POLITICAL ECONOMY ANALYSIS OF RURAL WATER PERFORMANCE UNDER DIFFERENT MANAGEMENT ARRANGEMENTS IN GHANA

April 2025

DISCLAIMER: This report builds on research initiated under the Rural Evidence and Learning for Water (REAL-Water) project, which was supported by a cooperative agreement between the United States Agency for International Development (USAID) and The Aquaya Institute. The research was completed in collaboration with Aguaconsult and KNUST. The contents of this report are the sole responsibility of The Aquaya Institute, Aguaconsult, and KNUST and do not necessarily reflect the views of USAID or the United States Government.

ACKNOWLEDGEMENTS

This report was written by Harold Lockwood (Aguaconsult), Kwabena Biritwum Nyarko (KNUST), Charles Gyamfi (KNUST), Godwin Armstrong Duku (KNUST), Analía Saker (Aguaconsult) and Eugene Appiah-Effah (KNUST) as part of the Ghana field work of the Rural Evidence and Learning for Water (REAL-Water) program. The report was edited by Jeff Albert and Ranjiv Khush (Aquaya) and Dan Smith and Ryan Mahoney (USAID).

PREFERRED CITATION:
USAID. (2025). Political Economy Analysis of Rural Water Performance under Different Management Arrangements in Ghana. Washington, D.C., USAID Rural Evidence and Learning for Water (REAL-Water) Project. This report builds on research conducted by the Rural Evidence and Learning for Water (REAL-Water) project under United States Agency for International Development (USAID) Cooperative Agreement Number 7200AA21CA00014. This report was completed independently of USAID.

AQUAYA CONTACTS:
Ranjiv Khush, Project Director
ranjiv@aquaya.org

Jeff Albert, Deputy Project Director
jeff@aquaya.org

Dayna Hansberger, Senior Program and Operations Manager
dayna@aquaya.org

ABOUT REAL-WATER:
Rural Evidence and Learning for Water (REAL-Water) was a USAID-funded applied research program that studied how to achieve safer and more sustainable rural water supply in low- and middle-income countries. Designed and originally executed as a five-year program (September 2021–September 2026) led by Aquaya, REAL-Water was terminated in February 2025 along with the vast majority of USAID's overseas development assistance programs. For further information about this and other aspects of the project, as well as to access our knowledge products, please visit https://aquaya.org/real-water-resource-hub/.

TABLE OF CONTENTS

ACRONYM LIST **5**

EXECUTIVE SUMMARY **6**

1. INTRODUCTION **10**

1.1 Studying the Drivers of Rural Water Performance in Ghana 10

1.1.1 A Quantitative Performance Evaluation 10

1.1.2 Political Economy Analysis 11

1.2 Roles and Responsibilities in the Rural Water Sector 11

1.2.1 An Overview of Ghana's Rural Water Sector 11

1.2.2 Management Arrangements in Ghana 12

1.2.3 The Evolving Role of the Community Water and Sanitation Agency 14

1.2.4 A Regulatory Gap for Rural Water Services 15

2. APPROACH AND METHODOLOGY **16**

2.1 PE Diagnostic Framework 16

2.2 Sampling And Data Collection 20

2.3 Key Informant Interviews 21

2.4 Transcription, Coding And Analysis 21

3. LITERATURE REVIEW **22**

3.1 The Political Economy of Rural Water 22

3.2 The Political Economy of Rural Water In Ghana 22

4. RESULTS **24**

4.1 Overview 24

4.1.1 Factor Areas and Nodes Common to all Three Levels 25

4.1.2 Regional Differences in Factor Area at the Service Authority Level. 25

4.2 Key Findings by Factor Area 26

4.2.1 Policy and Institutional Factor Area 26

4.2.2 Sector Financing Factor Area 29

4.2.3 Legislative and Decentralization Context Factor Area 30

4.2.4 Donor Influence Factor Area 31

4.2.5 Infrastructure Factor Area 33

4.2.6 Socio-Economic and Cultural Factor Area 34

4.2.7 Vested Interests: Political Influence 36

4.2.8 Vested Interests: Corruption 38
4.2.9 Water Resources 39
4.3 High Performing and Poorly Performing Water Supply Facilities 40

5. DISCUSSION 45
5.1 A Political Vacuum in Ghana's Rural Water Sector 45
5.2 Political Economy Factors Driving Performance 45
5.2.1 Support and Accountability 46
5.2.2 External Pressures and Influences 46
5.2.3 Construction Contractor Selection, Spare Parts, and Electricity Costs 46
5.3 Implications For The Rural Water Sector in Ghana 47
5.4 Limitations 50
Annex 1: Interview Protocol 51
Annex 2: Matrix Coding Query All Levels: Heatmap 58
Annex 3: Nodes and Factor Areas that Differ Across Stakeholder Groups at the Three Levels 59
Annex 4: Matrix Coding by Region: Heatmap 60
Annex 5: High Performing and Failing Water Facilities: Weighted Heatmap 61
Annex 6: Political Economy Factors by Category, Level and Linkage to other Factors 62
Annex 7: Considerations for Addressing PE Factors, Stakeholders, Timeframes and Levels of Difficulty. 64
Bibliography 66

FIGURES

Figure 1: Diagnostic Framework for Political Economy Analysis of Rural Water Management Arrangements 17

TABLES

Table 1: Management Arrangements for Rural Water Service Delivery in Ghana 13
Table 2: Political Economy Factor Areas and Nodes 18
Table 3: Number of Key Informant Interviews by Stakeholder Group and by Level 21
Table 4: Performance Index of Selected High and Low Performing Schemes 41
Table 5: Summary of Political Economy Findings and Proposed Policy and Operational Responses 49

ACRONYM LIST

CBM	Community-based management
CONIWAS	Coalition of NGOs in Water and Sanitation
CWSA	Community Water and Sanitation Agency
DA	District Assembly
DACF	District Assembly Common Fund
DP	Development Partner
GWASHDP	Ghana Water, Sanitation and Hygiene Sector Development Programme 2021 – 2030
GWL	Ghana Water Limited
KNUST	Kwame Nkrumah University of Science and Technology
IMP	Improving Management Performance
MMDA	Metropolitan, Municipal and District Assemblies
MSWR	Ministry of Sanitation and Water Resources
NCWSS	National Community Water and Sanitation Strategy
NWP	National Water Policy
PEA	Political Economy Analysis
PURC	Public Utilities Regulatory Commission
REAL-Water	Rural Evidence and Learning for Water (Water Research and Learning program of USAID)
RQ	Research question
SWE	Safe Water Enterprise
USAID	United States Agency for International Development
WRM	Water resource management
WSMT	Water and Sanitation Management Team

EXECUTIVE SUMMARY

We conducted a political economy analysis (PEA) to identify how electoral politics, political patronage, macroeconomic factors, and donor preferences, among other factors, influence rural and small town piped water supply development and performance in Ghana. This PEA complements a quantitative study of rural water supply performance in Ghana. Both our quantitative study and this PEA focus on three rural water supply management arrangements:

- Public utility provision via Ghana's Community Water and Sanitation Agency (CWSA);
- Community-based management (CBM) via small town Water and Sanitation Management Teams (WSMTs) that are supported by local governments (Metropolitan, Municipal and District Assemblies, or simply District Assemblies); and
- Donor-supported Safe Water Enterprises (SWEs) operated by social enterprises on market principles but supported by external aid.

Between February and April 2023, we interviewed 45 key informants at the national, Service Authority and service provision (water facility) levels in Ghana using a common framework, followed by a coding of informant responses and analysis. We define a Service Authority as the institution(s) with the legal mandate to ensure that water services are planned and delivered. Service authorities are usually, but not always, equated with local government, and are not necessarily involved in direct service delivery themselves (although they may be in some cases) (Lockwood and Smits 2011; World Bank Group 2017). In the case of Ghana, the Service Authority for all management arrangements is the District Assembly, as defined by the Local Governance Act of 2016, Act 936. However, for CWSA and donor-supported SWEs, some of the service authority roles are assumed by internal structures, such as financial and technical support provided by regional and national CWSA and SWE offices.

RESULTS

We assessed the influences of political economy factors on piped water scheme performance at three levels, as summarized below.

National

At the national level, systemic factors affecting water supply performance include a perceived lack of clarity in policy and legal instruments that govern the water sector. Most important with respect to this lack of clarity is the de facto transition of the CWSA from its historic role of facilitation and oversight into a small town and rural service provider. CWSA initiated this transition in 2017 as a component of proposed policy reforms for the rural water and sanitation sector aimed at professionalizing management arrangements. These proposed reforms received Cabinet approval in 2019 and were incorporated in the revised National Water Policy of 2024 that was officially launched in August 2024. However, legislation that defines operating and regulatory structures for CWSA service provision has not been established. Other national level factors affecting water supply performance include inadequate public and private sector financing, the absence of effective regulation of service quality and tariff setting, and a decline in donor funding.

