, creating accessibility challenges for a large portion of the community. Significantly, the WSMT, community headman and community members note that their inputs were ignored when the facility was sited. There was reportedly no formal introduction to the contractor, and the WSMT reported that the contractor did not consult them before siting the facility at the outskirts of the community.



²⁹ Preventive maintenance refers to the regular inspection and servicing of water supply facilities, including replacement of consumable spare parts, to preserve assets and minimise breakdowns. It should be carried out on a regular schedule according to the requirements of components of the scheme.

4.2.5. Environmental

The environmental factor scored moderately at the national level (52) but poorly at the district level (0). Two national-level indicators were assessed, the first of which focused on national environmental protection standards and scored positively (88). **National standards exist to protect the natural environment from the potential impacts of the construction of water supply infrastructure as well as their design, sizing and siting.** Moreover, Ghana's Environmental Protection Agency is mandated to monitor and enforce environmental impact mitigation standards, including for water supply services. The second national-level environmental indicator focused on the existence and utilisation of integrated water resources management plans, which scored very poorly (16). In the first instance, while the national water resources plan is publicly available online, there are not sufficient efforts being taken to educate municipal and district water offices about it. Moreover, monitoring data is not regularly collected to update the national water resources plan, which has not been updated since 2012. Additionally, municipal and district water supply plans that comply with local watershed management plans have only been developed in two of the seven Municipal and District Assemblies visited.³⁰

At the district level, the assessment looked at whether natural resources are managed to support sustainable community water supply services. This scored extremely poorly (0). **Assembly personnel in all seven Assemblies acknowledged that ecosystem-related risks to drinking water quality and vulnerability to climate-related impacts (i.e., droughts, heavy rainfall events and flooding) had not been assessed in their jurisdictions.** Therefore, adaptation measures are not being considered in any of the municipalities or districts to address challenges relating to natural resources or climate change.

4.3. School Water Supply

The RI-USAID WASH Partnership programme implemented 15 school water supply facilities, just four of which were assessed for this study.³¹ When viewing the findings presented in this section, it is important to note they are based off a very small sample. Figure 16 presents the factor level scores from across the four assessed school water supply facilities. It highlights good performance for the institutional (88), technical (69) and management (60) factors as well as poor performance of the financial (24) and environmental (33) factors.

Figure 16: School Water Supply – Factor Level Scores

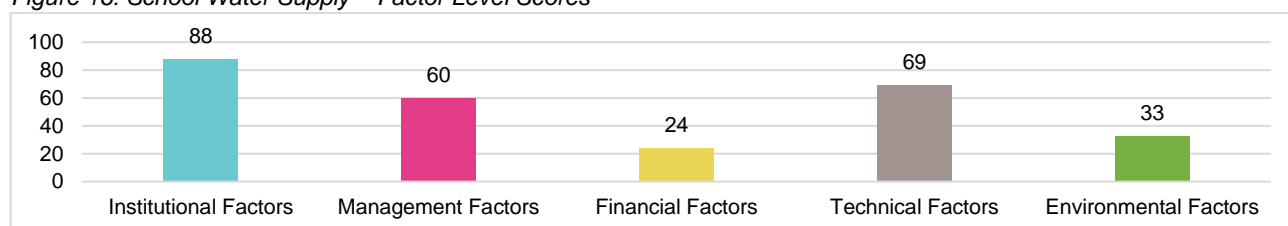
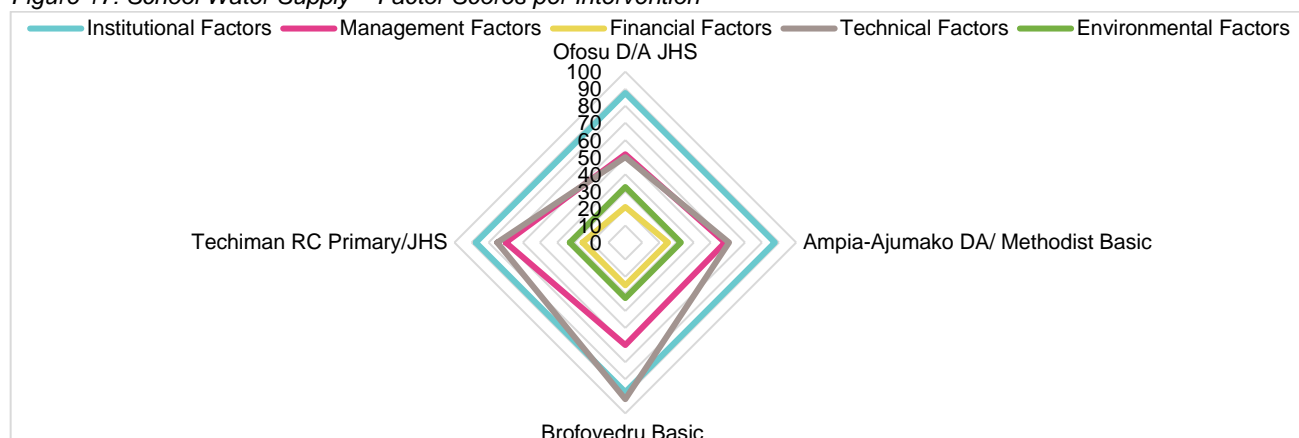


Figure 17 plots these factor level scores for each of the four assessed school water supply facilities. There is a relatively high degree of correlation between scores, with assessed facilities that scored well for one factor being more likely to have positive scores for other factors.

Figure 17: School Water Supply – Factor Scores per Intervention

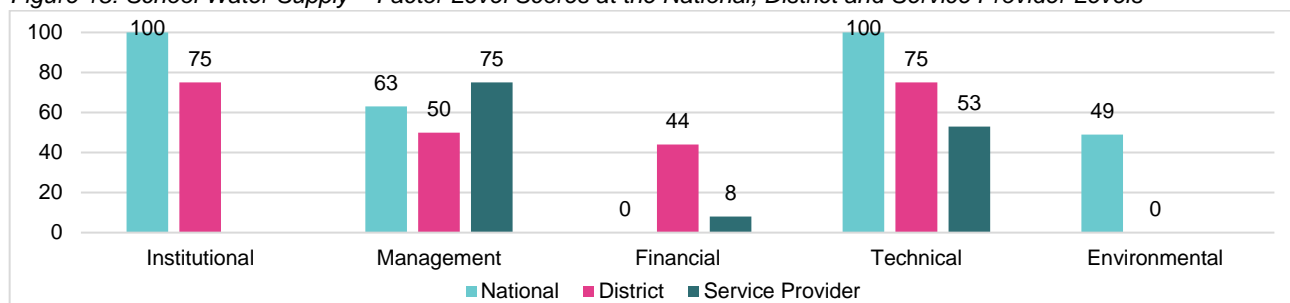


³⁰ Consulted Assembly personnel in the two districts where plans have been developed noted that water supply plans were not developed with the active involvement of key WASH actors and steps are not being taken to educate WSMTs about key aspects of the plan.

³¹ Most school water supply facilities were implemented in primary schools that were shut during the study period due to COVID-19 and therefore were not able to be included in the sampling.

Figure 18 details the factor levels scores disaggregated to the national, district and service provider levels. It highlights several areas performing very strongly as well as areas of extremely poor performance where improvements are needed. At the national level, the institutional (100), management (63) and technical factors are all performing strongly, while the environmental indicator is scoring moderately (49) and the financial indicator very poorly (0). At the district level, the institutional and technical factors both scored well (75), the management (50) and financial (44) factors scored moderately, and the environmental factor scored very badly (0). At the service provider level, the management factor scored well (75) and the technical factor moderately (53); however, the financial factor scored very poorly (8) and represents a critical area of concern.

Figure 18: School Water Supply – Factor Level Scores at the National, District and Service Provider Levels



4.3.1. Institutional

The institutional factor scored well at the national (100) and district (75) levels. At the national level, the School Health Education Programme Unit of the Ghana Education Service is the dedicated institution for school WASH. There are clear guidelines that have been developed to guide WASH in Schools (i.e., the Technical Guide for WASH in Schools Facilities and National Implementation Model for WASH in Schools developed by the Ghana Education Service). These documents spell out the roles and responsibilities of various institutions with respect to the delivery of school WASH services. Coordination between related ministries of school WASH activities is being done through various structures such as the Water Supply and Sanitation Technical Working Group and the National SHEP Steering Committee.

The high district level score reflects the fact that there are formalised roles and responsibilities for Assemblies and District and Municipal SHEP Coordinators in supporting schools to use and maintain their water supply facilities properly. Moreover, in both districts, the Assembly and District SHEP Coordinators' roles and responsibilities were written down and accessible and understood by all relevant staff. **However, in all four visited schools, consulted school SHEP focal persons and headteachers did not know what the role of their Assembly or District SHEP Coordinator was in relation to school water supply.**

4.3.2. Management

The management factor scored strongly at the national (63) and service provider (75) levels, and moderately (50) at the district level. The national-level management indicator investigates the existence of a national database of school water facilities and support provided to Assemblies, including training and refresher training. An Educational Management Information System (EMIS) exists, which is used to capture data on water and sanitation facilities in schools including their functionality. The EMIS is updated annually during the annual school census conducted by Ghana Education Service. However, on-going support to Assemblies from the national level in the form of routine refresher training to enable them support to the management of school-base water facilities is mostly lacking.

District level indicators focused on the monitoring and support provided by Assembly personnel and District SHEP Coordinators to schools to ensure their water supply facilities' proper use and maintenance. **All four schools reported that they received monitoring visits from Assembly personnel or District SHEP Coordinators every three months; however, only two schools (50%) reported that support was available or provided following monitoring when required.** This highlights an issue also found in the case of school latrine blocks, where Assembly personnel and District SHEP Coordinators monitor WASH in schools but lack the capacity to provide tangible support or address problems identified. Assembly personnel in Nkwanta South District stated that monitoring activities informed their planning of school-based water supply activities (i.e., support and infrastructure needs). By contrast, Assembly personnel in Ajumako Enyan Essiam District stated that their monitoring activities did not inform planning.

At the service provider level, all four assessed schools have a dedicated administrative body managing water issues, and both functional school water facilities are cleaned daily. Three schools (75%) reported that 100% of school children have their own drinking water vessels.

4.3.3. Financial

The financial factor scored moderately at the district level (44), but extremely poorly at the national (0) and service provider (8) levels. The alarming national level score for the financial factor reflects the facts that there are only very limited dedicated funds available to support school based-water supply costs beyond what schools can provide, with MSWR, GES and MMDAs not setting aside funding for this and only having very limited funds that could be allocated for this. The two district-level financial indicators highlight similar concerns as were found for the other assessed intervention types. In the first instance, District level actors largely have the required human resources to fulfil their support functions. For example, in both Districts visited the SHEP Coordinator and relevant staff of the Environmental Health and Sanitation Units (EHSUs) have relevant qualifications and skills. **However, critically, financial and material resources are insufficient for Assemblies or District SHEP Coordinators to perform their support functions for school-based water supply facilities.** In both districts visited, Assembly personnel and the District SHEP Coordinator stated that sufficient budgets are not allocated to support school-based water supply, and that budget allocations are not released when required for supporting schools. Moreover, personnel in both districts reported that they do not have the material capacity (i.e., vehicles, computers, educational tools) to support schools properly.

Substantial financial issues were also found at the service provider level for the financial factor. Only Ofosu D/A JHS School in Nwanta South District recognised the requirement of the school for saving funds to cover the costs of preventative maintenance and minor repairs. Moreover, none of the four schools are budgeting for long-term capital maintenance costs for water supply facilities. The schools (mostly public) usually cannot plan and budget for these given the nature of their income sources. At the basic level, public schools do not collect fees. The capitation grant³² from the government through Ghana Education Service (GES) is meant to make access to basic education free. School authorities indicate that the amount is inadequate to have these

Box Four: Ampiah-Ajumako DA Methodist Basic School struggles to finance repairs:

The hand-pump constructed for the Ampiah-Ajumako DA Methodist Basic School (Ajumako Enyan Essiam District) broke down four times in the past year. The last breakdown occurred a few days before schools were closed in March 2020 because of COVID-19. In the first instance, Rotary/USAID/Global Communities provided assistance to have it repaired. Subsequently the school has engaged the services of local area mechanics to repair the facility. The last repair cost the school GHC400 (equivalent to US\$68.00), with the school only able to pay GHC200 and still owes the area mechanic GHC200. The head teacher reports that following the re-opening of the school, the school is unable to engage the services of the area mechanic to repair the non-functional facility due to financial constraints.



³² Introduced in Ghana in 2005, the capitation grant was intended to facilitate the Millennium Development Goal of primary education for all by financing the primary and Junior Secondary Schools in Ghana so that education is free for all. For government primary and JSS schools no school fees need to be paid anymore. The subsidy paid by the government per student per term covers general stationery and management, office machinery, first aid, building maintenance, sports fee, culture fee, sanitation fee, postage, textbook user fee, practical fees, furniture maintenance and tools maintenance as well as machinery for technical schools and institutions. It was increased from GHC4.5 to GHC10.00 per child per annum in 2019

'added' costs taken care of. Since the schools, per their makeup, are not income-generating entities, they mostly rely on external support to cover water and sanitation facilities' maintenance costs. For example, through silver collection during their midweek worship services. **Ultimately, the findings for the financial factor severely undermine the prospects for the sustainability of these interventions.** Box Four provides an illustration of this.

4.3.4. Technical

The technical factor scored strongly at the national (100) and district (75) levels, but moderately at the service provider level (53). National standards and guidelines have been set for water quality, quantity, equipment standardisation, siting and construction of school water facilities. Water quality standards conform to what have been set by the Ghana Standards Authority. Guidelines on quantity, siting and construction, amongst others have been clearly spelt out in the 'Technical Guide for WASH in Schools' developed by the GES. These standards and guidelines are widely disseminated and largely enforced.

The technical support available to schools from Assembly personnel in the two Assemblies surveyed varied considerably. In Ajumako Enyan Essiam District, Assembly personnel reported that they were able to provide technical support to schools for the maintenance and repair of their water supply facilities on request;³³ however, personnel in Nkwanta South District stated they could not provide technical assistance in these areas.

Four service provider indicators were assessed, the scores for which varied considerably. **Issues were identified with the service levels provided by school-based water supply facilities constructed under the RI-USAID WASH Partnership programme.** These are largely explained by the fact that one of the facilities has been non-functional since early 2020 following a series of breakdowns that the school struggled to finance, and that another facility is functional but has been laid claim to by community members and is not currently being used by the school. Box Five provides more detail on the issue of community takeover; this was also an issue identified for several assessed school latrine blocks. Additionally, the water from one of the two assessed facilities that remains in use contained *E. coli*.³⁴ On a more positive note, both functional and utilised facilities provide five litres of water per school child per day and met the reliability criteria of being functional 95% of the time (347 days) over the last year.

Box Five: Community takes over Ofosu D/A Junior High School water supply facility

Due to the insufficient engagement of district-level stakeholders, there was only limited sensitisation activities conducted in some local communities and for some school water supply and sanitation facilities. This situation resulted in some district officials not having any plans to engage with communities about the rights and obligations in using school facilities. The GES Director and District SHEP Coordinator for Nkwanta South District reported that they were not adequately consulted in implementing the school water supply facility for Ofosu D/A Junior High School, which was taken over by local community members and is no longer used by the school. They stated that they first heard about the facility following the completion of construction. They indicated that informing them would have helped them plan appropriate community sensitisation activities before completing and handing over, and that this would have reduced the possibility of community takeover. Furthermore, they believe the period would allow them to assess other community WASH needs to help them plan for interventions.

School-based water facilities complied with public health standards. All four assessed facilities comply with national standards regarding siting (being located 50 metres from the nearest sanitation facility and open water or potential pollution source) and are not at risk of flooding. Both facilities being utilised by their respective schools had a sanitary surrounding, with drainage controlled to minimise standing water and control disease vectors. Some negative scores were found in this area;³⁵ however, these are explained by the issues detailed above regarding the non-functionality of one facility and the community takeover of another.

The final two technical indicators focused on preventative maintenance and repairs. Two schools (50%) reported that they have a member of staff (i.e., caretaker) with the skills to perform preventative maintenance on their water supply facility. However, Brofoyedru Basic School in Ajumako Enyan Essiam District was the only school

³³ The one non-functional school water supply facility is, however, located in Ajumako Enyan Essiam District.

³⁴ This was Brofoyedru Basic School in Ajumako Enyan Essiam District, which, according to the Aguagenx CBT EC+TC water quality test contained a most probable number of 48.3. This is classified as 'High Risk / Probably Unsafe'.

³⁵ Specifically, this related to whether the facilities had a sanitary surrounding and whether drainage was controlled.

with the tools and equipment available to perform preventative maintenance. **Only Brofoyedru Basic School reported that preventative maintenance was performed on the school-based water supply facility.** None of the schools visited had a member of staff capable of performing basic repairs on their school-based water supply facility. **However, most schools (75%) reported that a local private operator or area mechanic was available to support the school in the event of a breakdown, and all these schools reported that their services could be obtained within three days.** All four schools reported that spare parts could be obtained within three days.

Box Six: Regular preventive maintenance of Brofoyedru Basic School water supply facility

The School-Based Health Coordinator for Brofoyedru Basic School (Ajumako Enyan Essiam District Assembly) has the requisite skills and tools to perform preventative maintenance on the hand pump. He reportedly performs preventative maintenance on the facility every three months. Given the financial constraints that schools face, it is necessary to ensure that a member of staff is trained and equipped to perform regular preventive and minor repairs (see Sub-Section 7.4.3. for the recommendation on this).



4.3.5. Environmental

The environmental factor scored moderately at the national level (49) and extremely poorly at the district level (0). These assessed indicators and sub-indicators focused on the same areas as for community water supply, albeit with a focus on school water supply. Slightly different scores were found because of small variances in performance between districts; however, the write-up provided for the environmental factor for community water supply (see Sub-Section 4.2.5.) is equally applicable for school water supply.