Service Authority

Cited factors at this level of influence include fiscal decentralization, which results in limited support to Service Authorities to enforce their mandate for delivering rural water services. In addition, we note the absence of effective regulation of the rural sub-sector, resulting in variable service quality and tariffs charged by different types of providers. Cultural factors, including views on the value of water and intra-community dynamics, were also flagged as an important barrier to payment for services in rural areas, although there are signs of a shift in these views in favor of payments for good service. The influence of politicians and traditional leaders is seen as limiting the ability of service providers to manage water facilities independently, including interference in tariff setting, elite capture and rent seeking behaviors. Political interference is viewed as having a disproportionate impact on WSMT arrangements. This is due to several underlying causes including the more informal governance arrangements for WSMTs, lack of oversight or regulation from the District Assemblies and party political dynamics. In a smaller number of cases, external actors, including politicians, are viewed as positive and contributing to solutions through provision of financing or resolving community conflicts. A further positive factor is the role of the media, and specifically radio, which is seen as having an important influence on the attitudes of consumers and decision-makers: i.e., reporting on water services indirectly contributes to improved performance across all management types.

Service Provision

Political economy factors highlighted at the service provision level include the lack of support provided by District Assemblies for WSMT arrangements, largely due to lack of funding, low technical staffing, and logistical constraints but also include a low priority for rural water. Most of the WSMT arrangements reported relying on support from sources beyond the District Assembly, including non-governmental organizations (NGOs) and local politicians. Other factors including cultural views and social behaviors within the community can harm management performance. A commonly cited issue at this level was the presence of alternative, lower-priced or free water sources from informal providers and charities or religious groups, which affects all three management arrangements. Internal social pressures and dynamics between different user groups and traditional leaders or local elites were also flagged as compromising performance, particularly for WSMT arrangements. Several infrastructure-related factors also emerge as important, including the selection of contractors and the cost of electricity, both of which are cited as major concerns affecting all management arrangements. Finally, challenges with availability and the cost of spare parts are viewed as more problematic for WSMT arrangements.

DISCUSSION

The most important political economy forces are captured in the four main findings together with suggested priority actions. We recognize that many of these actions are long-term in nature and will require strong sector leadership to achieve. It is also important to note that there are significant costs and tradeoffs in supporting certain actions against a backdrop of finite resources in the water sector and government budgets more widely. In particular, extending regulatory arrangements to the rural water sub-sector and improving the capacities of the District Assembly departments that support WSMTs would be costly. Perhaps most pressing is the question of the transition of CWSA into a rural public utility. Support for this organizational shift will likely result in less government support for WSMT arrangements. Ultimately, these are political decisions as much as they are technical.

1. A political vacuum in Ghana's rural water sector at the national level is driving fragmentation that may inhibit investment, regulation and effective water resource management. Without greater attention, development partners may be contributing to this fragmentation. We identified an apparent lack of political authority and institutional leadership within the sector, particularly around the reform process. Much of the momentum behind CWSA's shifting role has been propelled by that same agency, rather than the Ministry of Sanitation and Water Resources[1], which is the apex body in the sector. This situation has resulted in ambiguity regarding where and when to prioritize different management arrangements, how to coordinate asset ownership and transfer, and how services should be financed. Unregulated expansion and competition between the various management arrangements – WSMTs, CWSA and donor-supported SWEs plus an unknown number of informal private providers – is likely to further fragment the sector and facilitate an effective 'free for all' allowing different management arrangements to be promoted by interested parties. It is likely that the loser in this scenario will be – and some would argue already is – the WSMT arrangement, particularly those managing point sources. Under-resourced District Assemblies and a distracted CWSA, particularly in the context of dwindling donor funding, will be increasingly unable to support WSMTs.

Finding 1 Priority Actions:

- Finalize sector policy and reform processes, including the transition of CWSA into a public rural utility, clarification of management arrangements and definition of service areas.
- Develop new and revise existing legal instruments to support the proposed reform and remove any contradictions between sector policy and decentralization laws.
- Expand regulation of water service providers in rural areas, establish common tariff regimes across different management arrangements, and address alternative service providers who undercut and distort the market for rural water consumers.
- Ensure the alignment of development partner investments with (clarified) government policy directions.

2. Current trends undermine the community-based management arrangement. Support for the community-based WSMT management arrangement from CWSA is decreasing as it focuses on its new role of direct service provision. Many District Assemblies have also experienced declines in financial support for water services as aid funding to the sector has declined and there is inadequate public financing to make up the shortfall. The accountability balance between WSMTs as service providers and District Assemblies as Service Authorities is also decreasing. All management arrangement types remain vulnerable to political interference, but WSMTs are viewed as being far more vulnerable and less insulated than CWSA as a public utility and donor-funded SWE arrangements. This vulnerability is linked to various factors: for example, the limited levels of regulation and oversight means that tariff setting remains a politicized process, particularly for WSMT arrangements and has the knock-on effect of reducing the financial viability of schemes.

[1] At the time of writing the Ministry of Sanitation and Water Resources was a standalone government entity, but following the elections in late 2024 responsibility for rural water supply was shifted to the Ministry of Worls, Housing and Water Resources; throughout this document we retain the old name of the Ministry as it existed during the course of the research.

Finding 2 Priority Actions:

- Develop strategies to better insulate WSMT governance structures from political influence.
- Enforce development partner coordination at regional and district levels.
- Engage MPs and district level political and traditional leaders in setting and implementing sector priorities.
- Design and implement communication campaigns (radio, print/social media) that share sector priorities and progress with rural consumers.

3. District Assemblies have insufficient capacity, resources and incentives to act as the Service Authority for all management arrangements, particularly the WSMTs. In theory, the constrained abilities of District Assemblies to fulfill their roles as Service Authorities should extend to all management arrangement types. However, the biggest loser in terms of insufficient support is consistently perceived as the WSMTs. Although there are some cases of support being extended to CWSA and SWEs, these are the exceptions. Further, the lack of District Assembly engagement with WSMTs removes a layer of accountability and makes this management arrangement especially vulnerable to interference from local politicians and traditional leaders.

Finding 3 Priority Actions:

- Improve adequacy of decentralized funding and increase the share controlled by District Assemblies.
- Build District Assembly capacities for acting as Service Authorities, including in the management of public contracts.
- Establish incentive structures for District Assemblies to improve performance in rural water service delivery. This may include designating a national level institution through which budget and institutional support can be channeled to the MMDA supported WSMTs.
- Establish a mechanism for the equitable allocation of the 2% levy between CWSA as a utility and the MMDA supported WSMTs.
- Strengthen the WASH capacity of the Office of the Head of Local Government Service (OHLGS) and work with them to include performance indicator on decentralized water service delivery/small towns piped water systems under supported CBM arrangement in the annual Performance Contract of MMDAs.

4. Limited influence over contractor selection, poor infrastructure quality, and increasing energy costs are compromising District Assembly efforts to oversee and support water services. The selection of contractors and the quality and integrity of these actors is of critical importance to the construction of water supply infrastructure and can have significant, long-term impacts on performance and operation and maintenance costs. District Assemblies have a role to play in construction oversight and supervision but are often bypassed when contractors are assigned by non-state actors or through central government procurement mechanisms. The high costs of electricity pose challenges for all management arrangement types, but the effects are reduced for water systems that are not entirely reliant on the national grid.

1. INTRODUCTION

This report presents the findings from a Political Economy Analysis (PEA) of the drivers of rural water piped scheme performance in Ghana carried out as part of USAID's REAL-Water program. We conducted this PEA to complement a quantitative cross-sectional observational study of rural water schemes, investigating the variations in management performance, and the main practices and conditions that might account for such variations.

This introductory section provides an overview of the study within the institutional context of Ghana's rural water sector and explains important current developments. The following section sets out the detailed methodology, stakeholder selection and interview protocols. Section 3 presents the findings of a limited literature review into the political economy of the rural water sector in Ghana, and Section 4 presents the analysis and main findings from the PEA. Section 5 offers a discussion of the results and provides suggestions for addressing factors that constrain the performance of Ghana's rural water sector.

1.1 STUDYING THE DRIVERS OF RURAL WATER PERFORMANCE IN GHANA

Together, our research addressed three central questions:

1. How does rural water supply facility performance vary within and between management arrangements?
2. What management practices and conditions account for or mediate any observed variability, and what role do broader contextual factors play?
3. What political economy factors help explain variability in water facility performance that are not easily captured by quantitative surveys and field observations?

1.1.1 A QUANTITATIVE PERFORMANCE EVALUATION

To answer the first two questions, we conducted observations of facility performance and surveyed consumers, water service providers, and service authority and oversight personnel covering 150 rural piped water facilities in Ghana between February and April 2023, sampling three different management arrangements across a range of climate zones and administrative regions.