4.4. School Latrine Blocks

The RI-USAID WASH Partnership programme constructed 159 school sanitation facilities. Twenty-six of these were assessed across six districts and municipalities: Ga South; Shai Osudoku; Bole; Amenfi Central; Ayensuano; Ajumako Enyan Essiam. Figure 19 details the factor level scores from across the 26 assessed school latrine blocks. Similarly to the respective scores for communal and school water supply interventions, it highlights high scores for the institutional (84) and technical (73) factors, moderate scores for the management (50) and financial (46) factors and a poor score for the environmental factor.

Figure 19: School Latrine Blocks – Factor Level Scores

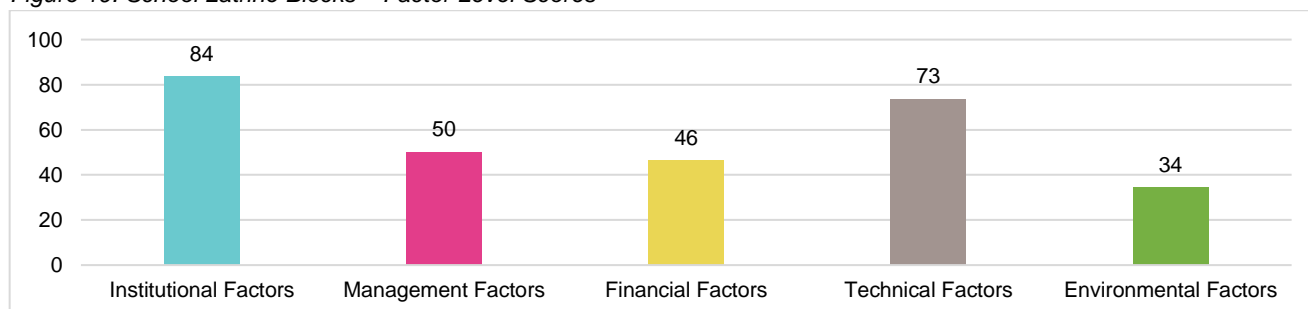


Figure 20 plots the factor level scores for each of the 26 assessed school latrine blocks.

Figure 20: School Latrine Blocks – Factor Scores per Intervention

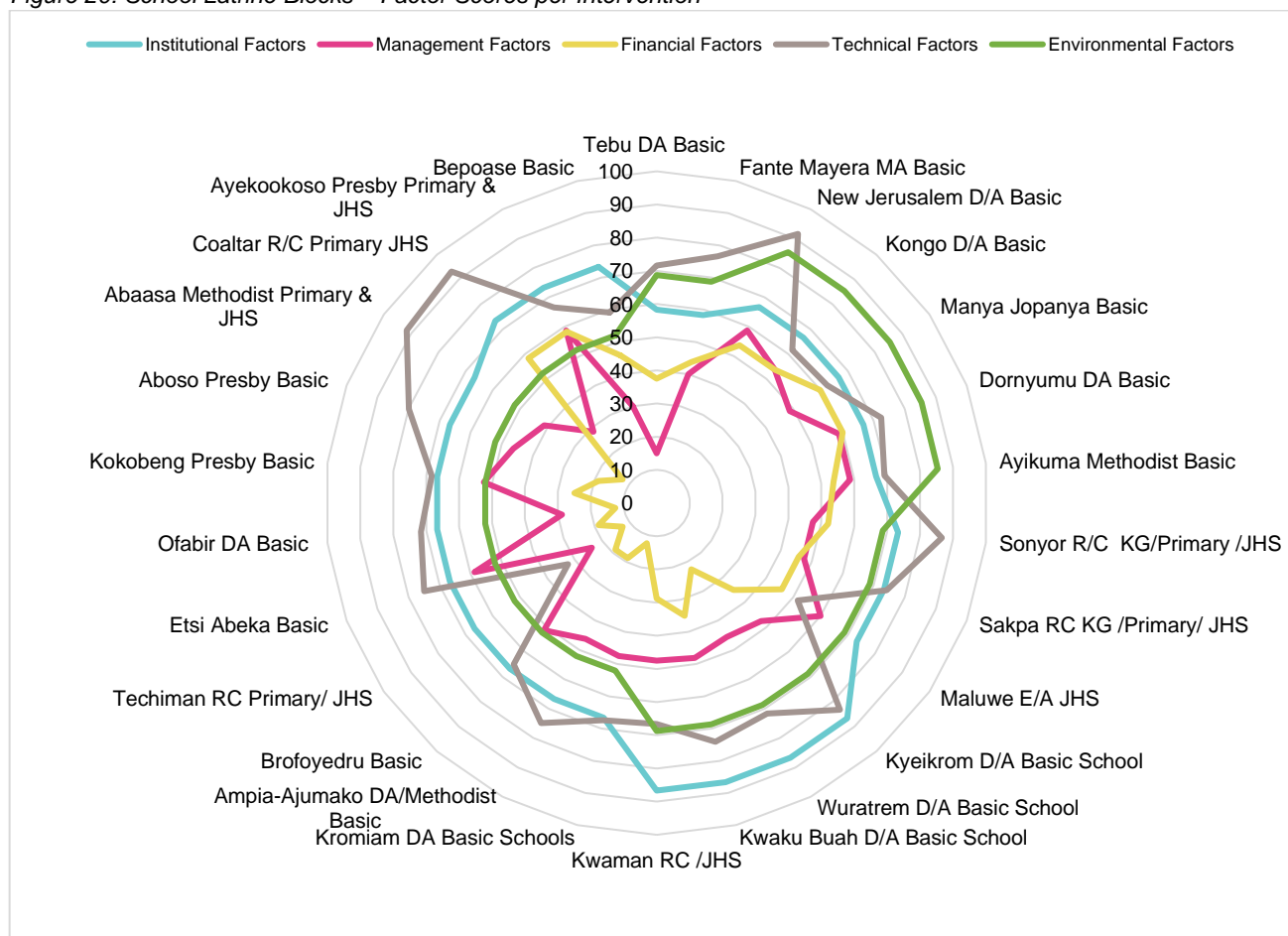
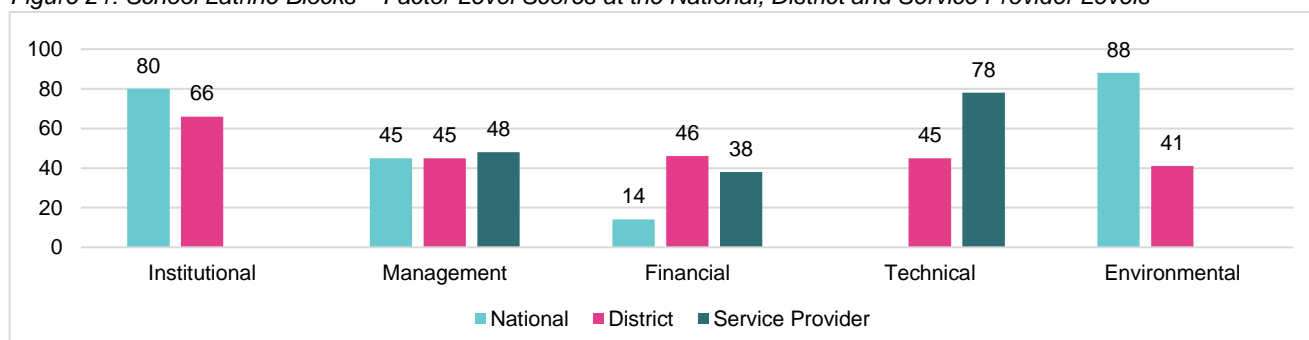


Figure 21 presents the scores for the institutional, management, financial, technical and environmental factors aggregated to the national, district and service provider levels. It highlights good performance at the national level for institutional and environmental factors, the district level for the institutional factor and the service provider level for the technical factor. Many of the factors are scoring moderately to poorly, and a key area of concern is the financial factor at the national level.

Figure 21: School Latrine Blocks – Factor Level Scores at the National, District and Service Provider Levels



4.4.1. Institutional

The institutional factor scored comparatively well at the national (80) and district (66) levels. At the national level, this reflects the fact that there are relevant national policies and guidelines on school-based sanitation,³⁶ an institution (the SHEP Unit of the Ghana Education Service) dedicated to school sanitation and clearly defined institutional mandates for stakeholders at the national, regional, district and school levels. The one area for improvement identified at this level concerns the effectiveness of coordination. This relates to coordination

³⁶ Of note, the Technical Guide for WASH in School Facilities and the National Implementation Model for WASH in Schools.

between MSWR, the Ministry of Health and Ministry of Education regarding the policy framework for school sanitation as well as CWSA, Ghana Health Service and Ghana Education Service for the implementation of school-based sanitation policies.³⁷

Two district-level indicators were assessed. The first focused on whether Assemblies and Municipal and District SHEP Coordinators have clear roles and responsibilities for supporting schools with sanitation facility use and maintenance, which scored very well (98). **This reflects how roles and responsibilities in this area are clearly defined and understood by Assembly staff and SHEP Coordinators in all MMDAs visited.** Ga South Municipality was the only MMDA where Assembly staff were not actively supporting school sanitation facility use and maintenance, although activities were conducted by the Municipal SHEP Coordinator. The second indicator focused on the presence of licensed, monitored and regulated septage hauliers/desludgers in each District. This scored poorly (34) as most Municipal and District Assemblies do not license septage hauliers/desludgers (zero of six surveyed), monitor septage hauliers/desludgers activities (one of six) or penalise those caught breaching rules and regulations (two of six).³⁸

4.4.2. Management

The management factor scored moderately at the national (45), district (45) and service provider (48) levels. **Assemblies and District or Municipal SHEP Coordinators do not receive sufficient ongoing support from the national and regional levels.** All consulted Assembly personnel and Municipal and District SHEP Coordinators reported that appropriate personnel had received training to support schools in sanitation facility use and training.³⁹ However, personnel in only one Assembly (17%) reported that they receive regular refresher training on school sanitation issues and only two District SHEP Coordinators (33%) stated that they received refresher training. Moreover, in all six Assemblies, personnel reported that sufficient financial and human resources are not provided down to the district-level to enable staff or District and Municipal SHEP Coordinators to adequately support school sanitation facility use and maintenance.

District-level actors are monitoring school sanitation facility use and maintenance. An impressive 21 of the 26 (81%) schools reported that they received monitoring visits from their Assembly or District / Municipal SHEP Coordinator every six months.⁴⁰ **However, monitoring of school sanitation facility use and maintenance often fails to translate into substantive support being provided to schools.** Only eight schools (31%) reported that support was actually provided following monitoring activities, and only three schools (12%) had received support within a week of a request or issue being identified. The challenge of backing monitoring activities up with more tangible support is linked with resource constraints at the district-level (see Sub-Section 4.4.3.) and should be a focus of future RI-USAID WASH Partnership activities at the district-level (see Sub-Section 6.4.1.). In several Districts and Municipalities, the following further points (not captured in the SIT framework) were raised:

- i. Contractors responsible for constructing school latrine blocks were not engaged together with the technical teams in Municipal and District Assemblies. This reportedly created challenges for Assembly staff to monitor and hold contractors accountable when issues with the construction of facilities were identified.
- ii. Municipal and District staff were generally not involved in post-construction assessments, which they reported created challenges in identifying any issues with the facilities in the early stages.

Impressive management structures and practices for sanitation issues exist within assessed schools. Several positive statistics highlight this:

- 23 assessed schools (88%) had school management committees responsible for managing the latrine block.

³⁷ While the national technical working group on water and sanitation met five times in the last year and touches on issues pertaining to school sanitation, effective coordination for the implementation of these policies is projectized and mainly only occurs as a part of a large programmes (i.e., the ongoing UNICEF/Government of Ghana WASH programme).

³⁸ The licensing aspect of this indicator is a somewhat harsh reflection of the situation. Except for Ga South Municipality, none of the districts have desludgers or hauliers – they are usually reliant on ones from neighbouring districts or municipalities when there is a need.

³⁹ Assembly personnel in five of the six Assemblies (83%) and all consulted Municipal and District SHEP Coordinators stated that this training included the principles and practices of behaviour change communication.

⁴⁰ This compares favourably to the comparable 2012 assessment, where just 56% of schools reported that they were monitored by such actors every six months.

- 24 schools (92%) had school health clubs.⁴¹
- Functional school health clubs meet regularly, typically either weekly (11), fortnightly (5) or monthly (6).
- 23 of the school health clubs (96%) have elected executives, and 14 (59%) have developed bye-laws covering aspects such as key sanitation and hygiene practices, attendance of school health club meetings, cleanliness of the school, and sanitation and hygiene messaging to other pupils as well as the broader community.
- 22 of the school health clubs (92%) have developed and implemented a programme of activities, covering areas such as school and community clean up exercises, quizzes and debates within the schools, and sensitisation of school pupils and the wider community by local nurses on sanitation and hygiene-related issues (i.e., menstrual hygiene, reproductive health).
- 21 schools (81%) had facility management plans in place. These cover specific issues, including responsibilities for cleaning sanitation facilities, maintenance and minor repairs, provision of cleaning supplies and sanitation and hygiene materials (i.e., soap, toilet paper), and fund mobilisation.
- 19 schools (73%) had a SHEP action plan covering sensitisation and sanitation and hygiene messaging
- 19 schools (73%) had integrated WASH messages into the curriculum.

These findings represent a substantive improvement in the management structures put in place by the RI-USAID WASH Partnership programme for school latrine blocks compared to the Phase One IH₂OC programme. While 92% of the current RI-USAID WASH Partnership facilities had a functional school health club, the comparable 2012 assessment that was conducted soon after the implementation of the Phase One IH₂OC programme found that only 67% of schools had a school health committee or club. Box Seven details positive findings in this area for several schools.

It is not possible to make broad inferences about the impact of these improvements on the functionality of school latrine blocks and service levels provided because only two of the 26 assessed school latrine blocks are functioning sub-optimally. **However, the limited available data indicates that these important improvements in school management structures and behaviours are positively correlated with improved functionality and service levels of school latrine block facilities.** One of the two schools with a latrine block functioning sub-optimally does not have a school health club or facility management plan. Additionally, in both cases where the school latrine block met none of the service level indicators, there was either no dedicated committee or administrative body managing sanitation issues at the school or no school health club. While based off a very small sample size, these points are illustrative as only three schools did not have a dedicated committee or administrative body managing sanitation issues at the school and only one did not have a school health club.

The above-cited management structures are not currently sufficiently reflected in the SIT's indicator and scoring for the management factor at the service provider level;⁴² future SIT applications should ensure a greater focus on these. Despite these improvements, the management factor scored moderately at the service provider level (48) because of consulted school SHEP focal persons and headteachers' limited understanding of their school's pit emptying responsibilities.⁴³ On a more positive note, 23 schools (88%) reported that the main suppliers of consumable supplies (i.e., toilet paper, cleaning supplies) were clearly defined. This finding can be linked to the positive findings related to the management structures and practices put in place by the RI-USAID WASH Partnership programme.

4.4.3. Financial

The financial indicator scored very poorly at the national level (14), moderately at the district level (46) and poorly at the service provider level (38). **Mechanisms are not in place at the national or district levels to meet full life-cycle costs beyond schools' budgets, with only very limited national funds available to**

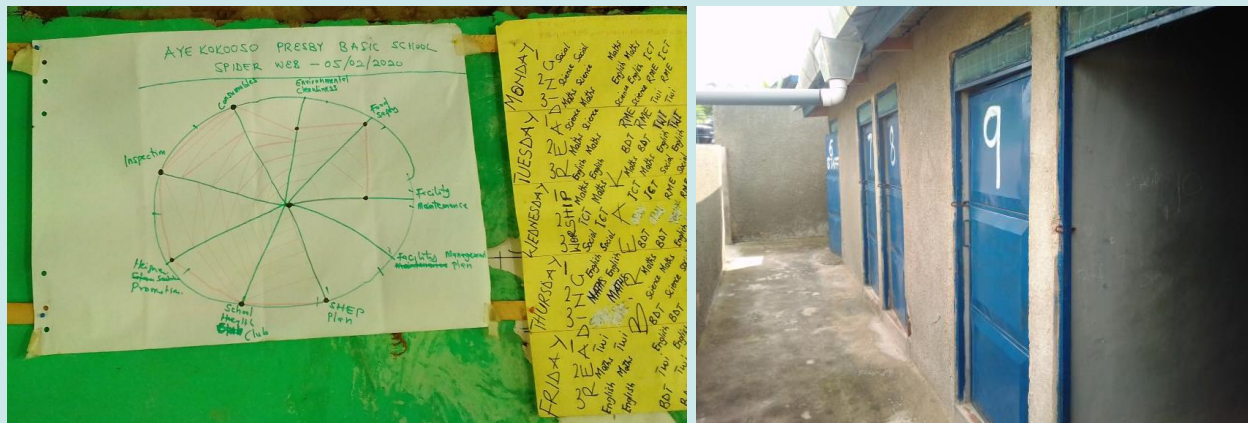
⁴¹ The three schools where school management committees were not in place all reported that no attempts had been made to form such an administrative body. The two schools without a school health club noted that it stopped functioning following a lack of interest from the school children.

⁴² The only sub-indicator in this area is whether there is a dedicated committee or administrative body that manages sanitation issues at the school; however, several more detailed supplementary areas of investigation were conducted for this study.

⁴³ Only five of the 26 assessed schools (19%) reported that pit emptying or desludging services were locally available, highlighting a limited awareness of these services that are available in most districts and municipalities. Moreover, only 10 schools (38%) appreciated that it was their responsibility to empty the pits of the school latrine blocks and none of the schools had a plan or schedule in place for pit emptying. It is also important to note that several of the sub-indicators in this area are somewhat harsh – albeit still important – as the implemented school toilets are designed in such a way that they generally do not require emptying for a substantial period (i.e., around three years).