The management arrangements we studied are:

1) **Public utility provision** via Ghana's Community Water and Sanitation Agency (CWSA);

2) **Government supported community-based management** via small town Water and Sanitation Management Teams (WSMTs); and

3) **Donor-supported Safe Water Enterprises (SWEs)** via social enterprises or private companies operating on market principles but supported by external aid.

For further details of these three main management arrangements see section 1.3.2 below.

1.1.2 POLITICAL ECONOMY ANALYSIS

For the third research question regarding political economy factors, we interviewed 45 key informants at national, regional and district levels in Ghana using a common framework, followed by a coding of informant responses and analysis. Our results are described in this document.

Our objective for the PEA was to identify the degrees to which political economy elements such as electoral politics, political patronage, macroeconomic factors, and donor preferences influence rural water supply development and performance in Ghana. For each management arrangement, we explored political economy influences on three high-performing facilities and two failing facilities which were non-functional at the time of the analysis. We purposefully selected these water supply facilities to capture conditions across the Ashanti, Northern, and Volta regions.

1.2 ROLES AND RESPONSIBILITIES IN THE RURAL WATER SECTOR

1.2.1 AN OVERVIEW OF GHANA'S RURAL WATER SECTOR

In 2017, Ghana established the Ministry of Sanitation and Water Resources (MSWR) to consolidate water, sanitation, and hygiene (WASH) development under a single ministry. Subsequently, the agencies for urban services (Ghana Water Limited, GWL), rural technical support (CWSA), and water resources (Water Resources Commission) were placed under the MSWR (Aquaya Institute 2020). Ghana's water sector is guided by a number of important policies and strategic plans, including:

- The National Community Water and Sanitation Program (NCWSP) 1994 was launched by the Ministry of Works and Housing after decentralization began in Ghana. The NCWSP provides the blueprint for water service delivery in rural communities and small towns. It promotes sustainability of services through community ownership and management, involvement of women and the private sector, and local government facilitation.

- The National Community Water and Sanitation Strategy (NCWSS, 2014), developed by the Ministry of Works and Housing and CWSA twenty years after the NCWSP with the aim of updating the program.

- The National Water Policy (NWP, 2007) introduced by the Ministry of Works and Housing provides the institutional framework for the sustainable development of Ghana's water resources.

- The Ghana Water, Sanitation and Hygiene Sector Development Programme 2021 – 2030 or GWASHDP, developed by the MSWR, provides the framework for inclusive sector planning, implementation, monitoring and evaluation, and reporting for sustainable and universal water supply, sanitation, and hygiene services in Ghana through 2030 (MSWR 2023).

- The revised National Water Policy (NWP 2024) is an update to the 2007 policy reflecting changes in global, regional and national discourses on water use and management, including recognition of water as a human right and the principle of 'leaving no one behind' (MSWR 2024).

Today, GWL functions as the primary water service provider in urban areas[2] and is regulated by the Public Utilities Regulatory Commission (PURC). GWL's current priorities include reducing non-revenue water, expanding its customer base, and improving operating performance.

CWSA was established by the Community Water and Sanitation Agency Act of 1998 (Act 564) as an autonomous organization with the mandate to facilitate the provision of safe drinking water and related sanitation services to rural communities and small towns and to coordinate all stakeholders and interventions under the direction of the NCWSP. Under Act 564, CWSA provides capacity building and oversight to Metropolitan, Municipal and District Assemblies (MMDAs or simply District Assemblies) and supports them in encouraging active participation of communities and women, in the design, planning, construction and community management of water supply and related sanitation services. The other major role of CWSA under this Act is to formulate strategies for the effective mobilization of resources for the execution of safe water and related sanitation programs.

1.2.2 MANAGEMENT ARRANGEMENTS IN GHANA

The MSWR released its revised National Water Policy in 2024 with the overarching goal of supporting a transition from unsupported community ownership and management approaches to a more coordinated and professionalized operation and management of small town and rural water supply systems under different management arrangements (including CBM). The reforms are bifurcated; (a) point sources would continue to be managed within the framework of the community ownership and management concept and under the supervision of District Assemblies and (b) small town piped water supply systems to be managed by CWSA as a public utility organization. The policy focuses on three different pathways for professionalizing management arrangements:

1. Recognising and supporting CWSA as a new public utility provider for small-town and rural piped water supply systems;
2. Promoting community ownership and management model (WSMT) for point sources and improving the likelihood of sustainability through the active participation of women, public sector facilitation and the private sector provision of goods and services and deepening the capacity of DAs to provide support;
3. Recognising and promoting private sector providers as operators and investor in capital infrastructure.

Under the new policy, asset ownership will be formally allocated to CWSA with respect to all publicly funded small town water systems, regardless of the contributions to capital cost of these facilities from DAs and communities. The new policy also provides an indication of how these service providers will be coordinated and regulated but this relies heavily on the PURC which has so far been limited to regulating urban water. There is also provision for District Assemblies and CWSA to delegate some piped schemes to private sector management (MSWR 2023, 2021–30). The MSWR initiated a revision to the national water policy in 2022 which has now been approved by Cabinet (MSWR 2024) . However, the legal steps required to transition CWSA into a formal service provider, including

[2] The definition provided in the revised draft Water Policy 2022 of a rural area in Ghana is for settlements below 5,000 inhabitants (Ghana Statistical Service 2014). Small town water supply is defined by sector policies as being between 2,000 and approximately 30,000 in population although definitions vary. However, in reality a rural area is identified as any location not served by the GWL. The result is that rural piped schemes managed by CWSA and other providers may operate in populations that range from approximately 600 up to 60,000 people.

amending or replacing its Legislative Act (564) from 1988 are still pending. The government also must consider defining the appropriate organisational structure within which it will operate, that is either as a state-owned limited liability company, an authority or agency. These decisions will then require further review by the Attorney General's office. The revised National Water Strategy clearly sets out the regulatory regime for CWSA as being under the purview of the PURC

The new sector development program is separate from this policy revision process and intended to update the earlier development plan to align with current challenges as well as with the SDGs. Based on the sector development program several discrete management arrangements in the delivery of rural water services can be identified as set out in Table 1 below, with District Assemblies continuing to play an important role in the support of WSMT arrangements.

TABLE 1: MANAGEMENT ARRANGEMENTS FOR RURAL WATER SERVICE DELIVERY IN GHANA

MANAGEMENT ARRANGEMENT	DESCRIPTION	STATUS AND SCALE
Public utility provision: Community Water and Sanitation Agency (CWSA)	Under this arrangement CWSA is taking on a direct implementation role as a utility, performing functions such as day-to-day operations, maintenance, repairs and spare part procurement, revenue collection and financial management. Once CWSA is formally recognized as a utility it will come under the regulatory purview of PURC.	The new role for CWSA to operate as a public utility has been clarified in the revised Water Policy 2024 and has obtained Cabinet approval/ The legislative steps to support the transition of CWSA are still pending.
	A variant to this approach is for CWSA to continue with responsibility for ensuring service provision but delegate O&M functions to private service providers. CWSA would subsequently perform monitoring and oversight to ensure compliance with contractual provisions regarding water quality, tariffs, and asset management.	At present an estimated 190 piped water supply facilities are being directly managed by CWSA out of a total of 1,022 piped schemes. Only one scheme is being operated under a delegated management arrangement to date.
Community based management: Water and Sanitation Management Team (WSMT) A form of supported CBM, known as Community Ownership and Management or COM' in Ghana, which is the predominant arrangement for point sources and piped water supply facilities.	Under this arrangement, WSMTs are responsible for service provider functions (e.g., day-to-day operations, revenue collection, minor maintenance). District Assemblies, in the capacity of Service Authority, have several critical support and oversight functions. District Assemblies in turn receive support from CWSA. Two main variants of WSMTs are identified: • Rural communities with point source supply and with five to nine members of the WSMT which are typically voluntary. • Small-town piped schemes where the WSMT serves as the board to supervise the operating team, which should be made up of 10 to 15 paid staff including a scheme manager, technical operator(s), revenue collector(s) and finance/Accounts officer. The other members of the WSMT do not draw salaries but only an allowance.	Legally established under NCWSP (1994) and included in the proposed reform. Current estimates of CBM management comprise over 32,000 point water sources and 800 piped water supply schemes across the country.

Donor-supported Safe Water Enterprises (SWEs) SWEs operate on market principles but rely on some form of subsidy provided by an external financing entity, typically a bi-lateral donor, charity or philanthropic foundation.	SWEs are social enterprises, NGOs or private companies that manage (and often own) water supply facilities in a prescribed service area. Each SWE functions differently, but they typically operate under a Memorandum of Understanding with the respective District Assembly or a more formalized Public Private Partnership agreement. SWEs perform a wide set of service provider functions, including revenue collection, operations and maintenance, water quality testing, spare part procurement, and repairs. There are at least five established SWEs in Ghana operating under this arrangement: Safe Water Network (SWN), 4ward Development, Water Health Ghana, Project Maji, and Saha Global	Provision for the involvement of SWEs and private sector in direct operation and management of rural water services is included in both the Sector Development Programme 2021-2030 and the revised National Water Policy. SWEs typically make agreements with district authorities without the systematic involvement of central government. SWEs are currently unregulated by PURC. At the end of 2022, one SWE estimated that there were over 700 facilities run by SWEs in Ghana, serving 1.4M people (a facility includes standalone kiosks and small piped networks)[3].

For purposes of this PEA report, we refer to the three main management arrangements set out in Table 1 above utilizing the Ghana context-specific terms, i. CWSA (as a public utility); ii. WSMTs (as supported CBM) and iii. donor-supported SWEs. The latter should be considered as distinct from fully private water service providers that rely on an internally generated profit margin. There is an unknown number of fully private service providers currently operating in the country, but estimates indicate above 1,000 based on requests that CWSA received when the government provided free water during COVID-19 pandemic.[4] For infrastructure built with public funding or development assistance (e.g. grants or concessionary loans) channeled through government, the assets are owned by the government. In the case of SWEs, capital costs are usually provided by a donor organization channeled via the SWEs who then own the assets. However, under some Build Operate and Transfer contracts, there are provisions for the transfer of ownership from SWEs to District Assemblies after a stipulated period.

1.2.3 THE EVOLVING ROLE OF THE COMMUNITY WATER AND SANITATION AGENCY

Prior to 2017, CWSA was funded primarily through external development grants and loans but following Ghana's reclassification by development finance institutions from low-income to lower-middle-income status in 2007, external funders began reducing their financial support for the agency. At the same time, CWSA asserted that the rural water sector continued to struggle with persistent capacity gaps, poor operation and maintenance, and high rates of water system breakdowns. In response to its own funding shortfalls and the poor performance of the rural water sector, CWSA initiated a process in 2017 to transform itself into a public water utility provider for small towns in rural areas of the country not covered by GWL (IRC 2017; Aquaya Institute 2020).

CWSA has moved relatively rapidly to transform itself as an organization and is taking on new service delivery functions. These moves pre-dated the associated changes in policy (and, if needed, legislation) that were assumed would follow. To date, CWSA has taken over direct management of some 190 small

[3] Figures based on those provided by Safe Water Network; personal communication, January 2024.
[4] This estimate was provided by CWSA senior staff in consultations in 2023 but the actual number is unquantified.

town piped systems of a total of 1,022 and is piloting one case of delegated management to a private sector entity.

Now that the formal approval has been given by Cabinet, the transformation of CWSA still requires on-going effort in a number of areas. Firstly, there has been the unexpectedly high level of resources needed to rehabilitate and manage the existing water supply facilities, coupled with limited revenue potential for certain of these schemes; in short, a less attractive financial prospect than envisioned. Additionally, in some instances, community representatives as well as some other sector stakeholders have been hesitant to permit CWSA to assume control of water systems.

Secondly, although the policy makes provision for CWSA to delegate management of schemes, the optimal management arrangements for publicly funded small-town piped water supply facilities not currently under CWSA remain poorly defined in the policy. This gap in management planning is exacerbated by both the limited capacity of CWSA and the uncertainty regarding the pace at which it might take over the management of such systems from existing District Assembly supported WSMTs. Thirdly, CWSA has not officially relinquished its role as a technical advisory agency for the rural water sector, which includes the provision of support to District Assemblies, even though its activities in this area are significantly reduced in practice due to its focus on transitioning into a service provider.

It is also noteworthy that at the time of writing, the long-standing Chief Executive Officer of CWSA – and a key driver of the transition process since 2017 – has been replaced by the President of the Republic. The indications are that this leadership change was not related to concerns over CWSA's evolving role. Nevertheless, the replacement is likely to increase the levels of instability around CWSA's transition and its place in the wider policy reform. Ultimately, much of the concern and resistance to CWSA's changing role can be attributed to the lack of clarity in legislation, policy, regulation, and strategy for delivering rural water services.

1.2.4 A REGULATORY GAP FOR RURAL WATER SERVICES

Unlike GWL, CWSA has historically not been recognized as a utility and therefore remained outside the scope of the PURC. Stakeholders in the sector are operating on the assumption that now CWSA's new role is formally approved, this situation will change. However, there are questions regarding the capacity of PURC to extend its regulatory reach to small town and rural schemes. Until this situation changes, CWSA is operating as a utility provider without formal regulation.

Under existing policy, rural water services in Ghana are 'regulated' through several mechanisms (Aquaya Institute 2020; ESAWAS 2022):

- Under the Community Water and Sanitation Agency Act 564 (1998), CWSA has a regulatory mandate, though in reality these are limited functions mainly related to prescribing standards and guidelines for safe rural water supply, providing related sanitation services, and supporting District Assemblies to ensure compliance with these standards.

- According to the Local Governance Act of 2016, Act 936, District Assemblies legally own public infrastructure on behalf of the state and are responsible for overseeing water system operations in rural settings and urban centers that are not covered by GWL. They have the authority to approve tariffs and promote CWSA guidelines, although the latter are not legally enforceable. In

practice this mandate is more evident for WSMTs. The SWEs determine their tariffs through internal processes and then engage in consultations with District Assemblies for approvals. This implies a consultative rather than a strictly regulatory role for District Assemblies in tariff-setting, which is not uniformly applied.

- Regulation by contract is also practiced on a limited basis. This is principally where District Assemblies directly contract private water service providers, most of which are now SWEs, to provide services and perform regulatory functions. The nature of the legal instrument and service provision arrangement varies among private service providers and may or may not include key performance indicators. However, in practice, follow-up, oversight, and regulatory functions associated with these MoUs are typically not done in a systematic way due to the limited capacity and experience of District Assemblies.

The District Assembly, as the approving authority for all water service provision in rural areas and small towns, is responsible for ensuring compliance with standards relating to access, service reliability and water quality as set by the Ghana Standards Authority. However, it is important to note that there is no mechanism for holding District Assemblies accountable. The reality is that many District Assemblies lack the intent and capacity to carry out these functions in support of WSMTs on a regular basis. As a result, oversight of compliance with standards is patchy at best and routine rural water quality monitoring rarely occurs, and many rural water systems fall into disrepair for long periods (Aquaya Institute 2020).

2. APPROACH AND METHODOLOGY

2.1 PEA DIAGNOSTIC FRAMEWORK

Our PEA included economic conditions (for example, macroeconomic trends and recent responses to the COVID-19 economic shocks, inflation, and fiscal austerity measures), electoral politics, support of policy by national government stakeholders, political patronage interests or economic interests (corruption) at local level, and development partner funding and influence.

Our approach was guided by a modified framework originally developed by the World Bank's Social Development Department (World Bank Group 2008; Edelmann 2009), drawing on both WaterAid's PEA Toolkit (WaterAid n.d; Whaites et al. 2023) and the approach taken by the Overseas Development Institute series for an analysis of political economies in three countries in 2018/19 (Sève 2018; Oates and Mwathunga 2018; Pichon 2019).

This framework has two parts: a diagnostic section and an action-oriented section to identify activities required to address policy reform. We only employed the diagnostic section, and we modified the specific topics of inquiry to better understand differences in water facility performance under different management arrangements that extend beyond our quantitative research. The framework distinguishes three key elements:

1. The national context of management arrangements (e.g. national legislative, policy, and political dimensions as well as such broader public administration dynamics such as decentralization and evolving donor priorities).
2. The service authority arena for rural water supply at district level, which is shaped by a range of sector stakeholders, institutions, and their economic and political interests, as well as more localized socio-cultural factors.

3. The service provision arena, capturing political and economic interests of individuals or water facility service providers as well as the influence of local leadership, champions, or opponents.

The main areas of interest for our research are set out in Figure 1 below.