Box Seven: Benefits of improved school-level management structures

At Ayekokooso Presby Primary and Junior High School, there is strong engagement between the head teacher and School Management Committee (SMC). The SMC pays regular visits to the school and uses its influence to solicit support for the school. The head teacher had made copies of the WASH in School guide and shared with the pupils. The School Health Committee and School Health Club also have copies of the Facility Management Plan.



Similarly, Techiman RC Basic School and Brofoyedru DA Basic School have also developed comprehensive School WASH Plans to ensure proper operation and maintenance of school water and toilet facilities and improve general environmental sanitation in the schools.

School: TECHIMAN CATHOLIC BASIC	District: A.E.E
Month: OCTOBER	Year: 2019

ACTIVITIES (based on identified problems)	WHEN TO DO IT (Date & Time)	HOW	PERSON RESPONSIBLE	RESOURCES NEEDED	EXPECTED OUTPUT
Creation of dumping site for the school	End of the first term	Pick axes, Shovel etc.	Chief and elders.	Available Land	By the close of the term
Monitoring of Food Vendors	daily	Draw monitoring roster	Food Vendors and School	Paper and Pen for record keeping	Daily Monitoring
Cleaning around the borehole	daily	Draw monitoring roster	Pupils and teachers	Scrubbing brush, brooms and cutlass	Weekly
Cleaning and maintaining school facilities such as	daily	Draw duty roster	Pupils and teachers	Scrubbing brush, brooms, cutlass and water	Daily Monitoring

School WASH Action Plan

Institution: BROFOYEDRU D/A BASIC	District: AJUMAKE ENTARI ESRAM
Month: JANUARY - MARCH	Year: 2019

ACTIVITIES (based on identified problems)	WHEN TO DO IT (Date & Time)	HOW	PERSON RESPONSIBLE	RESOURCES NEEDED	EXPECTED OUTPUT	REMARKS
Create school solid waste disposal pit	8/01/19 - 16/01/19	School labour	SHHC/Compound Prefect	Pickaxes, Shovel, spade	One biologically safe pit in place	
Education on Hygienic transportation, storage and use of water	8/01/19 - 4/04/19	School labour	Headteacher, SHHC, Compound Prefect	WASH Manuals, Scarves, cloths	Equipments for transporting and storage of water will be cleaned, existing cloths	
Provision of essential materials and equipments for WASH activities	9/01/19 - 28/3/19	Through PTA meetings	School Health Committee	Gallons, Toilet rolls, soap, etc.	Use of appropriate materials	
Food Hygiene & Safety	17/01/19 - 17/01/19	Meeting with the school	School Health Committee	WASH facilities, Cuppy, Taps, etc.	Vendors prepare and serve food under hygienic conditions	

support schools.⁴⁴ Only two of the six surveyed Assemblies (33%) reported that supplementary funds are available at the district level. In both cases, it was acknowledged that these resources were insufficient to support the schools within their jurisdictions to maintain their sanitation facilities properly. Sufficient resources are also not provided to the district level to support school sanitation.

District level indicators focused on whether Municipal and District Assemblies have sufficient human, financial and material resources. **Surveyed District and Municipal Assemblies largely had sufficient human resources.**⁴⁵ In four of the six cases, Assembly staff and SHEP Coordinators noted that the number of staff in the Assembly's EHSU matched the number outlined by governmental standards and a municipal or district SHEP Coordinator was in post. Moreover, in all six Districts and Municipalities, staff were reported to have the relevant qualifications and skills. **However, critical challenges were found regarding the financial and material resources available to Assembly personnel and SHEP Coordinators to perform their support**

⁴⁴ The capitation grant of GHC10.00 per pupil per year is woefully inadequate. An analysis done under the GAMA Sanitation and Water Project estimates that, an amount of GHC45.00 pupil per year would be required to operate and maintain a six-seater water closet toilet used by between 300 and 350 pupils (CONIWAS, 2019).

⁴⁵ The indicator focused on human resources at the district level scored 75 out of 100.

functions.⁴⁶ This is a key area of concern that future RI-USAID WASH Partnership programmes should pay greater attention to (see Sub-Section 6.1.1.). In only two Districts (Shai Osudoku and Ayensuano), staff reported that sufficient budgets were allocated to provide the necessary support to schools. Moreover, in none of the Districts did staff state that budget allocations were released when required for supporting schools. None of the Assembly staff and District SHEP Coordinators reported having sufficient material capacity (i.e., vehicles, computers).

The service provider financial indicator focused on whether schools can meet long-term operational, minor maintenance and capital maintenance expenditures. Only 11 surveyed headteachers and school SHEP focal persons (42%) displayed a sufficient understanding of the key long-term operational costs of the school's latrine block (e.g., toilet paper, soap, cleaning agents, expenditure on labour, electricity, minor repairs). Moreover, only nine schools (35%) are budgeting for long-term capital maintenance costs and just three of these (12%) either keep funds for long-term capital maintenance costs separate from other funds or specifically track these funds. On a more positive note, 17 schools (65%) are managing to ensure the availability of consumable supplies (i.e., toilet paper, cleaning supplies), often with parents covering certain ongoing costs at the beginning of term.

So far, there have been only a limited number of failings in the school latrine blocks that require substantive repairs to be performed. **However, the challenges at the national, district and service provider levels create a critical issue when breakdowns occur, and repairs are required.** The financial resources provided to schools through the capitation grant to cover issues pertaining to sanitation (just 0.80 GH¢ (equivalent to US\$ 0.14) per student per year) are widely viewed as insufficient,⁴⁷ and therefore schools are forced to rely on monies raised from other (often unreliable) sources. Consequently, schools are generally unable to budget for long-term capital maintenance, and Assembly staff and SHEP Coordinators struggle to provide necessary financial support.

4.4.4. Technical

The technical factor scored moderately at the district level (45) and well at the service provider level (78). The one district-level indicator focused on the availability and accessibility of goods and services for the maintenance and repair of school sanitation facilities to schools. Twenty of the 26 surveyed schools (77%) noted that consumables and equipment for repairs for sanitation facilities are available within their district or municipality. However, only 13 schools (50%) stated that consumables and equipment for repairs were affordable and accessible to the school; this drop-off rate illustrates the impact of the significant financial issues detailed above. Moreover, only ten schools (38%) were aware of private operators providing maintenance or repair services to schools within their district, and only three (12%) stated that these services were affordable.

Several technical indicators were assessed at the service provider level. The overall high score for the technical factor at the service provider level reflects the general quality of construction and schools' performance of key responsibilities, although some pressing issues were identified. **School latrines were constructed in-line with design criteria needed for long-term and safe use, with the indicator focused on this scoring very highly (88).** All 26 assessed facilities were constructed with all the appropriate components, and all assessed facilities were suitable for schoolchildren (i.e., child-sized slabs/holes). However, in three instances (12%), the school sanitation facilities do not have a functional handwashing station.⁴⁸ In a further six cases (23%), the handwashing facility constructed with the intervention is currently non-functional, and the school has fashioned a tippy-tap or bucket system, often far from the sanitation facility.

School latrine blocks were constructed, and are being maintained, in line with environmental health guidelines. The indicator focused on this scored very well (92). Twenty-four of the 26 assessed sanitation facilities (92%) comply with the national guideline that they are located greater than 30 metres from a water source, while 22 (87%) of the facilities were found in a sanitary condition at the time of inspection (i.e., all cubicles and surrounding area free faecal matter and urine, flies, used anal cleansing material, and generally

⁴⁶ The indicator focused on financial and material resources at the district level scored just 17 out of 100.

⁴⁷ The capitation grant was introduced in Ghana in 2005 to facilitate the Millennium Development Goal of primary education for all. It is a subsidy paid by the government per student per term. It covers general stationery and management, office machinery, first aid, building maintenance, sports fee, culture fee, sanitation fee, postage, textbook user fee, practical fees, furniture maintenance and tools maintenance as well as machinery for technical schools and institutions. The breakdown of the capitation grant is as follows: general stationery and management and office machinery, GH¢ 1; first aid, 0.40 GH¢; building maintenance, GH¢1.50; sports fee, 0.80 GH¢; culture fee, 0.30 GH¢, sanitation fee, 0.80 GH¢; postage, 0.20 GH¢; textbook user fee, GH¢ 1.30; practical fees, GH¢ 3; furniture maintenance, 0.60 GH¢.

⁴⁸ Ten (38%) of the functional handwashing stations did not have a dedicated cleansing agent.

Box Eight: Cracked floors and walls and rusting metalwork

At the Kongo D/A Basic School in Shai Osudoku District, the toilet facility had developed deep cracks in the floors and the wall. In some parts of the structure, these cracks ran from the roof level to the ground. These cracks are likely to have developed due to the nature of the soils where the facilities have been sited. Some other structures on the school's compound had developed cracks (though not as severe as those observed on the toilet facility). A teacher remarked that the pupils are scared to use the facility because of the severity of the cracks.



For most of the school facilities, there was evidence of rusting metal works. This was visible mostly on the gates to the facility and the gates to the cubicles. Due to the rusting, some hinges of these gates and doors have broken off and the gates fallen off. Protective cages for the water storage tanks also showed signs of rusting.



odour free). All consulted SHEP focal persons and headteachers reported that septic tank, drain fields, soak pits, and latrine chamber registers were sealed and access limited.

Surveyed sanitation facilities are being very well maintained and properly used, with the indicator focused on the maintenance and use of school sanitation facilities scored very well (88). This represents a substantial and noteworthy improvement from the Phase One IH₂OC school latrine blocks, which, when assessed in 2012 using a comparable methodology, scored 25 for the same indicator. The improvements made in this can be linked to the management structures and practices put in place as part of this programme (see Sub-Section 4.4.2.).⁴⁹ Several statistics highlight the good performance in this area:

⁴⁹ One of the findings from the 2019 retrospective application of the SIT to school latrine blocks constructed under the Phase One IH₂OC programme was that the failure to ensure facilities were kept in a sanitary condition was linked to schools' failure to implement a regular cleaning programme. One of the primary recommendations of this study was the signing of facility management plans with schools and ensuring the functioning and active role of school health clubs.

- In 21 of the assessed schools (81%), 100% of students were reported to use the sanitation facility 100% of the time (in three schools, 75% of students were reported to use the sanitation facility 100% of the time).
- In 23 schools (88%), there is a regular cleaning programme that is documented, and cleaning supplies are currently available. In two additional schools, there is reportedly a cleaning programme in place, but cleaning supplies were not currently available.
- Furthermore, in 24 schools (92%), the cleaning programme includes the replenishment of anal cleansing materials.

Despite these noteworthy positive findings, some areas where improvements are warranted were found. In the first instance, issues were found concerning the overcrowding of facilities, with 14 assessed school latrine blocks (54%) not complying with the crowding criteria of no more than 50 users per each drop hole,⁵⁰ and only 10 facilities (38%) complying with siting criteria (no more than 30 metres from the school). **Additionally, while an impressive proportion of assessed sanitation facilities are fully functional and providing good service level, issues relating to the construction of the facilities still exist.** Substantial cracks were found in the walls and / or floor of five of the facilities (seemingly linked to the soil conditions) and issues were identified with the rusting and degradation of metal components (primarily doors, but also gates, disability rails and the rain gutter around the polytanks for collecting water) for many of the facilities. Box Eight illustrates challenges in these areas and the impacts this has had on the use of the sanitation facilities.

4.4.5. Environmental

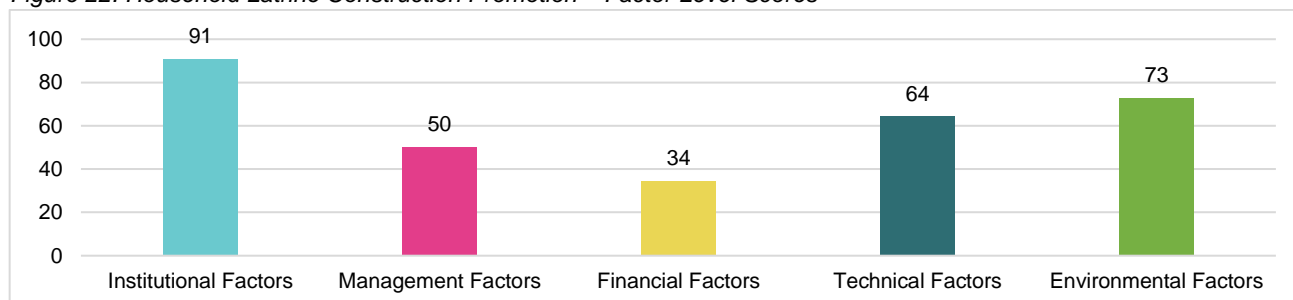
The environmental indicators scored well at the national level (88), but poorly at the district level (41). **At the national level, environmental protection standards and guidelines are in place.** Ghana's Environmental Protection Agency reviews strategic environmental assessments and environmental impact assessments for school sanitation projects to mitigate negative environmental impacts. Additionally, the CWSA Project Implementation Manual and CWSA Regulation 2011 include standards to protect the natural environment in the design, sizing, siting and construction of school sanitation facilities, while the 2010 Environmental Sanitation Policy contains a series of standards requiring the proper disposal and management of faecal waste. While these standards are publicly available and disseminated, further work is evidently required to ensure their proper enforcement.

Scores for the district level indicator 'natural resources are managed to support sustainable school sanitation service delivery' were highly variable between districts. Only one of the six surveyed Assemblies (Shai Osudoku District) have assessed the vulnerability of school sanitation services to climate-related impacts. Four Assemblies reported that they had incorporated climate-related adaption measures into the development of school sanitation services (i.e., design, siting). Steps are being taken by MSWR to collect and report sanitation data (including school sanitation) on an annual basis to help ensure sustainable school sanitation service delivery; however, the current system is only operational in six of Ghana's 16 regions.

4.5. Household Latrine Construction Promotion

The RI-USAID WASH Partnership programme worked to trigger household latrine construction using CLTS in 34 communities. This study assessed the prospects for the sustainability of this intervention in 13 communities across four districts: Shai Osudoku; Bole; Nkwanta South; Amenfi Central. Figure 22 displays the factor level scores from across the assessed interventions. It highlights good scores for the institutional (91), environmental (73) and technical (64) factors, a moderate score for the management factor (50) and a low score for the financial factor (34).

Figure 22: Household Latrine Construction Promotion – Factor Level Scores



⁵⁰ 13 of these 14 facilities also did not provide one drop hole per female school child.

Figure 23 plots these factor level scores per each community where household latrine construction promotion activities were assessed.

Figure 23: Household Latrine Construction Promotion – Factor Scores per Community

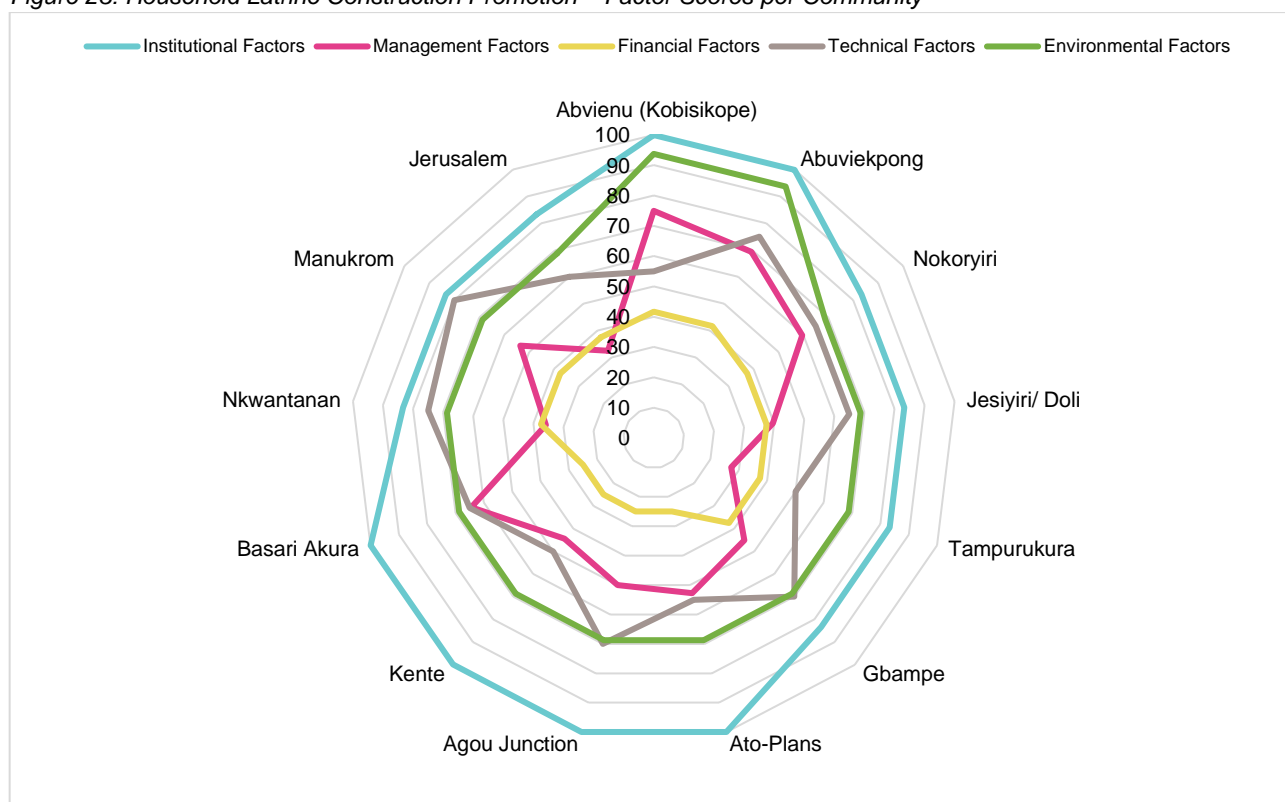
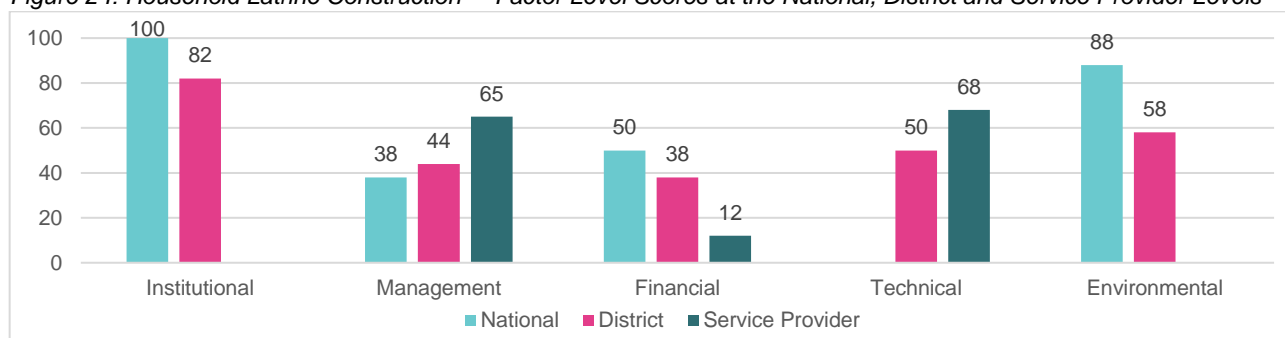


Figure 24 presents the scores for the five factors for the household latrine construction interventions disaggregated to the national, district and service provider levels. It highlights very strong performance at the national level for the institutional (100) and environmental (88) factors as well as at the district level for institutional factor (82) and the service provider level for the management (65) and technical factors (68). Moderate scores are found at the national level for the financial factor (50), and the district level for the management (44), technical (50) and environmental (58) factors.