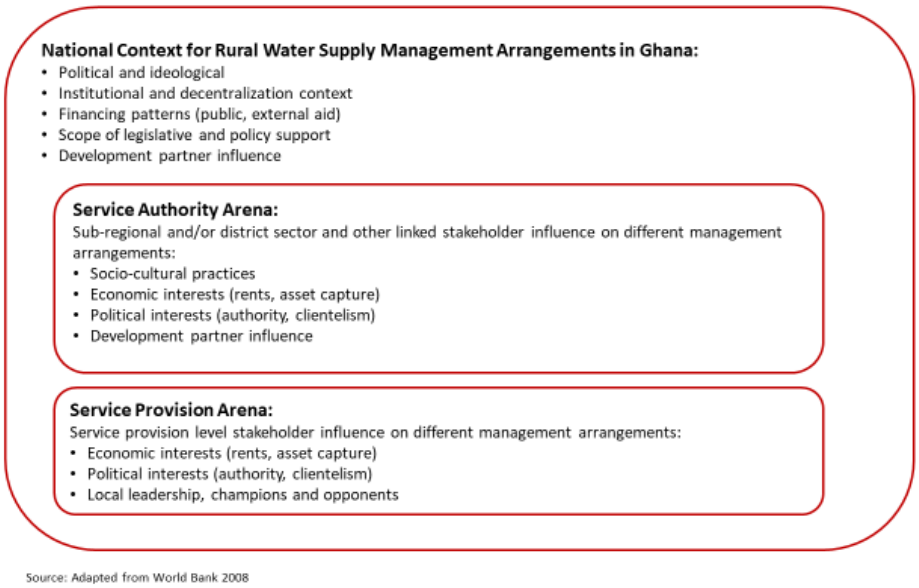

Figure 1: Diagnostic Framework for Political Economy Analysis of Rural Water Management Arrangements

We developed detailed interview guides initially divided into eight "factor areas" – broad thematic categories – as indicated in Table 2. We made minor modifications to our questions based on the responses elicited during our early interviews, particularly for language and terminology, depending on the stakeholder group and sensitivity to factors such as political influence and corruption. Following the coding of the interviews, we added three new factor areas to the eight that we had initially specified, across which we identified 29 "nodes"[5] also indicated in Table 2.

Our analysis consisted of 1) a document review of political economy factors relating to the water sector in Ghana, including any previous assessments of rural water services; 2) semi-structured interviews with 45 key informants in the rural water sector, ranging from water service providers to national-level officials, using a common questionnaire protocol focusing on different political economy dimensions; 3) coding of the interview transcripts using NVIVO software (Lumivero, Denver, CO USA) to index segments of text to themes; and, 4) analysis of the NVIVO outputs to identify drivers of water facility performance under the three different management arrangement.

[5] In NVIVO, a "node" is a collection of references about a specific topic, case or relationship that together sit within a broader "factor area." In reviewing the interviews, references are grouped together by coding sources to a node; for example, all references to the absence of a dedicated regulator for rural water would be coded to a node within the Policy and Institutional factor area.

TABLE 2: POLITICAL ECONOMY FACTOR AREAS AND NODES

FACTOR AREAS	NODES	DESCRIPTOR
Policy and institutional	1: Clarity on policy and legal instruments	The impact of the clarity – or lack of clarity - of sector policies and instruments on the performance of different management arrangements.
	2: Impact on changes in national policy	The impact of changes in the relative emphasis given to management arrangements on the performance of different management arrangements.
	3: Policy drivers	The impact of organizations, individuals, and leaderships within the sector on the policy decisions and direction for different rural water management arrangements.
	4: Absence of dedicated regulatory actor	The impact of the lack of an independent and dedicated regulatory actor for rural water supply services on the performance of different management arrangements.
	5: Lack of information for decision-making (new node)	Impact of lack, or limited extent, of information on the performance of the different management models on policy reforms and support for different management arrangements.
Sector Financing	6: Changes in public expenditure and investment	The impact of changes to the extent of public funding on the performance of different management arrangements.
Legislative and Decentralization Context	7: Effects of fiscal decentralization	The impact of fiscal flows (volume, frequency and timeliness) from central to decentralized levels of government on the performance of management arrangements.
	8: Effects of decentralization	The impact of decentralization arrangements on the performance of different management arrangements.
	9: Service authority support	The impact of support from regional level government, entity or District Assembly on the performance of water supply schemes under different management arrangements (i.e. investment planning, capital maintenance investments and technical support for specific problems).
	10: Economic status of the service authority	Impact of differences in economic status of the region or individual district on the performance of different management arrangements for rural water.

Development Partner Influence	11: Reduction in donor funding	The impact of changes in external donor funding on the performance of different management arrangements.
	12: Support from donors	The support and influence of development partners on policy choices around different management arrangements for rural water.
Infrastructure	13: Impact of the selection of contractors	The impact of construction contractors, well drillers and other service providers on the long-term performance of different management arrangements
	14: Spare parts	The impact of the availability, quality and cost of spare parts on the long-term performance of different management arrangements
	15: Electricity (new node)	The impact of the costs of electricity and downtime/surges in supply on the long-term performance of different management arrangements
Socio-Economic and cultural	16: Changes in demographics in rural areas	The impact of changing demographics and population densities on the performance of different management arrangements.
	17: Macro-economic factors	The impact of Ghana's changing macro-economic context on the performance of management arrangements.
	18: Pandemic water tariff relief	The impact of the COVID 19 pandemic water tariff relief or subsidy affecting the ability to manage water supply schemes under different management arrangements.
	19: Customers' wealth	The impact of different levels of consumer income or wealth on the performance of water supply schemes under different management arrangements.
	20: Cultural factors	The impact of cultural practices, dynamics views or beliefs on the value of water, including any regional variations, on the performance of water supply schemes under different management arrangements.
	21: Other (new node)	The impact of miscellaneous issues on performance under different management arrangements identified during coding that were not covered by any other node under this factor area. These included payment modalities, the ability of consumers to pay, metering, setting of water tariffs, conflict and institutional debtors.
Influence others (new factor)	22: Support from others	The impact of interest groups outside government (e.g., NGOs, media) on the performance of different management arrangements.

Vested interests (political influence)	23: Effects of other actors	The impact of champions, exceptional leaders (cultural, tribal and religious), and opponents of service providers (e.g., special interests seeking to promote specific water supply options) on the performance of management arrangements.
	24: Effect of political parties and politicians	The support and influence of particular politicians or political allegiances has had on the promotion of different management arrangements
Financial interests (corruption)	25: Impact of corruption on performance	The impact of corruption or rent-seeking on the performance of different management arrangements.
	26: Existence of corruption	The presence and extent of corruption or rent-seeking on the performance of different management arrangements.
Capacity of service providers (new factor)	27: Limited capacity at the service provider level	The capacity, or lack of capacity, of service providers to operate, maintain and manage water supply facilities under different management arrangements.
Water resource	28: Water resources issues (new node)	The impact of climate change and seasonality on the availability and quality of water, as well as anthropogenic environmental impacts and how these influence performance of different management arrangements.
	29: Various water sources	The impact of the presence of alternative water sources under other management arrangements in the same or contiguous service areas on the performance of the management arrangement in question.

2.2 SAMPLING AND DATA COLLECTION

We conducted 45 key informant interviews. At the national and Service Authority levels, we identified individuals from relevant water sector institutions and added additional key informants as suggested by those already selected. We interviewed 14 informants at national level, 16 at Service Authority level, and 15 rural water supply service providers from the three management arrangement types. We identified five facilities for each management arrangement type across three regions, namely Ashanti, Northern and Volta. All of the sampled WSMTs are in the category of small-town piped schemes where the WSMT serves as the board to supervise the operating team. For each management arrangement we identified three high performing and two poor performing facilities. The selection of high and poorly performing schemes was purposeful, based on three criteria: the performance information collected in the quantitative research and available at the time of the interviews, the subjective evaluation of the data collection teams, and an even distribution of schemes across the country (see section 4.3 for further detail). We defined "high performers" in terms of service levels (functionality, reliability and water quality) and also by strong management practices identified by the quantitative study. We defined poor performers as those that were experiencing major supply interruptions at the time of the interviews.

2.3 KEY INFORMANT INTERVIEWS

The 45 key informants we identified (Table 3) are distributed across the following categories:

- Civil society and NGOs, including affiliated consultants and network organizations involved in the sector
- Development partners (e.g. bilateral and multilateral donors)
- National government (e.g. PURC, the regulator for urban water and line ministries)
- Service Authority (e.g. District Assembly staff)
- Regional staff of CWSA and SWEs.
- Service Providers of the three management arrangements: WSMTs, CWSA, and SWEs

TABLE 3: NUMBER OF KEY INFORMANT INTERVIEWS BY STAKEHOLDER GROUP AND BY LEVEL

NATIONAL CONTEXT	NO.	SERVICE AUTHORITY	NO.	SERVICE PROVIDER	NO.
Government	5	District Local Government	12	CWSA	5
Service Provider	3	Regional Service Provider	3	WSMT	5
Civil Society	3	Donor-supported SWE sector regional	1	Donor-supported SWE	5
Development Partners	3				

2.4 TRANSCRIPTION, CODING AND ANALYSIS

The research team conducted semi-structured interviews both in person and virtually. Interviews were recorded with the permission of the respondents and transcribed. The transcripts were checked by the same interviewer to correct any mistakes in the recording and transcription process and then entered into NVIVO software. The transcripts were independently coded by two researchers into an index of segments of text relating to the factor areas and nodes shown in Table 2. The inter-rater variability (also known as a coding comparison query) was measured and the Kappa Coefficient was 0.994. Our threshold was set at a minimum of 0.8, indicating a high degree of convergence in the independent coding process. The transcription and coding resulted in 1,122 individual coded pieces of text or threads of evidence from the interviews corresponding to the 29 nodes across the 11 factor areas.

2.4.1 DATA ANALYSIS

After finalizing the coding of responses relating to the 29 different nodes under the 11 main factor areas, we carried out a final stage of analysis of the coded text to identify further themes, interpret meanings, and examine possible relationships among themes. Within each node we identified different numbers of specific themes which could be positive or negative and could be expressed by different stakeholders at the different levels; the number of themes identified varied between one and eight under all 29 nodes. For example, in reviewing the node for reduction in donor funding within the Development Partner

Influence factor area, four themes were identified: i. effects on monitoring and O&M; ii. reduction of investment in new infrastructure; iii. dwindling efforts on capacity building, and iv. emergence of blended financing. This was done for each of the 29 nodes to identify specific themes for different stakeholder groups at the three different levels; through this process we identified 118 individual themes. The results of this analysis are set out in Section 4 below.

3. LITERATURE REVIEW

3.1 THE POLITICAL ECONOMY OF RURAL WATER

THERE IS AN EXISTING BODY OF LITERATURE FROM LOWER MIDDLE-INCOME COUNTRIES HIGHLIGHTING THE POLITICAL ECONOMY OF THE WATER SECTOR, WITH A FOCUS ON SECTOR LEVEL ASSESSMENTS, URBAN WATER, AND WATER RESOURCE ALLOCATIONS. The water sector in general has been recognized as highly politicized for some time, specifically in relation to processes around resource allocation, patronage and political campaigning during election periods, which can undermine the ability of (local) government to fulfill the functions of the state (Manghee and Poole 2012; Oates and Mwathunga 2018; Hope et al. 2020; RésEAU 2023). At a more local level, control over individual water supply infrastructure may also be closely linked to wealth enhancement (rent-seeking) by powerful elites (Chowns 2015; Harvey 2021; Lockwood et al. 2021). There has long-been a tacit recognition that individual and organizational incentives and rewards flowing from governance and institutional arrangements are critical to how services are delivered (Harris, Kooy, and Jones 2011; World Bank 2022).

THE LITERATURE ON RURAL WATER MANAGEMENT ARRANGEMENTS IS LIMITED, WITH THE EXCEPTION OF COMMUNITY-BASED MANAGEMENT. For the rural sector, an analysis of the political economy of CBM finds the model ineffective in some cases and ultimately disempowering, providing an excuse for duty bearers to abdicate responsibility (Chowns 2014; Brown and van den Broek 2017; Moriarty et al. 2013). More recently, three country-level studies on rural water services highlight broader aspects of the political economy, including pressure to install infrastructure (to expand coverage) rather than investing in institutions and capacity to support existing services, lack of financing, and poor capacity at the local, decentralized levels (Sève 2018; Oates and Mwathunga 2018; Pichon 2019). The studies also note the existence of competition among elites over access to limited public resources, which constrains the ability of government officials to implement policies in the interest of rural communities. Resistance to decentralizing control over resources to lower levels is also documented. Other important factors have received less attention, such as the unwillingness of government policy makers to accept the limits of current management arrangements (referring to CBM), in part due to lack of reliable and timely performance data; the lack of "safe space" for government officials to critically reflect on dominant approaches and poor performance; and finally, the role of donors in maintaining the status quo and their disproportionate influence over policymakers (Jones 2015).

3.2 THE POLITICAL ECONOMY OF RURAL WATER IN GHANA

THE NATURE OF GHANAIAN POLITICS AND THE "CLIENTELISM" ASSOCIATED WITH THE TWO-PARTY POLITICAL SYSTEM HAS UNDERMINED THE EFFECTIVENESS OF STATE INSTITUTIONS IN THE DELIVERY OF PUBLIC SERVICES. Efforts to reform and improve the

delivery of core state functions, including the supply of safe drinking water, must be viewed in the broader political economy context of Ghana. Several recent studies have characterized high levels of 'competitive clientelism'[6] and associated patronage systems as central to understanding the lack of progress in improving the effectiveness of public institutions (Appiah and Abdulai 2017; Odijie and Imoro 2021). In this case, the nature of Ghana's two-party state has exacerbated the 'winner takes all' strategies adopted by ruling elites, in which both parties utilize strategies of reward via distribution of state resources, or control over such resources, as a means of ensuring their political survival. Indeed, it is the very short-term nature of such patronage systems that undermines the consensus building needed to support long-term national development (Odijie and Imoro 2021). This pattern of political behavior extends to 'political appointments' (and removals of personnel associated with previous regimes) through the politicization of institutions, reducing the effectiveness of state bureaucracies: "one of the first acts of successive governments has been to dissolve the boards of state-controlled enterprises so as to appoint their own loyalists to those positions" (ibid, p. 11).

Such clientelism adds to the prevailing conditions for public sector corruption, which is common to many contexts globally and most often is linked to high-value and large-scale government-led infrastructure projects (OECD 2017). Ghana is no exception. As Appiah and Abdulai point out, public sector corruption is pervasive in Ghana, and recent evidence suggests that progress in reducing corruption has either stagnated or even worsened during the roughly twenty-year period ending in 2014 (Appiah and Abdulai 2017). More recent evidence from Transparency International's Corruption Perception Index indicates that Ghana still performs poorly, with an average of just over 42 points out of 100 and a 2021 ranking of 75th of 180 countries. The combined impacts of clientelism and corruption have resulted in the inability of Ghanaian state institutions to deliver agreed upon medium to long-term development goals as set out by the country's own National Development Planning Commission.

POLITICAL ECONOMY FACTORS HAVE A BEARING ON THE (RURAL) WATER SECTOR IN GHANA, PARTICULARLY IN TERMS OF POLITICAL APPOINTEES TO PUBLIC BODIES, PUBLIC PRIVATE PARTNERSHIP ARRANGEMENTS AND TARIFF SETTING. Several studies assess the political economy of the water sector in Ghana, two of which focus on an analysis of a Public Private Partnership (PPP) model. The first explores the experiences of a management contract led by the Ghana Water Company Limited (GWL) between 2006 and 2011 with the aims of reducing urban non-revenue water by 5% per year, and of improving customer-service operations and operating efficiencies. This case reconfirms the significance of underlying political economy dimensions outlined above in the context of private sector involvement in the delivery of urban water and the extent to which appointments of directors and key positions on boards are heavily politicized. The authors point to the fact that although performance of the private entity was constrained by a design 'based on ambiguous and inadequate information' it also suffered from political appointments and politically determined tariffs as well as interference, which constrained the independence of senior management (Hirvi and Whitfield 2015).

[6] "Competitive clientelism is a distribution whereby a competition exists between elites over privileged access to a limited set of state resources that they can then distribute to their clients" (Lust 2009). This term refers to the use and operation of clientelism by different political parties or factions through the distribution of goods or services to attain and/or stay in power, most notably through the political support from elites or individual citizen voters. It is particularly relevant in a two-party state such as Ghana.

The second case looks at PPP arrangements in the rural context, focusing on one extremely large scheme, which is not representative of the sub-sector in Ghana.[7] As well as positive findings around the structure of institutional arrangements and the impact of improving access to water, it also highlights the challenges of political interference on the operator. For example, proposals for increasing tariffs were resisted by political stakeholders over fears of losing votes in upcoming elections. This led the authors to conclude that (based on this one case), the success of PPPs in the water sector depends not only on financing and the capacity of public sector institutions, but also political will and cooperation (Nyanyofio et al. 2022).

AS THE RURAL SUB-SECTOR IN GHANA MOVES FROM ONE DOMINATED BY DONOR FUNDING TO A GREATER RELIANCE ON TARIFF REVENUE AND PUBLIC FUNDING SOURCES, POLITICAL ECONOMY FACTORS WILL CONTINUE TO HAVE AN IMPORTANT INFLUENCE ON THE SECTOR. Current efforts to revise the National Water Policy should be considered against the backdrop of competitive clientelism and political patronage, especially as it pertains to changes in the landscape of rural water service provision. The 2024 revision to the existing National Water Policy from 2007 focuses on a number of measures to improve performance of service providers and to attract new financing to the sector, including greater private sector participation and investments in rural water through delegated contracting, leasing of assets to CWSA, supporting District Assemblies who want to enter into PPP arrangements and introduction of tax incentives to encourage investment (MSWR 2024). The management arrangements for those piped schemes not being taken over by CWSA, which currently amount to over 80% of those in the country, are yet to be fully determined, but could potentially involve some form of PPPs. According to the 2024 National Water Policy, point source schemes will continue to be managed under community ownership model (section 2.5.1, pg 32) but are likely to continue to face the same structural challenges of under-resourced and low capacity WSMTs and limited support from District Assemblies.