Figure 24: Household Latrine Construction – Factor Level Scores at the National, District and Service Provider Levels



4.5.1. Institutional

The institutional factor scored well at both the national (100) and district (82) levels. The high score at the national level is attributed to the fact that the MSWR has a clear mandate for leading household latrine promotion and provides policy direction to that effect. MSWR's Environmental Health and Sanitation Directorate (EHSD) is responsible for coordinating of policies, programmes and projects in the sub-sector. There is also a National Environmental Sanitation Policy (revised 2010), the National Environmental Sanitation Strategy and Action Plan (NESSAP-2010) and the Rural Sanitation Model and Strategy (RSMS) (2012) among others, which guide the implementation of activities and interventions in the sub-sector. The policy defines clear institutional mandates for household sanitation promotion.

The district-level institutional indicator focused on roles and responsibilities at this level. In the first instance, personnel in all four District Assemblies stated that there were formalised roles and responsibilities for the Assembly regarding household latrine construction promotion and ongoing support to ensure proper use and maintenance. However, personnel in Amenfi Central District (Western Region) stated that these roles and responsibilities are not written down or accessible. In Bole District (Savannah Region), personnel acknowledged that the Assembly's roles and responsibilities were not understood by all Assembly personnel involved in promoting household latrine construction and proper use.

4.5.2. Management

The management factor scored poorly at the national level (38), moderately at the district level (44) and well at the service provider level (65). One national-level management indicator was assessed. This relates to the provision of capacity support to WASH staff at the Assembly level. Even though the relevant Assembly staff are trained to facilitate household latrine promotion, there is no systematic effort to ensure regular refresher training or follow-up. Training and refresher training of staff to support and facilitate household latrine construction, use and maintenance has been mostly project-based.

Three management indicators were assessed at the district level, the performance of which varied considerably. The first indicator focused on whether there is a district sanitation plan – this scored poorly (15). Shai Osudoku was the only district to have a district sanitation plan that includes social marketing principles and was developed with the participation of the Environmental Health and Sanitation Unit. The second indicator assessed whether Assembly staff carry out regular monitoring of sanitation facility use and provide support where needed. This scored well (75), with Bole District being the only one not to perform key responsibilities in this area. All four surveyed Assemblies have a household sanitation monitoring plan covering issues such as sanitation facility use and the status of infrastructure. **Except for Bole District, Assemblies are monitoring household latrine use and practices periodically (i.e., every six months).** Assembly staff are, however, only ensuring the continued promotion for the use of sanitation facilities in Shai Osudoku and Nkwanta South districts. In Shai Osudoku, Amenfi Central and Nkwanta South District, monitoring data is reportedly used to inform future sanitation planning. In Bole District, Assembly personnel acknowledged that this is only partially done.

The final district-level indicator focused on whether there is monitoring and follow-up support to community sanitation and hygiene promoters, including training. This scored moderately (40). All four surveyed Assemblies have a designated unit responsible for support and managing sanitation and hygiene promoters. **However, only four of the seven community sanitation and hygiene promoters that remained in post (57%) reported that their activities were monitored, and just one (14%) indicated that support was provided following monitoring.** Moreover, only three of the consulted community sanitation and hygiene promoters (43%) stated that support was available from the Assembly, and five (71%) that refresher training was provided annually.

Two service provider indicators were assessed. The first of these investigated whether community sanitation and hygiene promoters are in place, monitoring households' sanitation practices and providing follow-up support – including refresher training – where required. This scored moderately (40). **In six of the 13 communities visited (46%), the community sanitation and hygiene promoters trained under the programme have left their posts.**⁵¹ The second indicator focused on households' understanding of their responsibility for pit emptying or decommission the facility and construct a new household latrine. This scored very strongly, with only 22 of the 188 consulted household heads (12%) being unaware of this responsibility. For the most part, households understood that it was their responsibility to ensure the emptying of latrine pits or decommissioning/reconstruction. However, in Nkwantanang community (Amenfi Central District) most households stated that this was Rotary or USAID's responsibility. One-hundred and forty-six of the consulted households planned to decommission their facility and construct a new one when their latrine pit filled-up, while 42 planned to have the pit emptied. Of these, only 14 (33%) stated that pit emptying services were locally available.⁵²

4.5.3. Financial

The financial factor scored moderately at the national level (50), poorly at the district level (38) and extremely poorly (12) at the service provider level. Budgeting is done at the national level to support the promotion and

⁵¹ While disappointing, a higher percentage of community sanitation and hygiene promoters remained in their position in communities where household latrine construction promotion interventions were conducted (54%) compared to communities where only hygiene and handwashing promotion activities were performed (44%).

⁵² As the household sanitation facilities were all constructed in rural contexts, there was pretty much always sufficient space available to decommission the facility and construct another.

construction of household latrines particularly in poorer communities. Such funding, however, is not specifically allocated to District Assemblies. The Assemblies are required as part of their composite budgeting to budget and allocate funds for environmental sanitation activities including household latrine promotion using funds from various sources (i.e., District Assemblies Common Fund, Internally Generated Funds among others). Sufficient funds are however not allocated and released to the EHSUs to enable them to undertake rigorous and continuous household latrine promotion and supervision.

District level indicators focused on whether District Assemblies had the requisite human, financial and material capacity to fulfil support functions relating to household sanitation. The first indicator scored well (75) and focused on the human resources available. Assembly personnel in two of the four Assemblies visited (50%) noted that the number of staff available in the Assembly's EHSU did not match the number outlined by government guidelines. However, in all four Assemblies, the staff of the EHSU's had the expected qualifications and skills. The second district level indicator focused on the financial and material resources available to Assemblies. It scored extremely poorly (3) and highlighted similar critical issues to those found for the other intervention types assessed as part of this study. **Personnel in all four District Assemblies stated that budget allocations to the EHSU were not sufficient to provide the required support to communities or the work of the community sanitation and hygiene promoter.** Staff in Shai Osudoku District stated that budget allocations were sometimes released when required; however, in all other districts, it was acknowledged that budget allocations were not released when required. Finally, in all four districts, Assembly personnel stated that they did not have sufficient material capacity (i.e., vehicles, computers, data collection devices) to support household latrine construction or sanitation promotion activities.

Critical challenges were also found for the assessed financial indicator at the service provider level, which investigated whether households could meet long-term capital maintenance expenditures. In only three of the 13 communities visited (23%) did a two-thirds majority of households state they were saving to cover long-term capital maintenance costs of the sanitation facility. In total, 98 of 188 household heads stated that they were saving to cover these costs. Additionally, none of the four Municipal and District Assemblies visited have programmes in place to support low-income households meet the financial costs of maintaining their sanitation facility.

4.5.4. Technical

The technical factor scored well at the service provider level (68) and moderately at the district level (50). The district level indicator looked at whether goods and services for the maintenance and repair of sanitation facilities are available and accessible. **Except for Amenfi Central District (Western Region), Assembly personnel stated that there are private operators in the district providing support for sanitation services, for example, performing maintenance or repairs and selling spare parts.** However, it was only in Nkwanta South District that Assembly personnel deemed private operators' services to be affordable to most households. None of the four districts visited have mechanisms in place to improve the accessibility of private operators' services (i.e., payment programmes, micro-finance, subsidies).

Four technical indicators were assessed at the service provider level, all of which scored well. The first indicator focused on whether constructed household sanitation facilities complied with national standards and scored strongly (79). Household sanitation facilities were assessed against whether they had a slab with cover, vent with fly screen and a superstructure to ensure privacy. In five of the 13 visited communities (38%), a two-thirds majority of household sanitation facilities complied with all three criteria. In a further seven communities (54%), a two-thirds majority of facilities complied with two of the three criteria.⁵³ **Overall, 76% of facilities were found to have a slab with cover, 78% a vent with fly screen and 92% a superstructure to ensure privacy.**

Table Four in Sub-Section 3.4. provides a more detailed overview of the performance of household sanitation facilities against key indicators. The quality of constructed household latrines was generally better in Shai Osudoku (Greater Accra Region) and Amenfi Central (Western Region) districts compared to Nkwanta South (Oti Region) and Bole (Savannah Region) districts. In all 13 communities visited, a two-thirds majority of household sanitation facilities met crowding criteria (no more than 25 users). In total, only 63 of the 188 surveyed household heads (34%) stated that the household sanitation facility was used by people outside of their household on a regular basis, and only three household sanitation facilities (1%) did not meet the crowding criteria.

⁵³ Particularly good performance was found in Nwantanan (Amenfi Central District), Manukrom (Amenfi Central), Agou Junction (Nkwanta South), Abuviekpong (Shai Osudoku), and Gbampe (Bole). Conversely, poor performance was found in Jerusalem (Amenfi Central).

Some households complained of collapsing household latrines following heavy rainfall events (and sometimes floods) due to the materials used for construction and the nature of the soils in their communities. For example, a WSMT member in Nkwanta South District lamented how he had to construct a third toilet because the first two collapsed.

The second service provider indicator investigated whether environmental health risk guidelines have been followed in the construction and use of household sanitation facilities. Overall, this scored well (65); however, a number of pressing issues were identified. **Fifty-two of the 188 household heads (28%) reported that their household sanitation facility was constructed in an area at risk of flooding.** This was particularly problematic in Nokoyiri, Jesiyiri and Tampurukura communities in Bole District and Ato-Plans community in Nkwanta South District. This indicator also assessed the following operations and maintenance practices to see whether households complied with national guidelines for minimising health risks: (i) latrine is cleaned regularly; (ii) anal cleansing material put in the drop hole/pit; (iii) small mound exists around the latrine to prevent rainwater accumulating and entering the pit; and (iv) inspection of latrine for cracks and other structural defects. **Nkwantan and Manukrom were the only communities where a two-thirds majority of households practised operations and maintenance that complied with all these criteria for minimising health risks.** In a further five communities (38%), a two-thirds majority of households complied with at least two of these four indicators. In total, 171 of 188 household heads (91%) stated that they were cleaning the latrine regularly, 120 (64%) that anal cleansing material was put down the drop hole / pit; 84 (45%) that they inspected the latrine for cracks and other structural defects; and 59 (31%) that a small mound exists around the latrine to prevent rainwater from accumulating around the latrine.

The third service provider indicator focused on whether household sanitation facilities are valued and used by all members of the household – this scored well (65). **A two-thirds majority of households in all communities understood the health benefits of having a household sanitation facility.** In only one community (8%) (Nokoyiri, Bole District) did a two-thirds majority of household heads report that household members used the household facility 100% of the time, while, in six communities (46%), a two-thirds majority of household heads stated that household members use the facility 75-99% of the time. In total, 18 (10%) household heads reported household members used the household sanitation facility 100% of the time, 82 (44%) 75-99% of the time, 46 (24%) 50-74%, 28 (15%) 25-49%, 13 (7%) 1-24%, and only one (1%) 1% of the time.⁵⁴

The final technical indicator investigated whether sanitation facilities are properly maintained and used to maximise health benefits. This also scored well (65). **One-hundred and twenty-two of the 188 surveyed households' (65%) had a handwashing station within ten metres of their sanitation facility.** Of these 122 households, 102 (84%) reported that they had a dedicated cleansing agent available at the handwashing station. Additionally, household heads for 123 of the 188 (65%) stated that anal cleansing material was present at the facility, while only 36 (19%) acknowledged that the household sanitation facility was not being kept in a sanitary condition (wall, floor and toilet seat free of urine and faeces; facility is generally odour free).

4.5.5. Environmental

The environmental factor scored very well at the national level (88) and moderately at the district level (58). The national indicator investigated whether environmental protection standards exist and are applied to household latrines. **Standards exist to protect the natural environment in the design, sizing, siting and construction of household sanitation facilities and the proper disposal and management of faecal sludge.** Roles and responsibilities are also clearly defined for the monitoring and enforcement of environmental impact mitigation standards for household sanitation facilities. However, while these standards are publicly available and disseminated, their enforcement is very limited.

The district-level environmental indicator focused on whether natural resources are managed to support sustainable WASH service delivery. Shai Osudoku District was the only one of the four Districts to state that vulnerability to climate-related impacts (i.e., droughts, heavy rainfall events and floods) had been assessed for household sanitation services. However, Assembly personnel in all four districts stated that climate-related adaption measures had been incorporated into the design of household sanitation services (i.e., sizing and siting of built infrastructure) implemented in their respective districts.

⁵⁴ This is largely a reflection of the fact that most of these communities are farming communities where their use of the facilities was limited only to the time they are back home from their farms.

4.6. Hygiene and Handwashing Promotion

Hygiene and handwashing promotion activities accompanied the community water supply interventions in the 70 communities they were implemented. This study assessed hygiene and handwashing promotion activities conducted in 25 communities. Figure 25 details the factor level scores for the institutional, management, financial and technical factors across all the assessed communities. It highlights good scores for the technical (78), financial (63) and institutional (61) factors as well as a poor score for the management factor (34).

Figure 25: Hygiene and Handwashing Promotion – Factor Level Scores

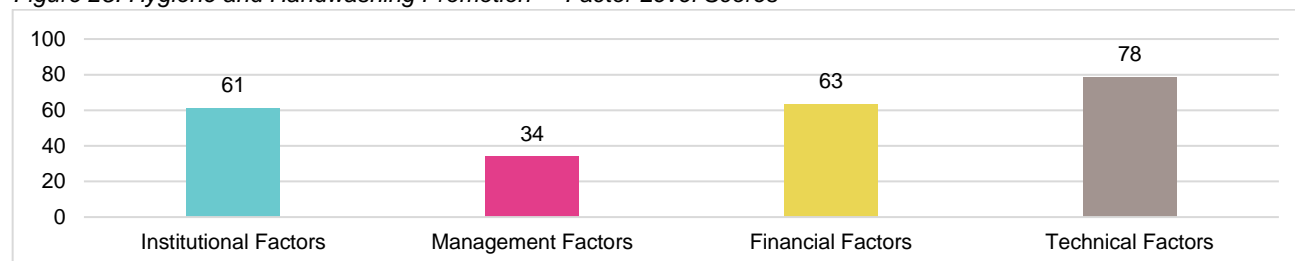


Figure 26 plots the four factor level scores assessed for hygiene and handwashing promotion for each community where this intervention type was assessed. It highlights a high degree of variability in the scores between specific communities, especially for the management and technical factors. This discrepancy is largely related to how many community sanitation and hygiene promoters have left their positions, varying levels of support and monitoring from Municipal and District Assemblies to community sanitation and hygiene promoters and communities themselves, as well as underlying differences in hygiene and handwashing behaviours between communities.

Figure 26: Hygiene and Handwashing Promotion – Factor Scores per Community

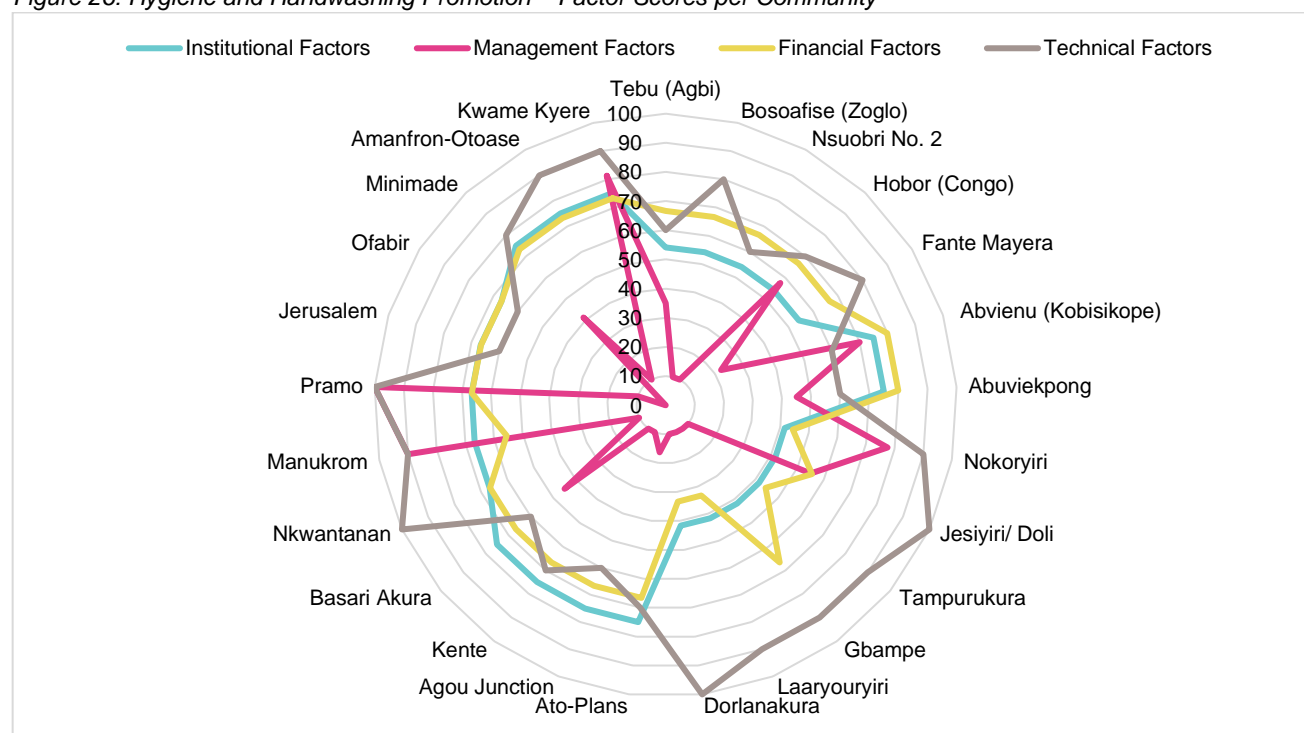
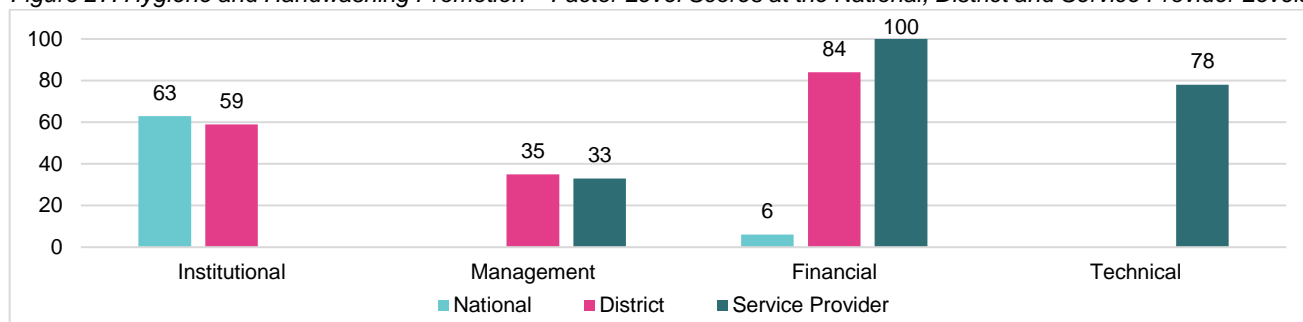


Figure 27 presents the factor level scores for the hygiene and handwashing promotion interventions disaggregated to the national, district and service provider levels. It highlights a significant disparity in the performance of different levels for different factors. High scores were found at the national level for the institutional factor (63), the district level for the financial factor (84) and the service provider level for the financial (100) and technical factors (78). Conversely, an extremely low score was found at the national level for the financial factor (6), while low scores were found for the management factor at the district (35) and service provider (33) levels.

Figure 27: Hygiene and Handwashing Promotion – Factor Level Scores at the National, District and Service Provider Levels



4.6.1. Institutional

The institutional factor scored well at the national level (63) and moderately at the district level (59). Two indicators were assessed at the national level, the first of which focused on whether hygiene and handwashing promotion are sufficiently recognised in government policy. The Environmental Sanitation Policy embeds a focus on hygiene throughout the CLTS approach, for example, including good hygiene practises as a key component without which communities cannot be fully declared open defecation free. Additionally, handwashing is one of the specific aims of the Environmental Sanitation Policy.

The second national level indicator focused on national hygiene promotion and behaviour change campaigns and scored moderately (50). Although there is a national hygiene promotion/behaviour change programme, hygiene promotion and behaviour change activities are mostly linked to discrete water and sanitation programmes and projects. A further issue identified at the national level is that data on hygiene education activities is not comprehensively collected or routinely analysed to inform decision-making. BaSIS is supposed to capture data on hygiene; however, it is currently only applied in nine of Ghana's 16 regions.

At the district level, the assessed indicator focused on whether support for hygiene promotion activities is provided by the Assembly and other agencies. There was a high degree of variability for this indicator – Ga South Municipality and Bole District both scored poorly, while the other five District Assemblies all scored very well. Four of the seven Assemblies (57%) stated that they liaised with relevant ministries and agencies (i.e., MSWR, Ministry of Health, CWSA, Ghana Health Service, Ghana Education Service) regarding hygiene promotion activities and worked with field staff from different agencies to deliver hygiene messages and coordinate hygiene education materials, training, support. Two municipalities and districts said they sometimes did this, and Bole District acknowledged that they never did this.

4.6.2. Management

The management factor performed poorly at the district (35) and service provider (33) levels, with a very high degree of variability between communities (see Figure 26). **This reflects the varying levels of support from Assemblies to community sanitation and hygiene promoters and that many community sanitation and hygiene promoters have left their posts.** The district level indicator focused on the extent of monitoring of community sanitation and hygiene promoters by Assembly personnel as well as the follow-up support provided. All seven MMDAs had designated units responsible for supporting sanitation and hygiene promoters; however, the levels of support provided were low. Several statistics highlight this:

- Only five of the community sanitation and hygiene promoters that remained in post (45%) reported that they were monitored by Assembly personnel, and just three of these stated that support was provided where required following monitoring.
- Only four community sanitation and hygiene promoters (36%) reported that support was available from the Assembly when requested,
- Only five community sanitation and hygiene promoters (45%) reported that they had received some form of refresher training following the initial RI-USAID WASH Partnership intervention.

The limited monitoring and support provided to community sanitation and hygiene promoters by Assemblies is a probable contributing factor to many community sanitation and hygiene promoters having left their posts.

At the service provider level, the assessed indicator focused on whether community sanitation and hygiene promoters remained in post and were actively performing their functions. **Just two to three years after most**

community sanitation and hygiene promoters were trained under the programme, only 11 of the 25 visited communities (44%) visited have a community sanitation and hygiene promoter. It was reported that some hygiene promoters had left their positions due to abuse from community members in the discharge of their duties. Box Nine provides an illustration of reasons why community sanitation and hygiene promoters left their positions, while Box 10 details an instance where the community sanitation and hygiene promoter left their post, but the WSMT took up these activities in their stead.

Box Nine: Community sanitation and hygiene promoter left their position because of verbal abuse:

In some communities, the WSMT reported that the community sanitation and hygiene promoter was sometimes verbally abused by community members when carrying out their duties. This situation demotivates them, and they become lax or even abandon their roles entirely. One WSMT observed that the voluntary nature of the work discouraged hygiene promoters from subjecting themselves to abusive community members. In Agou Junction (Nkwanta South District), hygiene promotion activities have been discontinued for about three years because of verbal abuse from community members, and this remains an ongoing issue impacting the WSMT.

A link exists between whether more expansive messaging was conducted in the community concerning household latrine construction promotion through the CLTS approach and whether the community sanitation and hygiene promoter remained in their position. In communities where CLTS was undertaken, 54% of community sanitation and hygiene promoters had stayed in post. Of the 11 community sanitation and hygiene promoters that stayed in their positions, seven (64%) regularly monitor household hygiene and handwashing behaviours, while three (27%) do so on an infrequent basis. Four community sanitation and hygiene promoters (36%) stated that they regularly provided support (including refresher training) to households following monitoring, while two (18%) acknowledged that they only did this on an *ad-hoc* or infrequent basis. Seven of the 11 community sanitation and hygiene promoters (64%) considered gender-specific messages in their activities.

The COVID-19 pandemic has increased the importance of good hygiene and handwashing practices. **However, three community sanitation and hygiene promoters acknowledged that the pandemic had caused them to substantially reduce their monitoring and support activities.** For example, in Minimade (Ayensuano District) and Basari Akura (Nkwanta South District) communities, household hygiene and handwashing practices were being monitored on a weekly basis with follow-up support being provided before the pandemic. However, the frequency of monitoring and support activities have now reduced significantly.

4.6.3. Financial

The financial factor scored very well at the district (84) and especially service provider (100) levels, but very poorly at the national level (6). **The national-level indicator scored particularly poorly because neither national nor district-level mechanisms are in place to meet the full costs of hygiene and handwashing promotion programmes (i.e., facilitator training and necessary resources).** In the first instance, only personnel in Ayensuano District stated that their Assembly budgeted for supporting hygiene promotion activities. Moreover, in all seven Municipal and District Assemblies, supplementary national funds were not available to the Assembly for hygiene and handwashing promotion, there are not social programmes in place at the national or district levels to provide low-income households with hygiene products and Assemblies did not have sufficient resources to conduct hygiene promotion activities (i.e., personnel, education materials).

The assessed district level indicator focused on the availability of soap and other hygiene products in local markets and their affordability. **Four-hundred and nineteen (93%) and 382 (85%) of the 450 household heads stated that soap for handwashing and anal cleansing materials (i.e., toilet paper) were available locally and affordable to the household, respectively.** Additionally, 178 of 236 female household heads (75%) stated that menstrual hygiene products were locally available and affordable. COVID-19 was found to have several impacts on the availability and affordability of hygiene products, which varied from community to community and even household to household. The most cited of these was the increased availability and costs of these products because of greater demand. At the service provider level, 425 of the 450 household heads (94%) reported that they were willing and able to purchase hygiene products including soap, and 421 (94%) stated that they had soap or another cleansing agent (i.e., ash) for handwashing available in the household at the time of the inspection.

Box 10: WSMT members take up hygiene promotion activities:

In Minimade community (Ayensuano District), the community sanitation and hygiene promoter trained under the programme relocated in 2018. However, the other WSMT members have taken up his responsibilities. They monitor households' sanitation and hygiene practices regularly and provide follow-up support such as training where required and have even assisted residents to install tippy taps on their compounds. Collectively, they spend around three days a month on sanitation and hygiene related activities, with activities being conducted every Thursday (a rest day in the community). Additionally, they requested several resources (i.e., dustbins to collect solid waste, materials to produce tippy taps for community members still lacking a sanitation facility) to help them perform their roles.



4.6.4. Technical

The technical factor investigated household knowledge and practice of correct hygiene and handwashing practices. **It scored well (78), given the generally good hygiene and handwashing practices found.** However, it is important to note that the results provided here are based on household heads' self-assessment of hygiene and handwashing practices, rather than a more detailed monitoring of specific hygiene behaviours. In all 25 communities, an overwhelming majority of household heads stated that they washed their hand using soap, with most households stating that COVID-19 positively impacted their handwashing practices. In 15 of the 25 communities visited (60%), a two-thirds majority of household heads displayed a good understanding of the important times to wash their hands, with 320 of the 450 household heads (71%) correctly identifying four of the six key times to wash their hands.⁵⁵ The most commonly correctly identified time was after using the toilet (448), followed by before eating (434), after social gathering (343), before preparing food (307) after cleaning infant's bottom (292), and before feeding infant (251).

Additionally, 440 of the 450 consulted household heads (98%) stated that the female (or male if no female) head of household actively promoted handwashing practices amongst household members. Sub-Section 3.5. provides a more detailed overview of household self-assessed handwashing behaviours. However, 68% of household heads reported that adult household members washed their hand at four of six key moments, while 33% stated that child household members did. Finally, an overwhelming majority of household heads stated that they practised safe water storage (that their water is stored in a clean covered container).

⁵⁵ These are after using the toilet, after cleaning infants bottom, before eating, before feeding infants, before preparing food and after social gathering.

5. ADVOCACY ACTIVITIES

This section presents data on the advocacy activities conducted by Rotary Ghana volunteers as part of the RI-USAID WASH Partnership. To briefly recap, this component of the Phase Two programme sought to influence several key areas, including: (i) promoting increased WASH financing; (ii) enhancing the sustainability of service delivery through capacity development of WASH stakeholders for effective operation and maintenance of services; and (iii) shining a spotlight on the importance of WASH.

At the time of data collection (October-November 2020), these activities remained ongoing and were just being restarted following significant disruptions caused by COVID-19. As of February 2021, these activities remain ongoing. However, at the time of data collection, several sets of activities had been conducted:

- Advocacy workshops for 40 core Municipal and District Assembly staff and 46 officers from Municipal and District Education Directorates focused on financing and WASH policies and their implementation.
- Leadership training sessions for 121 community leaders from 27 beneficiary communities in the Greater Accra, Eastern and Western Regions to empower them to advocate for their rights.
- Visits by Rotary advocacy volunteers to engage Assembly staff and service providers, with a focus on functionality and management performance, financing of WASH services, and post project monitoring.

This section focuses on the impact of activities in five of the seven visited Municipal and District Assemblies, as well as community WASH and school latrine blocks. Of the seven municipalities and districts visited for this assessment, advocacy activities were conducted in Shai Osudoku District, Ga South Municipality, Ajumako Enyan Essiam District, Ayensuano District and Amenfi Central District.

5.1. Community Water, Sanitation and Hygiene

Data was collected on the impact of advocacy activities on the 15 communal water supply facilities assessed in Ga South Municipality, Shai Osudoku District, Ayensuano District, Amenfi Central District and Ajumako Enyan Essiam District. **Only five of the WSMTs (33%) stated that a WSMT or community member had met with relevant Assembly staff to discuss topics such as their rights to WASH services or the roles and responsibilities of the Assembly.**⁵⁶

Additionally, seven WSMTs (47%) stated that advocacy activities had contributed to them holding community-level meetings more frequently to discuss WASH issues. In five communities, these meetings were now being held relatively frequently (i.e., three or four times a year), in one community they were held every month and in another they had previously been held monthly but had been stopped because of COVID-19.

Consulted WSMTs were asked what positive impacts the advocacy activities had on their functioning, the community's behaviour in relation to water supply service provision (i.e., willingness to pay tariffs) and the support available from their District or Municipal Assembly. **Most WSMTs noted that there had not been any substantial benefits seen in these areas. Instead, the reported benefits mainly centred on improved sanitation and hygiene practices in the community.** This included reduced dumping of solid waste around the community and increased participation in community clean-up exercises, improved sanitation practices with a reduction in open defecation, and improved hygiene and handwashing practices. Despite stating they had not benefitted from advocacy activities in relation to the levels of support received from their District or Municipal Assembly, WSMTs that benefitted from advocacy activities were monitored considerably more than those that did not receive any such support (see Sub-Section 5.3.).

Assessed communal water supply interventions that benefitted from advocacy activities had marginally higher SIT scores at the service provider level than communal water supply interventions that did not benefit from these activities. Annex Two provides an overview of the SIT indicators used for community water supply facilities.⁵⁷ The average SIT score at the service provider level across all five factors for community water supply facilities that benefitted from advocacy activities was 68. The same average score was 66 for the other community water supply the same interventions. Table Eight details a comparison of the overall scores for the

⁵⁶ These were Bosoafise (Zoglo) in Ga South Municipality (twice), Yaw Sarbengkrom in Amenfi Central District (three times) and Abuviekpong in Shai Osudoku District (twice).

⁵⁷ With the exception of the indicators of WT-CHP-T-S1 and WT-CHP-T-S2, all of the service provider indicators (those with an 'S' as the last section of the code are deemed to be highly relevant to indicating the impact of advocacy activities at the community / service provider level.

WSMTs that did and did not benefit from the programme's advocacy and leadership activities, as well as the scores for each of five factors assessed.

Table Eight: Community Water Supply – Impact of Advocacy Activities on Sustainability Index Tool Scores

	Community water supply facilities where the WSMT benefitted from advocacy activities	Community water supply facilities where the WSMT did not benefit from advocacy activities
Institutional	85	81
Management	63	69
Financial	50	50
Technical	79	73
Environmental	34	35
Overall	68	66

Specific service provider indicators where WSMTs that benefitted from advocacy activities scored better than those did not were:

- *Management*: Representative water committee actively manages water point with clearly defined roles and responsibilities (score of 92 vs. 83).
- *Financial*: Tariff setting complies with national/local regulations, including social tariff (score of 31 vs. 28).
- *Financial*: The water committee demonstrates effective financial management and accounting (score of 71 vs. 68).
- *Technical*: Hand pump complies with standards and norms in terms of siting and public health risk (score of 88 vs. 69).
- *Technical*: The knowledge and spare parts are available to perform repairs in a timely manner (score of 85 vs. 77).

For the most part, the gaps in the scores for the indicators are comparatively small, and it is necessary to be careful not to draw too broad inferences, especially when dealing with a modest sample size. However, for a couple of indicators (i.e., the 'hand pump complies with standards and norms in terms of siting and public health risk') the gap is relatively large, thereby strongly suggesting the positive impact of the advocacy activities.

5.2. School Latrine Blocks

Data was collected on the impact of advocacy activities on the school latrine block interventions for 16 schools across four districts: Shai Osudoku District, Ga South Municipality, Ajumako Enyan Essiam District, and Amenfi Central District. **Key benefits of the advocacy activities noted by school SHEP focal persons and headteachers included:**

- Providing a platform for the school to meet with opinion leaders to discuss and find resolutions to key sanitation issues at the school, for example, the utilisation of the school latrine by community members.
- The usefulness of training on proper sanitation facility use and maintenance in ensuring the ongoing operation of the facility.
- Improved handwashing habits of school children.