4. RESULTS

4.1 OVERVIEW

As a first level of analysis, we examined citation frequencies across the 11 factor areas and the 29 nodes to identify any pattern or common political economy factors that may explain influence on management arrangement performance. Annex 2 provides a heatmap showing the frequency of cited nodes across all levels and all stakeholders and indicates those areas cited very frequently (shown in red and dark orange; >35 times), frequently (in orange; 25 to 34), moderately (yellow and light orange;15 to 24) or less commonly (indicated by green colors <14 times).[8]

[7] The study assessed governance mechanisms and implementation of the Three–District Water Supply project in Ghana, providing services to over 115,000 people across 129 rural and small-town communities. Under this PPP arrangement a management contract was signed between the government (represented by CWSA and the various concerned Metropolitan, Municipal and District Assemblies and a private service provider).

[8] Note: stakeholders at the Service Provision level were not asked questions for nodes under the Policy and Institutional factor area or some of the questions relating to nodes under the Legislative and Decentralization Context, hence they score 0.

4.1.1 FACTOR AREAS AND NODES COMMON TO ALL THREE LEVELS

Service Authority Support (70), support from development partners (50) and the **effect of political parties and politicians** (87) are the three most commonly cited nodes. The node for existence of corruption also scores highly (52), but interestingly it is not mentioned by any stakeholders at the service provision level.

NATIONAL LEVEL:

The nodes for **policy drivers,** (41), **absence of dedicated regulatory actor** (42), under the policy and institutional factor area, and **political influence** (effect of political parties and politicians (38)) were the most commonly cited by national-level key informants.

SERVICE AUTHORITY LEVEL:

At this level, the most frequently cited nodes were **cultural practices** (33) and the **effect of political parties and politicians** (33). The next most commonly cited nodes at this level were the **lack of a dedicated regulator** (29) along with the **effects of fiscal decentralization** (29), the **availability of spare parts** (28), **customer wealth** (27), the **existence of corruption** (25) and **support from others** (27).

SERVICE PROVISION LEVEL:

At this level the highest number of citations were given to the node for **Service Authority support** (36). High citations were also made for the nodes for **alternative water sources (32), spare parts** (30)**, cultural practices** (29)**, customer wealth** (25), and the **effects of other actors** (27).

4.1.2 REGIONAL DIFFERENCES IN FACTOR AREAS AT THE SERVICE AUTHORITY LEVEL.

The heatmap in Annex 4 shows the citation frequency of nodes broken down by region.

VOLTA REGION:

For Service *Authority* respondents, the main issues, as measured by the frequency of citation, include the **effects of political parties or politicians** (16) and **customer wealth** (14). For Service Providers in the Volta region the most commonly cited nodes include the **effect of other actors,** the **selection of contractors** and **various water resources.**

NORTHERN REGION:

For the Service Authority respondents, the top two cited nodes were **cultural practices** (11) and **effects of political parties or politicians** (10). Service Providers in the Northern region responded to the issues of **customer wealth** and **cultural practices** most frequently.

ASHANTI REGION:

The node for **absence of a dedicated regulator** was the most commonly cited (11), with four other nodes all with 10 citations: **effects of decentralization, support from others** (political influence factor), **spare parts** and **cultural practices**. Among Service Providers the most cited nodes included **spare parts, various water sources, Service Authority support, customer wealth** and the **effect of other actors.**

4.2 KEY FINDINGS BY FACTOR AREA

The following subsections present the key findings for each of the 11 main factor areas based on the opinions as expressed by stakeholders at different levels and from different stakeholder groups, as analyzed by the Nvivo methodology. These findings focus on insights that were significant based on the analysis and therefore do not include all factor areas or nodes. Anonymized quotes are provided where relevant to support the views expressed.

4.2.1 POLICY AND INSTITUTIONAL FACTOR AREA

HISTORIC LACK OF CLARITY IN POLICY, LEGAL AND REGULATORY INSTRUMENTS

Key Finding: Sector policies and associated legal instruments in Ghana are perceived as not having been clearly defined, with lack of delineation of asset ownership, responsibility for service provision, regulation, monitoring, and reporting in the rural sub-sector. The evolving role for CWSA is viewed as resulting from the above ambiguity and lack of leadership in Ghana's rural water sector.

Clarifying policy and legal instruments was of most importance to national and Service Authority stakeholders. Ghana's current legal, regulatory and policy landscape for rural water provision were put in place largely with the WSMT arrangement in mind. The current reform of the CWSA from its historic role of facilitation and oversight into a public rural water utility, potentially competing with the WSMT arrangement, was emblematic of this legal and policy confusion. Some respondents, particularly national stakeholders, expressed the belief that the sector was already well-governed by numerous policies and regulations. An opposing view was that there is a lack of clearly defined policy and legal framework that includes guidance on asset ownership. Respondents espousing this view argued that the repositioning of CWSA into a rural water utility raises questions about regulation of the rural water sub-sector and the role of other actors, including District Assemblies. They also see this lack of clarity as enabling development partners to assume disproportionate roles because of their financial influence.

CHANGES IN NATIONAL POLICY DRIVEN BY RURAL WATER PRACTICE

Key Finding: Changes in the practice of rural water service delivery on the ground are viewed as driving policy changes, rather than policy leading practice. As a result, transitions in Ghana's national rural water policy have been uncoordinated, and are driven by a recent shift in responsibilities for public utility provision (e.g. via CWSA's new focus) as well as the rise of donor-funded SWEs, both enabled by the absence of legal and regulatory clarity on asset ownership, regulation (water quality, tariffs and service quality), performance monitoring and reporting.

The transition from the established WSMT arrangements to utility-based approaches raises questions about alignment with decentralization (e.g. roles of national and local authorities) and the evidence basis for this latest reform. Respondents did voice concern about the lack of adequate supervision and accountability mechanisms for WSMTs, as well as the voluntary nature of this arrangement, while others, notably some development partners, voiced concerns that there has been no evaluation to inform the decision of CWSA reverting to being a public utility after separating the small towns from the urban utility some 30 years ago. CWSA has been implementing the utility model for the past five years but has not provided evidence (e.g. operational data, costing etc.) to support the claim that the utility management arrangement is superior to the WSMT model.

POLITICS AND DONOR FUNDING FILLING A SECTOR LEADERSHIP VOID

Key Finding: Reforms in the rural water sector are driven, in part, by political considerations and donor preferences, rather than being evidence-based and coordinated processes. Different stakeholders may advocate for different rural water management arrangements, creating a fragmented institutional landscape.

Key national government actors in Ghana, chiefly the MSWR, have embraced the repositioning of CWSA into a professionalized service provider, but other stakeholders have raised concerns about the effectiveness and sustainability of the public utility management arrangement, pushing other modalities instead (e.g., donor-supported SWEs). Some key informants argue that weak sector leadership has contributed to delay in rural water reform, the lack of regulatory frameworks, and a lack of clarity on such key issues as the role of the District Assemblies in the new public utility modality led by CWSA. Meanwhile, the influence of external funders is differentially viewed as positive or negative by different respondents, a function of their preferred management approach with donor priorities of the moment.

The recent evolution of rural water management in Ghana has been shaped by CWSA, CONIWAS,[9] selected donors, and a number of NGOs and private organizations that have established SWEs. CWSA led efforts to introduce the public utility model, initially facing resistance but ultimately gaining support from key stakeholders to implement this transition, initially without the requisite policy and legal frameworks in place. In parallel, SWEs have attempted to overcome opposition by addressing affordability concerns and showing results from pilots.

The WSMT arrangement in Ghana was always envisioned as a form of supported community-based management, designed to benefit from support from District Assemblies and indirect support from CWSA, but neither institution has been able to provide sufficient oversight or assistance. Key informants argued that WSMTs were initially able to function better with more donor funded support and when CWSA and funders showed greater interest in their performance. However, as CWSA has reinvented itself, it is no longer able to support the WSMT model to the same extent, a problem further compounded by declining assistance from District Assemblies.

Some respondents argued for a regulatory framework that includes comprehensive evaluations of various management arrangement options to inform sector reforms. For example, concerns were expressed about the high operational costs associated with the CWSA utility model for rural areas.

ABSENCE OF A DEDICATED REGULATOR FOR THE RURAL WATER SECTOR

Key Finding: The absence of an adequately funded, dedicated regulator in the rural sector means that there is, at present, no formal oversight of utility service providers and limited enforcement of service provision requirements. The regulatory gaps make WSMT arrangements more vulnerable to political interference, thereby undermining performance.