Assessed school latrine block interventions that benefitted from advocacy activities did, however, have slightly lower SIT scores at the service provider level than school latrine block interventions that did not benefit from these activities. Annex Two provides an overview of the SIT indicators used for school latrine blocks.⁵⁸ The average score at the service provider level across all five factors for school latrine block interventions that benefitted from advocacy activities was 61, while the same average score was 63 for the other school latrine block interventions. This is a very thin overall margin, especially considering the modest sample size. However, it does highlight that the advocacy did not have the overall impact in this area that was intended. Table Nine provides a comparison of scores between schools that did and did not benefit from the advocacy and leadership activities for each of the factors assessed.

⁵⁸ With the exception of the indicator SN-INS-T-S1, all the service provider indicators (those with an 'S' as the last section of the code) are deemed to be highly relevant to indicating the impact of advocacy activities at the community / service provider level.

Table Nine: School Latrine Blocks – Impact of Advocacy Activities on Sustainability Index Tool Scores

	Schools that benefitted from advocacy activities	Schools that did not benefit from advocacy activities
Institutional	65	69
Management	49	44
Financial	26	61
Technical	80	74
Environmental	66	61
Overall	61	63

Nevertheless, several service provider indicators scored better for schools that received visits from Rotary volunteers as part of the advocacy activities compared to those that did not. These were:

- *Management*: School understands responsibilities for operation and maintenance including pit-emptying/desludging and has capacity to manage this (score of 49 vs. 44).
- *Technical*: Sanitation facilities are constructed in-line with design criteria needed for long-term and safe use (score of 91 vs. 81).
- *Technical*: Environmental health risk guidelines exist and are followed (score of 94 vs. 89).
- *Technical*: Sanitation facilities are well-maintained and are being used (score of 96 vs. 74).

In most cases, these margins are moderate; however, there is a significant gap for the technical indicator 'sanitation facilities are well-maintained and are being used', indicating a notable positive impact from the advocacy activities in this important area.

5.3. Municipal and District Assemblies

No impact was found from the advocacy and leadership activities on Municipal and District Assemblies budget allocations or releases for WASH. However, for community water supply, areas of improved performance were found at the district level for the districts and municipalities that benefitted from advocacy activities compared to those that did not. The overall score for the district level indicators for Municipal and District Assemblies that benefitted from advocacy activities (45) was markedly higher than those Assemblies that did not (32).

Most notably, the levels of monitoring of WSMTs were substantially higher for WSMTs that benefitted from advocacy activities compared to those that did not (see Sub-Section 5.3.). Seventy percent of the 15 WSMTs that benefitted from advocacy activities reported being having their financial technical and administrative performance monitored by their Assembly compared to just 20% for the 10 WSMTs that did not benefit from advocacy activities. Moreover, while 50% of WSMTs that benefitted from advocacy activities were visited by Assembly personnel every six months, just 20% of WSMTs that did not benefit from advocacy activities were visited every six months.

Other district level indicators for community water supply where districts that benefitted from advocacy activities scored better than those that did not included:

- *Institutional*: Assemblies' roles and responsibilities and ownership arrangements are clearly defined (score of 96 vs. 65).
- *Financial*: Human resources available for district/service authority to fulfil functions (score of 79 vs. 73).
- *Technical*: The district water staff can provide support for maintenance and repairs on request (score of 40 vs. 35).

Conversely, for school latrine blocks, the districts and municipalities that benefitted from advocacy activities scored lower (51) for the SIT district level indicators than those that did not benefit from these activities (55).

6. CONCLUSIONS

The RI-USAID WASH Partnership programme in Ghana ran from 2017-2020 and implemented a series of WASH interventions in 14 Municipal and District Assemblies in seven Regions. **Two to three years after implementation⁵⁹ this sustainability assessment has found that an impressive percentage of these interventions remain functional, often with high service levels.** This assessment also found several areas where improvements were made relative to the Phase One IH₂OC programme, increasing service provider performance and the prospects for the sustainability of several of the assessed interventions. At the same time, it is important to acknowledge that there are several pressing areas or sustainability challenges common in Ghana's rural WASH sub-sector that the RI-USAID WASH Partnership programme did not fully address. In many cases, these represent key sustainability challenges that are projected to reduce the functionality and service levels of assessed interventions moving forwards.

This section presents the conclusions from the assessment of the RI-USAID WASH Partnership programme in Ghana, based on the findings presented in the preceding sections of this report. This starts with cross-cutting conclusions applicable across the five intervention types assessed, before detailing the conclusions for each intervention type.

6.1. Cross-Cutting

RI-USAID WASH Partnership interventions were, for the most part, well implemented. This is most clearly reflected by the fact that, two to three years following implementation, high functionality rates were found, and most infrastructure provides a moderate to high service level. Indeed, both the functionality and service levels found compare favourably to the norm across Ghana. Service providers were also largely constituted in line with national guidelines. Critically, in many areas, the RI-USAID WASH Partnership went beyond the activities conducted at the service provider level for the first phase of the IH₂OC and indeed what is undertaken for most WASH programmes. This is most clearly seen in the improved management structures and practices in place for sanitation issues in the schools visited and is positively impacting the management and use of school sanitation facilities. Examples of improved service provider performance were also found for many of the WSMTs.

Ghana's WASH sector has developed an extensive set of policies and guidelines for the rural WASH and WASH in Schools sub-sectors, with a series of documents precisely setting out standards that are to be adhered to (i.e., desired service levels, equipment standardisation, arrangements for spare parts as well as environmental and public health standards). Institutional frameworks are also well-established and in place at the national, regional, district and service provider levels, with key actors generally having a good understanding of their respective roles and responsibilities. **However, the current lack of sufficient public investment means that unless they receive development partner support, financial and material resource constraints will continue to severely undermine actors' ability to perform their roles and responsibilities, especially at the district and service provider levels. Reliance on development partner funding will alleviate this, but only on a temporary and projectized basis.**

District and Municipal Assemblies hold an expansive set of service authority functions (i.e., planning and budgeting, monitoring, refresher training, etc.) and are ultimately responsible for ensuring the provision of WASH services. District level actors' (i.e., Assembly personnel and District and Municipal SHEP Coordinators) monitored many of the service providers visited, especially schools. However, they struggle to provide more tangible follow-up support (i.e., assistance with maintenance or repairs) or address issues identified (i.e., WSMT mismanagement or a school's failure to establish a school management committee or health club). The failure to provide this support is a critical challenge and closely interlinked with pressing financial and material capacity constraints (i.e., lack of vehicles, laptops, data collection devices or software).

6.2. Community Water Supply

Two to three years following the implementation of most of the community water supply facilities, only 10% are non-functional, with 53% functioning optimally. This low non-functionality rate is a considerable improvement on past community water supply facilities implemented in Ghana under the first IH₂OC programme. It is also well below average non-functionality rates for community water supply facilities in Ghana (20-30%).

⁵⁹ For example, 13 of the community water supply interventions (43%) that were assessed for their functionality were implemented in 2019 and another 13 (43%) in 2017. Additionally, 12 of the 25 assessed school latrine blocks (48%) were constructed in 2018 and 10 (40%) in 2017.

Functional facilities are largely providing moderate to high service levels, with eight of the 26 assessed facilities (31%) meeting three of the five service level indicators assessed, seven (27%) meeting four indicators and six (23%) meeting all five indicators.⁶⁰ An area of concern, however, is the location of community water supply facilities to limit the risk of water contamination; eight of the 25 assessed facilities (32%) did not comply with national guidelines requiring that they are not located within 50 metres of the nearest latrine or open water source.

All 23 functional assessed community water supply facilities had WSMTs in place. Eighty-eight percent of WSMTs were constituted in line with CWSA guidelines; however, this drops to 68% when the requirement to have at least 30% female members on the WSMT is added. All 25 surveyed WSMTs displayed a good understanding of their roles and responsibilities, and performance of their technical responsibilities was particularly impressive. Several statistics highlight positive developments in this area:

- 21 of the 25 WSMTs (84%) contained a member capable of performing preventative maintenance.
- 18 WSMTs (72%) had the necessary tools to perform preventative maintenance.
- 15 WSMTs (60%) were regularly (i.e., every six months) performing preventative maintenance on the water supply facility.
- 23 WSMTs (92%) reported that the local private sector or an area mechanic was available to support the WSMT in the event of a breakdown.
- 19 WSMTs stated that they were capable of sourcing spare parts within three days of a breakdown.

The RI-USAID WASH Partnership programme put in place several measures to improve WSMTs' tariff collection. Notably, 21 of the surveyed WSMTs (84%) keep financial records, 20 (80%) have a bank account, and a water tariff has been set by 17 WSMTs (68%). However, none of the WSMTs had a set a tariff in line with CWSA guidelines, and only 13 WSMTs collected tariffs regularly (i.e., pay-as-you fetch or monthly household levy). Ultimately, 15 of the WSMTs (60%) had accrued greater revenues than expenditures for 2019, with seven WSMTs having managed to accrue revenues of over 500 Ghanaian Cedi's (equivalent to US\$ 85.00) in 2019 and three over 1,000 Ghanaian cedi's (equivalent to US\$ 170.00). Past SIT applications in Ghana established that the financial performance of WSMTs was a key predictor of the future functionality status of community water supply interventions. **Performance for the financial factor at the service provider level is worse than for the community water supply interventions implemented under the Phase One IH₂OC, and issues in this area are undermining the prospects for the sustained use and quality of the water supply interventions.**

The COVID-19 pandemic has adversely impacted WSMTs performance in several areas. It has reduced the frequency of WSMTs meetings as well as the transparency of their decision-making processes, with 10 WSMTs stating that COVID-19 caused them to reduce the frequency of their meetings or stop holding them entirely. The COVID-19 pandemic also impacted tariff collection, with four WSMTs stopping the collection of tariffs.

6.3. School Water Supply

Of the four school water supply facilities surveyed in this assessment, only two remain in use by the school: one is non-functional following a series of breakdowns, while nearby community members have taken over another. Additionally, water supplied from one of the two assessed facilities that remain in use contained E. coli. On a more positive note, both functional and utilised facilities provide five litres of water per school child per day and met the reliability criteria of being functional 95% of the time (347 days) over the last year, and all school-based water supply facilities complied with public health standards. Additionally, schools either had a member of staff capable of performing preventative maintenance (although preventative maintenance was only being performed for one school-based water supply facility) or reported that a local private operator or area mechanic was available to support the school in the event of a breakdown.

All four schools have a dedicated administrative body managing water issues and receive periodic (i.e., quarterly) monitoring visits from Assembly staff or their District SHEP Coordinator. **However, pressing**

⁶⁰ The five service level indicators assessed were: (i) community water supply facility was functional 95% of the time (347 days) over the last year; (ii) hand pump provides 20 litres (60 litres for the one mechanised borehole) of water per capita per day; (iii) water from the facility is not contaminated with E. coli; (iv) facility is not overcrowded (does not serve more than 300 people); and (v) facility is accessible (at least 80% of its users are located within 500 meters of the facility).

financing constraints at the national, district and service provider level undermine the prospects for the sustainability of the school water supply interventions:

- At the national level, there are no dedicated funds available to support school based-water supply costs beyond what schools can provide.
- At the district level, financial and material resources are insufficient for Assemblies or District SHEP Coordinators to adequately perform their support functions for school-based water supply facilities.
- At the service provider level, most schools did not recognise the requirement to save for preventative maintenance and minor repair, none of the schools are budgeting for long-term capital maintenance costs and are dependent on external support (i.e., through silver collection during midweek worship services) to cover costs.

6.4. School Latrine Blocks

School latrine blocks remain functional, with just two of the 26 assessed school latrine blocks (8%) functioning sub-optimally. However, the service levels provided by school latrine blocks appear to be deteriorating over time, with school latrine blocks implemented towards the beginning of the RI-USAID WASH Partnership programme (2017) having lower service levels than those implemented in the latter years of the programme (2018-2020).

Appropriate management structures for school sanitation exist , which help to ensure the proper management of facilities. Twenty-three of the 26 schools visited (88%) had school management committees responsible for managing the latrine block, while 24 schools (92%) had school health clubs conducting activities such as community clean-up exercises, quizzes and debates, and sensitisation of school pupils and the wider community on hygiene-related issues (i.e., menstrual hygiene, reproductive health). Additionally, 21 schools (81%) had facility management plans, covering specific issues such as responsibilities for cleaning sanitation facilities, maintenance and minor repairs, fund mobilisation, and the provision of cleaning supply and sanitation and hygiene materials. These findings represent a substantive improvement in the management structures put in place by the RI-USAID WASH Partnership programme compared to the Phase One IH₂OC programme.⁶¹ **The impressive management structures are contributing to the proper maintenance and use of school latrine blocks.** Several statistics highlight this:

- In 21 of the assessed schools (81%), 100% of students use the sanitation facility 100% of the time, and, in a further three schools (12%), 75% of students use the sanitation facility 100% of the time.
- In 23 schools (88%), there is a regular cleaning programme that is documented, and cleaning supplies are currently available. In 24 school (92%), the cleaning programme includes the replenishment of anal cleansing materials.

Although there is limited data available, findings indicate that improvements in management structures and practices have positively impacted the functionality and service levels of assessed school latrine blocks. In the first instance, while only two of the 26 surveyed schools did not have a school health club, it was one of these schools with one of the two latrine blocks functioning sub-optimally (this school also did not have a facility management plan). Additionally, in both cases where the school latrine block met none of the service level indicators, there was either no dedicated committee or administrative body managing sanitation issues at the school or no school health club.⁶²

Financing continues to represent a key barrier to ensuring maintenance and repairs are conducted on school latrine blocks when required.⁶³ So far, there has only been a limited number of failings in the assessed school latrine blocks that require substantive repairs to be performed. However, financial challenges at the district and service provider levels create a critical issue when breakdowns occur, and repairs are required. The financial resources provided to schools through the capitation grant to cover sanitation issues (0.80 GH¢ (equivalent to US\$ 0.14) per student per term) are widely viewed as insufficient. Consequently, schools struggle to set aside financial resources to cover breakdowns, with only 13 of the schools surveyed (50%) stated that consumables and equipment for repairs were affordable and accessible to the school. When coupled with the resource constraints at the district level that prevent most District and Municipal Assemblies and SHEP

⁶¹ Just 67% of schools benefiting from a sanitation facility under the Phase One IH₂OC programme had a school health club or committee in place, compared to 92% for the RI-USAID WASH Partnership programme.

⁶² While based off a very small sample size, these points are illustrative as only three schools did not have a dedicated committee or administrative body managing sanitation issues at the school and only one did not have a school health club.

⁶³ This was also one of the main findings of both the 2012 and 2019 (retrospective) assessments of the Phase One IH₂OC using the SIT.

Coordinators from assisting schools with repairs, this represents a critical challenge undermining the sustainability of the interventions. **If a significant breakdown occurs, it appears unlikely that the necessary financial resources will be available or mobilised to repair the facility.**

Assembly personnel and District and Municipal SHEP Coordinators are monitoring school sanitation facility use and maintenance. An impressive 21 of the 26 (81%) assessed schools reported that they received monitoring visits from Assembly staff or District / Municipal SHEP Coordinator every six months.⁶⁴ **However, monitoring of school sanitation facility use and maintenance often fails to translate into substantive support being provided to schools.** Only eight schools (31%) reported that support was provided following monitoring activities, and only three schools (12%) had received support within a week of a request or issue being identified. The challenge of backing monitoring activities up with more tangible support is closely interlinked with resource constraints at the district-level. Personnel in only two of the six Assemblies visited reported that sufficient budgets were allocated to provide the required support to schools and none of the consulted personnel stated that budget allocations are released when required.

6.5. Household Latrine Construction Promotion

Three to four years after CLTS was used to trigger household latrine construction promotion, assessed household sanitation facilities were generally of a moderate to a high standard. The following statistics reflect this:

- 92% of facilities had a superstructure.
- 78% had a vent with fly screen.
- 76% had slab with cover.
- 66% were not utilised by other households.
- 65% had a handwashing facility located within 10 metres of the facility.

However, just 30% of household latrines met all five criteria. Beyond the physical condition of the household sanitation facilities, several important issues were identified. In the first instance, 52 of 188 consulted household heads (28%) reported that their sanitation facility was constructed in an area at risk of flooding. Moreover, many facilities did not comply with public health siting guidelines.

A mixed picture was found concerning household performance and understanding of financial and operations and maintenance aspects, which are important to the long-term functionality and safe use of their sanitation facilities. One hundred and sixty-six of 188 household heads (88%) were aware of their responsibilities for pit emptying or decommissioning the facility and constructing a new household latrine. Seventy-eight percent of households plan to construct a new facility when the pit of their current facility was filled. On a more negative note, only 98 of the 188 consulted household heads stated that they were saving to cover these costs, and programmes are not in place in any of the districts visited to support low-income households meet the financial costs of maintaining their sanitation facility. Finally, the following statistics highlight that improvements are needed concerning several operations and maintenance practices:

- 91% of household heads stated that their latrine is cleaned regularly.
- 64% that anal cleansing material is put down the drop hole / pit.
- 45% that the latrine is inspected for cracks and other structural defects.
- 31% that a small mound exists around the latrine to prevent rainwater from accumulating around the latrine.

In six of the 13 communities visited, the community sanitation and hygiene promoters trained under the programme have left their posts. Several factors led community sanitation and hygiene promoters to stop performing their roles, including abuse from community members and limited support from Assembly personnel. Roles and responsibilities are formalised at the district level for household latrine construction promotion and ongoing support to households to ensure proper use and maintenance of household sanitation facilities. However, only four of the seven community sanitation and hygiene promoters that remained in post (57%) reported that their activities were monitored, and just one (14%) that support was provided following monitoring.

⁶⁴ This compares favourably to the comparable 2012 assessment, where just 56% of schools reported that they were monitored by such actors every six months.

6.6. Hygiene and Handwashing Promotion

Generally good hygiene and handwashing practices were found amongst the 450 surveyed household heads. Several statistics highlight this:

- In all 25 communities, an overwhelming majority of household heads stated that they washed their hand using soap.
- 71% of surveyed household heads correctly identified four of the six key times to wash their hands.⁶⁵
- 98% of household heads stated that the female (or male if no female) head of household actively promoted handwashing practices amongst household members.
- 68% of household heads reported that adult household members washed their hand at four of six key moments, while 33% stated that child household members did.

Many heads of households noted that COVID-19 had led to an improvement in household member's handwashing practices. It was also noted that COVID-19 increased the availability and costs of hygiene products (i.e., soap) because of increased demand.

Just two to three years after most community sanitation and hygiene promoters were trained under the programme, only 11 of the 25 communities visited (44%) have a community sanitation and hygiene promoter. Several reasons were cited for so many community sanitation and hygiene promoters having left their posts, including verbal abuse, a lack of implements to support their activities and insufficient follow-up support. An apparent link exists between whether more expansive messaging was conducted in the community concerning household latrine construction promotion through the CLTS approach and whether the community sanitation and hygiene promoter remained in their position. In communities where CLTS was undertaken, 54% of community sanitation and hygiene promoters had stayed in post. The COVID-19 pandemic has increased the importance of good hygiene and handwashing practices. **However, three community sanitation and hygiene promoters acknowledged that the pandemic caused them to substantially reduce their monitoring and support activities.**

⁶⁵ The most commonly correctly identified time was after using the toilet (448), followed by before eating (434), after social gathering (343), before preparing food (307) after cleaning infant's bottom (292), and before feeding infant (251).

7. RECOMMENDATIONS

This section presents a series of recommendations tailored towards the project stakeholders of the RI-USAID WASH Partnership, being Rotary Ghana, Rotary International, USAID and Global Communities. However, they are also relevant to other Ghanaian WASH sector organisations and will hopefully be disseminated and utilised more widely. Several broad cross-cutting recommendations are first detailed before outlining more specific recommendations for the various programme interventions.

7.1. Cross-Cutting

7.1.1. Focus RI-USAID WASH Partnership programmes in a smaller number of districts and municipalities

This study identified a range of pressing sustainability challenges at the national, district and service provider levels for each of the WASH interventions assessed. **Future RI-USAID WASH Partnership programmes should continue seeking to address these challenges in a concerted manner.** However, it is important to acknowledge that a long-term and comparatively intensive set of activities is required at both the district and service provider levels to address these challenges. If it were easy to address the sustainability challenges in the rural WASH sub-sector, non-functionality rates of around 30% would not remain so pervasive across Sub-Saharan Africa for so long. For example, supporting Assembly staff to perform their vital service authority functions more effectively through addressing challenges such as resource constraints and insufficient budget allocations or improving monitoring is a considerable undertaking that takes time.

Therefore, rather than seeking to rectify long-standing challenges in multiple districts and municipalities at once, it would be more realistic for future RI-USAID WASH Partnership programmes to focus on a smaller number of districts and municipalities but conduct a more expansive set of activities.

This would also enable future programmes to more easily benefit from Assembly staff's greater involvement in the design of interventions and innovations to meaningfully address challenges at the service provider level. For example, working with district staff (amongst other stakeholders such as CWSA) to collaboratively design measures to improve users' willingness to pay and WSMTs' revenue collection and management (see recommendation 7.2.1.).

7.1.2. Engage a broader range of stakeholders over a longer period when conducting district- and national-level advocacy activities

The Minister for Sanitation and Water Resources does not have power over funding allocations or decisions at the MMDA level. **Accordingly, to properly advocate at the national level on the pressing issue of budget allocations and releases for WASH at the district-level, it is necessary to engage other key stakeholders such as the Ministry of Local Government and Rural Development and the Fiscal Decentralisation Unit of the Ministry of Finance.** Moreover, it is important to consider the size of the challenge of improving district-level financing for WASH services; this is not something that can be easily be achieved in select District and Municipal Assemblies by Rotary Ghana alone over a period of a couple of years. A much longer period is required to bring about change in this area and collective action will be required through multiple organisations and government initiatives or donor programmes.

7.1.3. Move beyond advocacy activities and provide more substantive support to District and Municipal Assemblies

District level advocacy activities correctly focused on the critical issue of financing for WASH services through seeking to increase budget allocations and releases. **However, future programmes should consider moving beyond a sole focus on advocacy activities to provide more substantive support to District and Municipalities.** The focus and modalities of this support should be based on more detailed capacity assessments of district-level actors than were conducted as part of this study. However, possible areas of focus include: (i) training sessions and other forms of capacity building on topics such as life-cycle cost analysis, asset management, data collection and monitoring, and roles and responsibilities (especially regarding any changes in service delivery models for rural water supply); and (ii) in some cases, time-limited or short-term material capacity (i.e., provision of materials such as laptops or data collection devices required to perform core functions) support to fill key gaps. Any such capacity building should always be in line with sector guidelines and processes and factor governmental stakeholders' ability to sustain improvements made. Material capacity support should be conducted in tandem with existing activities pushing and supporting Assembly stakeholders to finance direct support costs (i.e., vehicles to address mobility challenges) required to sustain WASH service

levels. **If the RI-USAID WASH Partnership chooses to conduct more substantive capacity building activities, a partnership with a Ghanaian organisation with experience applying systems-based approaches could be especially impactful.** This would help ensure the success of these activities while simultaneously building Rotary Ghana's capacity to implement these activities independently in the future.

7.1.4. Ensure the involvement of Assembly staff in the implementation of interventions and when providing follow-up support to beneficiary communities and institutions

The functionality or service levels provided by several interventions were negatively affected by insufficient community sensitisation and oversight of building contractors. For example, it likely contributed to the construction of water points close to existing improved functional water facilities, is linked to the construction of a communal water facility in an appropriate low-lying location in Agou Junction community (Nkwanta South District), and the community takeover of the Ofosu D/A Junior High School water supply facility (Nkwanta South District). **Ensuring relevant Assembly staff, District and Municipal SHEP Coordinators and other support institution personnel such as District Ghana Education Service staff play a greater role in implementing interventions can help overcome these challenges.** This should not only cover the implementation of WASH interventions, but any future post-construction activities need to actively involve Assembly personnel to support them to perform their service authority functions.

7.1.5. Remain up-to-date to ongoing reforms to Ghana's rural WASH sub-sector

Ghana's rural WASH sub-sector is going through a comparatively intensive period of reform, with revisions currently being made to the national water policy and the national sanitation strategy. These revisions are expected to result in comparatively large changes to institutional arrangements and service delivery models, especially concerning the provision of rural water services. Notably, while studies and consultations informing the new national water policy are still underway, it is widely expected that the new policy will result in CWSA directly managing some water supply services (i.e., piped schemes) and possibly having a support function (i.e., for maintenance and repairs) for other types of rural water facilities.

These are potentially very significant developments that can help ensure more professionalised service delivery and overcome many of the common challenges evident in community-based management. **Future RI-USAID WASH Partnership programmes should remain cognisant of developments to ensure programmes reflect this context. Moreover, the effective implementation of these reforms will be a considerable undertaking, and programmes need to consider how they can support the implementation of new service delivery models for rural water supply.** For example, accounting for any potential role for CWSA to manage reticulated systems constructed under future programmes.

7.1.6. Ensure findings from the RI-USAID WASH Partnership Programme are disseminated and acted upon

Several of the activities conducted under the RI-USAID WASH Partnership programme have effectively supported key actors – especially service providers – to perform their roles and responsibilities in line with national guidelines and have positively impacted the sustainability of WASH interventions. This is most clearly seen concerning the management structures and practices put in place to ensure the proper use and maintenance of school latrine blocks. **Whether it is through sharing this comparatively detailed report or a summary, these positive findings should be shared externally to not only benefit Rotary Ghana and Global Communities but also other WASH organisations active in Ghana.**

The RI-USAID WASH Partnership should also share this study's findings that showcase areas where further improvements are required, both concerning WASH programming at the service provider (community) level and broader weaknesses at the service authority (district) and national levels. The challenges detailed in this report are certainly not limited to the RI-USAID WASH Partnership programme and reflect broader weaknesses in Ghana's rural WASH sub-sector at the national, service authority and service provider levels. The comparatively detailed analysis presented in this report concerning the extent and nature of many of these challenges would be beneficial to governmental and non-governmental organisations and should also be shared externally.

7.2. Community Water Supply

7.2.1. Adopt innovative measures to ensure tariffs are set in line with national guidelines and improve water and sanitation management teams' financial management

Challenges concerning tariff levels and modalities as well as payment rates represent one of the key areas undermining the prospective sustainability of the community water supply interventions moving forward. **Future RI-USAID WASH Partnership programmes should work with District and Municipal Assemblies – and possibly CWSA – to design and implement innovative measures to ensure tariffs are set in line with national guidelines, increase payment rates, and improve WSMTs financial management.** Examples of how this could be done include:

- Water meters and pre-paid water meters for piped water supply schemes or standpipes.
- **Borehole banking**, which is a concept borrowed from the Village Savings and Loans Model and has effectively reduced the non-functionality rate of hand pumps by tying the payment of water tariffs to community members' ability to access small-scale loans.

7.2.2. Ensure water and sanitation management teams have a gender balance and are democratically elected

All communal water supply facilities had WSMTs in place, and the vast majority of these were constituted in line with the CWSA guideline of having between five and nine members, including a chairman, treasurer or financial clerk, and caretaker. However, several WSMTs did not have 30% female members or were not democratically elected with the involvement of the entire community. **A relatively straightforward quick win for future programmes would be to ensure the gender balance of all WSMTs and their democratic election with all community members.**

7.2.3. Ensure communal water points comply with public health guidelines for siting

One of the most important technical areas for improvement concerns community water supply facility location to limit the risk of water contamination. Thirty-two percent of the facilities did not comply with national siting guidelines and were located within 50 metres of the nearest latrine or open water source.⁶⁶ **To mitigate this in the future, water facilities must not be constructed within 50 metres of existing household sanitation facilities, and a greater emphasis needs to be placed on the appropriate location of household sanitation facilities when CLTS is applied.**

7.2.4. More rigorous needs assessments

In some of the communities visited, there was already a safe source of drinking water that the community members preferred to the Rotary / USAID facility, while, in others, they preferred fetching from surface water or springs. **To avoid a situation whereby future communal water supply facilities are underutilised, more rigorous needs assessments are required to understand community dynamics and desires and the presence of existing improved water supply facilities.** This is an area where the greater involvement of Municipal and District Assembly staff would be beneficial earlier on in the process. This should help target community hand pump interventions to those most in need and likely to have higher levels of community ownership, while also enabling a more informed decision to be taken on the suitability of more advanced water supply technologies such as piped systems or boreholes with a standpipe compared to a hand pump. These assessments should also consider the water supply needs of institutions (i.e., schools) within the community.

7.3. School Water Supply

7.3.1. Ensure proper community engagement and sensitisation to prevent community take-over or vandalism of school water facilities

Extensive community engagement is needed to ensure community members understand the ownership arrangements for school water facilities. This would help in part to anticipate and mitigate conflicts that may arise after the facility has been constructed. Future programmes should consider not constructing water facilities for schools in communities where the local community is inadequately served. If facilities are constructed in schools in inadequately served communities, clear agreements must be put in place between the school and

⁶⁶ In two of these cases (25%), water supply facilities located within 50 metres of a latrine or open water source did not pass the water quality test performed.

community to facilitate the harmonious sharing of the facility (including allocating the period for fetching so as not to distract teaching and learning). This could be done in part through ensuring members of the School Management Committee are also part of the WSMT. This is also necessary to ensure community members contribute towards the facility's operation and maintenance mainly through pay-as-you fetch arrangements. As is noted above, Municipal and District Assembly staff should be encouraged to play a greater role in implementing interventions (including community sensitisation) to leverage their knowledge of community dynamics and possible areas of conflict.

7.3.2. Foster a debate at the national level on the financial issues undermining the sustainability of school water supply services

This study only assessed four school water supply facilities in two District Assemblies. However, it is abundantly clear that school water supply services face a pressing financing challenge, which severely undermines the sustainability of these services. Indeed, the extent of this challenge and the nature of school WASH services means that it is unlikely that this issue could be satisfactorily addressed by working at the service provider (school) or district levels alone. **Nevertheless, there are several activities project stakeholders should consider supporting to begin addressing this issue at the national level:**

- Commission a detailed study investigating the true extent of the financing challenge for sustaining existing school water supply services as well as possible actions to address the situation, including potential sustainable sources of financing.
- Advocate for MSWR to establish a technical working group or taskforce to investigate and address this pressing issue.⁶⁷

7.3.3. Support schools to perform preventive maintenance and conduct minor repairs

Given the extent of the challenges concerning the financing of school water supply, it is necessary to build the technical capacity of relevant school personnel (i.e., caretakers) to perform periodic (i.e., quarterly) maintenance and conduct basic repairs. While based on a very small sample size, only half of schools had a member of staff capable of performing preventative repairs and none that could perform basic repairs. Additionally, only one school had the tools and necessary equipment to perform preventive maintenance. **Future programmes should seek to rectify this by training relevant school personnel in preventive maintenance and minor repairs and provide necessary tools and equipment towards this end.**

7.4. School Latrine Blocks

7.4.1. Increased monitoring of schools' management practices by district-level governmental actors

There was good monitoring of the maintenance and use of school sanitation facilities by Assembly staff and Municipal or District SHEP Coordinators. Additionally, one of this study's key findings is the positive impact of the management structures and practices put in place. **Local government and Ministry of Education staff should build on this positive progress by ensuring the regular monitoring of the existence and functionality of school management committees and school health clubs to ensure facilities are managed according to national guidelines and the provisions of facility management plans.** Supporting this type of monitoring should be a key focus of district-level activities conducted under future RI-USAID WASH Partnership programmes.

7.4.2. Take measures to improve the quality and durability of school latrine blocks

Improved supervision and quality control can help to ensure proper construction and the quality of materials used and reduce the challenges found at several school latrine blocks concerning rusting and degradation of metal components (primarily doors, but also gates, disability rails and the rain gutter around the polytanks for collecting water) and the large cracks in the floors and walls of some facilities. **Future RI-USAID WASH Partnership programmes should engage a third-party supervisory consultant to provide monitoring and quality control of the construction of school latrine blocks.** This should include a focus on:

- Pre-construction assessments of sites identified to determine suitability for technology options, for example, the impact of soil conditions on the structural integrity of school latrine blocks.

⁶⁷ At a minimum, this should contain MSWR's EHSD, CWSA, GES, Ministry of Finance and key development partners (i.e., UNICEF, USAID) in the WASH sector.

- Ensure the quality of materials and techniques used by contractors to ensure compliance with appropriate standards.
- Ensure construction is carried out according to relevant specifications, standards and requirements.

A major focus of this is checking the quality of materials used by contractors to ensure they meet necessary standards and undertaking site visits to safeguard that construction is carried out according to relevant specifications. District / Municipal Works Departments and Environmental Health Officers should also be involved in project planning through to implementation, including learning from the third-party monitoring. This would ensure Assembly oversight in the construction of the facilities.

7.4.3. Adhere to crowding standards for school latrine blocks

Issues were found concerning the overcrowding of school latrine blocks, with 14 assessed facilities (54%) not complying with the crowding criteria of no more than 50 users per each drop hole.⁶⁸ **Future RI-USAID WASH Partnership programmes must adhere to crowding guidelines, particularly in areas where more than one school share a compound.** Over-crowding hinders accessibility, creates pressure on the facilities and raises issues for cleanliness and maintenance.

7.4.4. Integrate the provision of school latrine facilities with household latrine promotion to prevent community vandalism and usage

One of the recommendations from the 2019 retrospective assessment of the Phase One IH₂OC programme (2010-2013) concerned conducting household latrine promotion activities in communities where schools are receiving a latrine intervention. This is necessary to ensure that project benefits are spread to the wider community and reduce the chances of resistance from community members and possible vandalism or take-over of school sanitation facilities. This is equally applicable to the RI-USAID WASH Partnership programme. Furthermore, School Management Committees and School Health Clubs should be involved in community mobilisation and engagement to help ensure the community's support for school WASH activities.

7.5. Household Latrine Construction and Hygiene and Handwashing Promotion

7.5.1. Ensure household latrines are not constructed close to water points

Liquid waste seeping out of pit latrines is a potential environmental risk in using dry pit latrines, which can cause contamination of groundwater and surface water. Siting toilet facilities close (less than 50 meters) to – and uphill of – boreholes increase the likelihood of contaminating the water and breaches CWSA guidelines. **Future programmes need to ensure a buffer zone (a 50-metre plus radius) exists around the water points within which households do not construct toilets; this radius may need to be increased in cases with highly porous soils.** In this connection, future RI-USAID WASH Partnership programmes should place greater emphasis on sensitising households to know and adhere to the standards for distances between toilet facilities and existing water sources. Ensuring household latrines are not constructed close to water points is one of the many responsibilities of Assemblies' EHSUs and supporting EHSUs to perform this task should be a focus of future district-level activities.

7.5.2. Adopt measures to ensure community sanitation and hygiene promoters stay in post

In some communities, hygiene promoters requested tools and other implements (e.g., rakes, shovels, cutlasses, bins) to aid their work. **Factoring the provision of such tools into future interventions will serve as a motivation for hygiene promoters.** Additionally, consistent monitoring by external persons will address cases of abuse from community members (see Box Nine). Towards this end, community sanitation and hygiene promoters should be formally linked with District and Municipal Assemblies' EHSUs. The regular monitoring and support to community sanitation and hygiene promoters by EHSU personnel could be and a focus of future district level activities.

⁶⁸ 13 of these 14 facilities also did not provide one drop hole per female school child.

BIBLIOGRAPHY

- CONIWAS (2019), 'CONIWAS' *Position on the Provision and Management of Water, Sanitation And Hygiene (WASH) Facilities in Basic Schools in Ghana*
- Fisher, B., Shield, K., Chan, T., Christenson, E., Cronk, R., Leker, H., . . . Bartram, J. (2014). *Understanding Handpump Sustainability: Determinants of Rural Water Source Functionality in the Greater Afram Plains Region of Ghana.*
- Ghana Education Service. (2014). *Technical Guide for WASH in Schools.*
- IRC & CWSA. (2013). *The Status of Rural Water Services in Ghana: A Synthesis of Findings from Three Districts.*
- IRC. (2007). *Toward Effective Programming for WASH in Schools: A Manual on Scaling-Up Programmes for Water, Sanitation and Hygiene in Schools.*
- Lockwood, H. (2019). *Sustaining Rural Water: A Comparative Study of Maintenance Models for Community-Managed Schemes.*

ANNEX ONE: MUNICIPAL AND DISTRICT ASSEMBLIES – BACKGROUND INFORMATION

Table 10 presents background information for each of the seven Municipal and District Assemblies visited as part of this study.

Table 10t: District and Municipal Assemblies – Background Information

Municipality / District	Population	Population in Rural Areas	Main Sources of Drinking Water	Main Sources of Household Sanitation
Ga South Municipality	411,377	13.3%	Pipe-borne outside dwelling (38.3%); sachet water (22.1%); pipe-borne inside dwelling (19.7%); public tap/standpipe (7.5%); borehole/pump/tube well (3.6%); tanker supply/vendor provided (3.6%)	Water closet (26.6%); pit latrine (24%); public toilet (22%); no facility (bush/field/beach) (13.5%); KVIP (13.2%)
Shai Osoduku District	51,913	76.7%	Pipe-borne outside dwelling (37.3%); pipe-borne inside dwelling (17.3%); public tap/standpipe (16.1%); sachet water (8.8%); borehole/pump/tube well (5.6%); river/stream (4.6%); tanker supply/ vender provided (3.6%)	No facility (bush/field/beach) (31.2%); public toilet (30%); pit latrine (21.1%); water closet (8.9%); KVIP (8.7%)
Bole District	61,593	79%	Borehole/pump/tube well (59.4%); river/stream (8.8%); pipe-borne outside dwelling (6.8%); pipe-borne inside dwelling (6%); public tap/standpipe (5.8%); protected well (4.4%); sachet water (4%)	No facility (bush/field/beach) (69.2%); public toilet (20%); KVIP (5.3%); pit latrine (3%); water closet (1.8%)
Nkwanta South District	117,878	74.4%	Borehole/pump/tube well (47.1%); river/stream (20.8%); public tap/standpipe (14.6%); pipe-borne outside dwelling (12.7%); dugout/pond/lake/dam/canal (1.5%)	No facility (bush/field/beach) (47.7%); pit latrine (23.7%); public toilet (19%); KVIP (7.7%)
Amenfi Central District	69,014	91.4%	River/stream (50.9%); borehole/pump/tube well (18.3%); public tap/standpipe (9.3%); pipe-borne outside dwelling (8.1%); protected well (5.6%); unprotected well (2.9%); pipe-borne inside dwelling (2%)	Pit latrine (49.8%); public toilet (37.3%); no facility (bush/field/beach) (8.6%); KVIP (2.8%)
Ajumako Enyan Essiam District	138,046	68.1%	Pipe-borne outside dwelling (27.8%); public tap/standpipe (22.6%); borehole/pump/tube well (18.4%); river/stream (13.2%); pipe-borne inside dwelling (5.7%); protected well (3.6%)	Public toilet (46.2%); pit latrine (28.7%); no facility (bush/field/beach) (12.9%); KVIP (8.7%); water closet (3%)
Ayensuano District	77,193	93.1%	River/stream (43.8%); borehole/pump/tube well (37.9%); protected well (4.3%); sachet water (4.3%); rainwater (2.6%); unprotected well (2%)	Pit latrine (54.8%); public toilet (19.6%); KVIP (11.3%); no facility (bush/field/ beach) (9.9%);

ANNEX TWO: SUSTAINABILITY INDEX TOOL FRAMEWORKS AND INDICATOR SCORES

Tables 11 to 15 present the SIT frameworks for each of the five intervention types assessed as well as the aggregate scores for each indicator from across the interventions visited. Information is only presented down to the indicator level, for each of these indicators, a series of sub-indicators were assessed (see Annex Three for an example of how this works).

Table 11: Community Water Supply: Sustainability Index Tool – Framework and Scores

Code	Indicator	Average Score
WT-CHP-I-N1	National policy, norms and guidelines for community-managed water supply and enabling legislation is in place	88
WT-CHP-I-D1	Assemblies' roles and responsibilities and ownership arrangements are clearly defined	80
WT-CHP-I-S1	There is a water committee which has been constituted in line with national norms and standards	83
WT-CHP-M-N1	There is an updated national monitoring system or database available	38
WT-CHP-M-N2	National support to district/service authority is provided, including refresher training	48
WT-CHP-M-D1	There is regular monitoring of water services and community management service providers and follow-up support	33
WT-CHP-M-S1	Representative water committee actively manages water point with clearly defined roles and responsibilities	87
WT-CHP-M-S2	Water committee members actively participate in committee meetings and decision-making processes and reporting is transparent	45
WT-CHP-F-N1	There are national / local mechanisms beyond community contributions and tariffs, to meet life-cycle costs	60
WT-CHP-F-D1	Human resources available for district/service authority to fulfil functions	76
WT-CHP-F-D2	Financial and material resources available for the Assembly to fulfil functions	1
WT-CHP-F-S1	Tariff setting complies with national/local regulations, including social tariff	29
WT-CHP-F-S2	Tariff collection is regular and sufficient	52
WT-CHP-F-S3	The water committee demonstrates effective financial management and accounting	69
WT-CHP-T-N1	There are national norms that define acceptable service levels with explicit indicators and thresholds (e.g., water quality, quantity, accessibility, affordability, etc.)	75
WT-CHP-T-N2	There are national/local norms that define equipment standardisation and arrangements for providing spare parts	100
WT-CHP-T-D1	The district water staff are able to provide support for maintenance and repairs on request	37
WT-CHP-T-S1	Community water supply facility is functional and provides a basic service level	73
WT-CHP-T-S2	Hand pump complies with standards and norms in terms of siting and public health risk	78
WT-CHP-T-S3	The knowledge and equipment are available to conduct regular preventative maintenance	70
WT-CHP-T-S4	The knowledge and spare parts are available to perform repairs in a timely manner	81
WT-CHP-E-N1	National environmental protection standards are established and applied to WASH services	88
WT-CHP-E-N2	National integrated water resources management plan is in place, updated regularly, and applied to WASH services planning	16
WT-CHP-E-D1	Natural resources are managed to support sustainable WASH service delivery	0

Table 12: School Water Supply: Sustainability Index Tool – Framework and Scores

Code	Indicator	Average Score
WT-INB-I-N1	National policy, norms and guidelines for school-based water supply and enabling legislation is in place, with effective coordination	100
WT-INB-I-D1	National policy, norms and guidelines for school-based water supply and enabling legislation is in place, with effective coordination	75
WT-INB-M-N1	There is an up-to-date national monitoring system or database available, which covers school-based water facilities	100
WT-INB-M-N2	National support to district / service authority is provided, including refresher training	25
WT-INB-M-D1	Monitoring of school-based water supply use and follow-up support is provided by Assembly / other support institution	69
WT-INB-M-D2	Support to schools in the upkeep of school-based water facilities is available as needed	38
WT-INB-M-S1	School understands and is performing responsibilities for operation and maintenance of the water facility	75
WT-INB-F-N1	There are national / local mechanisms to meet full life-cycle costs, beyond the school's budgets	0
WT-INB-F-D1	Human resources available for Assembly / support institution to fulfil functions	88
WT-INB-F-D2	Financial and material resources available for Assembly / support institution to fulfil functions	0
WT-INB-F-S1	School can meet long-term operational, minor maintenance and capital maintenance expenditures	8
WT-INB-T-N1	There are national standards that define acceptable service levels with explicit indicators and thresholds (e.g., water quality, quantity, crowding, etc.) for school-based water supply facilities	100
WT-INB-T-N2	There are national/local norms that define equipment standardisation and arrangements for providing spare parts	100
WT-INB-T-D1	The district water staff can provide support for maintenance and repairs on request	75
WT-INB-T-S1	School-based water supply facility is functional and provides basic level of service according to national policy	42
WT-INB-T-S2	School-based water supply facility complies with standards and norms in terms of siting and public health risk	75
WT-INB-T-S3	The knowledge and equipment are available to conduct regular preventative maintenance	31
WT-INB-T-S4	The knowledge and spare parts are available to perform repairs in a timely manner	63
WT-INB-E-N1	National environmental protection standards are established and applied to WASH services	88
WT-INB-E-N2	National integrated water resources management plan is in place, updated regularly, and applied to WASH services planning	10
WT-INB-E-D1	Natural resources are managed to support sustainable WASH service delivery	0

Table 13: School Latrine Block: Sustainability Index Tool – Framework and Scores

Code	Indicator	Average Score
SN-INS-I-N1	There is an institution dedicated to school-based sanitation policy, with clear institutional mandates at all levels and coordination between related ministries	80
SN-INS-I-D1	Assemblies / support institutions have clear roles and responsibilities for supporting service providers of school sanitation	98
SN-INS-I-D2	There are licensed and regulated septage haulers/desludgers	34
SN-INS-M-N1	National support to Assemblies / other support institutions is provided and appropriate	45
SN-INS-M-D1	Monitoring of latrine use and maintenance and follow-up support provided by district/supporting institution	59
SN-INS-M-D2	Support to schools in the upkeep of sanitation facilities is available as needed	32
SN-INS-M-S1	School understands responsibilities for operation and maintenance including pit-emptying/desludging and has capacity to manage this	48
SN-INS-F-N1	There are national/local mechanisms to meet full life-cycle costs, beyond the school's budgets	14
SN-INS-F-D1	Human resources available for Assembly / support institution to fulfill functions	75
SN-INS-F-D2	Financial and material resources available for Assembly / support institution to fulfill functions	17
SN-INS-F-S1	School can meet long-term operational, minor maintenance and capital maintenance expenditures	38
SN-INS-T-D1	Goods and services for the maintenance, repair and emptying of pits for school sanitation facilities are available and accessible at the district level	45
SN-INS-T-S1	Sanitation facilities are constructed in-line with design criteria needed for long-term and safe use	88
SN-INS-T-S2	Environmental health risk guidelines exist and are followed	92
SN-INS-T-S3	Sanitation facilities are readily usable by students in terms of distance from school and number of people sharing them	45
SN-INS-T-S4	Sanitation facilities are well-maintained and are being used	88
SN-INS-E-N1	National environmental protection standards are established and applied to school sanitation services	88
SN-INS-E-D1	Natural resources are managed to support sustainable school sanitation service delivery	41

Table 14: Household Latrine Construction Promotion: Sustainability Index Tool – Framework and Scores

Code	Indicator	Average Score
SN-HHS-I-N1	There is an institution dedicated to sanitation policy and has presence at the national level, with clear institutional mandates at all levels and effective coordination	100
SN-HHS-I-D1	Roles and responsibilities of district (service authority) and ownership arrangements are clearly defined	82
SN-HHS-M-N1	Capacity support is provided to district local government WASH staff, including refresher training	38
SN-HHS-M-D1	Assembly support staff carry out regular monitoring of the use of sanitation facilities and reactive planning/interventions	75
SN-HHS-M-D2	Monitoring and follow-up support is provided to community sanitation and hygiene promoter/facilitators (i.e., WSMT members), including refresher training	42
SN-HHS-M-D3	Is there a district sanitation plan that includes social marketing principles that have been developed with participation of the district sanitation team?	15
SN-HHS-M-S1	Community facilitator or sanitation promoter has capacity to monitor and provide follow-up support to households, including refresher training	40
SN-HHS-M-S2	Pit-emptying services are accessible to households and households clearly understand their responsibility for pit-emptying	90
SN-HHS-F-N1	Resources are allocated at the national level to support district functions for household sanitation promotion	50
SN-HHS-F-D1	Human resources available for the Assembly to fulfill functions	73
SN-HHS-F-D2	Financial and material resources available for Assembly to fulfill functions	3
SN-HHS-F-S1	Households can meet long-term capital maintenance expenditures	12
SN-HHS-T-D1	Goods and services for maintenance, repair and the emptying of pits for household sanitation facilities are available and accessible at the district level	50
SN-HHS-T-S1	Sanitation facilities are constructed following standards and norms	81
SN-HHS-T-S2	Environmental health risk guidelines exist and are followed	66
SN-HHS-T-S3	Sanitation facilities are used and valued by all	67
SN-HHS-T-S4	Sanitation facilities are properly maintained and used to maximise health benefits	65
SN-HHS-E-N1	National environmental protection standards are established and applied to WASH services	88
SN-INS-E-D1	Natural resources are managed to support sustainable WASH service delivery	58

Table 15: Hygiene and Handwashing Promotion: Sustainability Index Tool – Framework and Scores

Code	Indicator	Average Score
HY-HWP-I-N1	Hygiene promotion, including handwashing, is a recognised government policy	75
HY-HWP-I-N2	There is a hygiene promotion / behaviour change programme with clear designation of responsibilities in national ministry(-ies)	50
HY-HWP-I-D1	Coordination and support for hygiene promotion is provided by Assembly and other agencies	59
HY-HWP-M-D1	Monitoring and follow-up support is provided to community hygiene promoter/facilitator, including refresher training	35
SN-HHS-M-S1	Community facilitator or promoter has capacity to monitor and provide follow-up support to households, including refresher training	33
HY-HWP-F-N1	National / local mechanisms are in place to meet full cost of hygiene and hand washing promotion	6
HY-HWP-F-D1	Soap and other hygiene products are available in the local market and affordable	84
HY-HWP-F-S1	Households are willing and able to pay for hygiene products	100
HY-HWP-T-S1	Households have knowledge of handwashing and the correct use of facilities	78

ANNEX THREE: EXAMPLE SUSTAINABILITY INDEX TOOL SCORING

The institutional factor for community water supply and its indicators and sub-indicators presented below for the interventions in Nkwanta South District (Oti Region) illustrate how the scores for the SIT are calculated.

Primary Invest-igation	Triang-ulation	Code	Indicator / Sub-Indicator	Community				National Average
				Ato-Plans	Agou Junction	Kente	Basari Akura	
		WT-CHP-I-N1	National policy, norms and guidelines for community-managed water supply and enabling legislation is in place					
CWSA		WT-CHP-I-N1a	Does the national policy for water supply recognise community management?	1.0	1.0	1.0	1.0	1.0
CWSA		WT-CHP-I-N1b	Have national norms and standards been set for the constitution and governance of water and sanitation management teams?	1.0	1.0	1.0	1.0	1.0
CWSA		WT-CHP-I-N1c	Is legislation in place that gives community management legal standing?	1.0	1.0	1.0	1.0	1.0
CWSA	MSWR	WT-CHP-I-N1d	Is there a national registry of the water systems / points managed by water and sanitation management teams?	0.5	0.5	0.5	0.5	0.5
Total: WT-CHP-N1				88	88	88	88	88
		WT-CHP-I-D1	Assemblies' roles and responsibilities and ownership arrangements are clearly defined					
Assembly		WT-CHP-I-D1a	Are there formalised roles and responsibilities for the Assembly?	0.0	0.0	0.0	0.0	0.8
Assembly		WT-CHP-I-D1b	Are the roles and responsibilities of the Assembly written down and accessible?	0.0	0.0	0.0	0.0	0.8
Assembly		WT-CHP-I-D1c	Are the roles and responsibilities of the Assembly understood by all staff in the Assembly involved in overseeing / supporting the water point/ system?	0.0	0.0	0.0	0.0	0.8
WSMT	Asse- mbly	WT-CHP-I-D1d	Are the roles and responsibilities of the Assembly understood by the water and sanitation management teams?	1.0	0.0	0.0	0.0	0.7
Total: WT-CHP-I-D1				25	0	0	0	80
		WT-CHP-I-SP1	There is a water committee which has been constituted in line with national norms and standards					
WSMT		WT-CHP-I-SP1a	Is there a water and sanitation management team?	1.0	1.0	1.0	1.0	1.0
WSMT		WT-CHP-I-SP1b	Is the water and sanitation management team constituted in line with the national (or local) norms and standard, in terms of number and functions of members?	1.0	1.0	1.0	1.0	0.9
WSMT		WT-CHP-I-SP1c	Is the water and sanitation management team constituted in line with the national norms and standards, in terms of gender?	1.0	1.0	1.0	1.0	0.8
WSMT	HH	WT-CHP-I-SP1d	Was the water and sanitation management team democratically elected with the involvement of the entire community?	0.0	1.0	0.0	1.0	0.6
Total WT-CHP-I-SP1				75	100	75	100	83
Total: Institutional Factor				63	63	54	63	84

At the lowest level, qualitative and quantitative data is coded as a 1 (positive), 0 (negative) or 0.5 (sometimes/in between) depending on the respondent's response to each sub-indicator.

To calculate the indicator score for each specific intervention (i.e., an individual mechanized borehole), the sub-indicator scores are added up and multiplied by 25 to provide a score out of 100.

The scores in the national average column are simply the average from the scores for each specific intervention. This either an average for the individual sub-indicator (a score ranging from 0 to 1) or the overall score for the indicator (a score ranging from 0 to 100).

The institutional factor score is the average of the scores for each of the indicators for that factor for each intervention.

The overall factor score is calculated by averaging the national average scores for each indicator. Factor scores are calculated for each level (national, district, service provider) by averaging the scores from the indicators that focused on that level of analysis.