The PURC currently only regulates the urban water sector. The absence of a dedicated regulator operating in the rural sub-sector has given room to CWSA's decision to act as a facilitator and service provider simultaneously. This situation means that responsibilities for rural water service provision are

[9] Coalition of NGOs in water and sanitation, or CONIWAS, is an umbrella Civil Society Organization established to contribute to water resource management and sustainable provision of water and sanitation and hygiene service promotion in Ghana; see: https://coniwasghana.com/

not enforced systematically and there is limited formal oversight, particularly of WSMTs. It has also led to disparities in service quality and pricing across rural water service providers.

It is important to note that the District Assemblies are responsible for the provision of rural water supply and its regulation in their respective areas based on the Local Governance Act 936 (2016). Some national-level respondents pointed out that the District Assembly are the regulators for the rural water sector with responsibilities for tariff setting, prosecution of corrupt WSMT members, monitoring water quality, and ceasing operations of non-compliant facilities. Key informants did indicate that the District Assemblies are only able to regulate the rural water sector if they are provided with sufficient human resources, financing and logistical capacity, which is currently largely not the case. This is viewed as having a greater, negative impact on WSMT arrangements which have no other formal oversight and support structures as compared to CWSA and SWEs (see also section 4.2.7 on political influence).

LACK OF INFORMATION FOR INFORMED DECISION-MAKING ABOUT DIFFERENT MANAGEMENT ARRANGEMENTS

Key Finding: The planned comprehensive sector information system[10] is not yet operational and there is no common monitoring system in place to generate data on the performance of different management arrangements to inform decision making, raising questions about the credibility and sustainability of the new rural water sector reform efforts.

There is limited information on the performance of the management models, such as WSMTs and the donor-supported SWEs, to inform decision-making. As one respondent indicated, *"CWSA started the reforms more than five years ago in 2017, so by now, they should have gathered evidence to show to the world why their model is the best".* Concerns were raised about the conversion of the CWSA into a utility without the backing of evidence-based studies supporting the claim that there is limited information on the performance of the other various management models. Some respondents believed the new reform should exclude well-performing water facilities managed under WSMT; as one respondent reflected, *" So for us, why do you want to take over our system although we are performing well?".*

At the time of the PEA study, there was a shared view that Ghana lacked a commonly held and clear direction for the rural water sector, with limited data, too many actors, including private individuals, faith-based organizations, CBOs, local and international NGOs etc., that are operating in a highly fragmented rural water space without economies of scale, and in (very) poor and low resource environments. The lack of reliable and comprehensive data is seen as one of the key barriers to any sector-wide progress, including informed decision-making about different management arrangements and their relative performance.

[10] The planned Sector Information System or SIS provides the framework for collecting and compiling information against the WASH sector performance indicators but is not functional as it is yet to be linked to the management information systems of the sub-sector - the District Monitoring and Evaluation System (DiMES), Basic Sanitation Information System (BaSIS), and Enterprise Resource Management (MSWR 2023).

4.2.2 SECTOR FINANCING FACTOR AREA

DECLINING PUBLIC SECTOR FUNDING FOR RURAL WATER SUPPLY

Key Finding: Public funding for rural water supply is viewed as being on a downward trajectory, and fiscal decentralization has not accompanied the decentralization of authority and responsibility for water services provision.

In Ghana, funding for rural water supply is channelled primarily through CWSA or to the District Assemblies via the District Assembly Common Fund (DACF). Since the CWSA reforms began in 2017, funding through CWSA has been diverted away from supporting CBM in favor of the public utility management arrangement approach, but that funding has been declining in recent years. Meanwhile, the DACF has been underfunded and has seen delays in disbursements. District Assemblies typically spend 15% of their DACF allocations on WASH activities, with most of the funds supporting liquid and solid waste management. WSMTs rely on sales of water, community mobilization efforts (e.g. *ad hoc* collection of money for repairs or in-kind contributions), or support from political figures.

The effects of fiscal decentralization emerged as a significant theme, as emphasized by respondents from the national level and Service Authority levels. They indicated that while responsibility and functions have been decentralized, the necessary financial resources have not always followed. This is a particular challenge for the WSMT management arrangement, for which the ability of District authorities to provide effective oversight and support is limited. CWSA, as a public utility, is comparatively less affected by fiscal decentralization, as it receives funds directly from central government.

The factor area for sector financing sought to understand how changes in public expenditure and investment impact the performance of management arrangements. This issue emerged as significant among national level stakeholders (particularly respondents from government institutions) and to a lesser degree by Service Authority stakeholders, although interestingly it was not mentioned by any key informants at the service provider level. This may be explained by the fact that CWSA funds are from government indirectly but could be viewed as from CWSA Head office by the respondents at the Service Provision level and because SWEs do not receive funding from Government at all. WSMTs were receiving public funding either indirectly through CWSA, which has dropped off, or via the DACF which is inadequate, with a small or zero percentage allocated to water supply compounded by significant delays in disbursement.

For the District Assemblies, these declines in public funding mean inadequate resources for activities such as data collection, monitoring and evaluation (M&E), technical support, auditing, as well as construction of new water supply facilities. Although the decline in public investment negatively affects both the public utility and WSMT management arrangements, public investment predominantly flows towards CWSA. The funds allocated by the government, whether through grants or loans, are directed to CWSA to support its operations, infrastructure development, and rehabilitation. This is underscored by the statement that *"any funding generated or borrowed by the Ghana government is likely to be channeled into the public utility model, either through the CWSA or the GWL".*

4.2.3 LEGISLATIVE AND DECENTRALIZATION CONTEXT FACTOR AREA

EFFECTS OF DECENTRALIZATION

Key Finding: The WSMT and SWE arrangements are aligned with the principles of decentralization, but the ongoing reforms to establish a rural public utility (e.g. CWSA) are not viewed in the same way.

The effects of decentralization emerged as a significant node under the legislative and decentralization factor area, as emphasized by a large number of respondents, across all stakeholder levels. All the stakeholder groups reported on the effect of decentralization on management arrangements. They perceived decentralization as a good governance approach that empowers local government and communities and brings decision-making closer to them. However, challenges were noted. At the service provider level, supply chain issues adversely affect operational efficiency and timely response to breakdowns. The Service Authorities expressed concerns about limited resources (i.e. limited budgets, lack of funding for fuel, delays in release of funds, and inadequate logistics) and decision-making power based on party political considerations. They mentioned instances where actions needed to be approved by higher political authorities, impacting their ability to make prompt and effective decisions. These challenges impact the ability of Service Authorities to effectively manage and oversee water supply schemes within their jurisdictions.

The WSMT and the SWEs are seen as more aligned with the principles of decentralization. In contrast, the public utility model employed by CWSA was perceived as incongruent with the ethos of decentralization.

INADEQUATE SERVICE AUTHORITY SUPPORT

Key Finding: District Assemblies are seen as being unable to provide adequate support for community-managed water supply facilities.

Stakeholders at the national and Service Authority levels emphasized the critical role that the District Assemblies should play in ensuring the effective management of water systems under their jurisdiction through regular monitoring, supervision, and regulation of water supply (i.e. Service Authority functions). However, some noted that District Assemblies are unable to fulfill this mandate due to the low technical staffing and logistical constraints. As one expressed, *"sometimes you look at a whole District, and maybe there's one or two engineers or technical people. And the public works department is not only for water, is for roads and houses. Anything engineering, anything technical. So, you ask yourself whether, realistically, this number of people would be sufficient".*

The importance of Service Authority support functions provided by District Assemblies was widely acknowledged by respondents from District Assemblies themselves, government and development partners. Key informants from the WSMTs indicated that for the most part they do not receive support from their respective Service Authority (District Assemblies), pushing them to rely upon independent assistance or additional funds from Members of Parliament. Donor-funded SWEs and CWSA key informants reported that they do not receive support from the District Assemblies, but instead from the service authority entities within their own organizations (i.e. regional level personnel and funding). Some SWE respondents did report that the District Assemblies support them in community mobilization, sensitization and the implementation of interventions.

4.2.4 DONOR INFLUENCE FACTOR AREA

The support from development partners in shaping the performance of management arrangements was acknowledged as highly significant by respondents who cited varying degrees of this influence.

SHIFTING DONOR PRIORITIES

Key Finding: There is a perception that the historic focus of aid funding for WSMT arrangements largely by the larger bi-lateral and multilateral donors is giving way to utility provision (via CWSA), with other philanthropic sources directing their attention to SWEs. Perceptions of donor influences on the sector were largely positive, albeit with some critiques of donor operations outside of official government channels.

In the past, the sector had long term bilateral funding (most notably from the Danish and Dutch governments) and multilateral development partners actively involved in the provision of technical assistance and funding for rural water supply, with substantial funding dedicated to infrastructure provision and long-term support for service provision under the decentralized structures with WSMT as the predominant arrangement. The donor landscape is changing, with declines in overall funding and support focusing mainly on the utility model. The World Bank, which has historically made loans in support of CWSA's previous role is now preparing a new package of lending in its new role of utility provider. As a result, key informants did express concerns that the direction and scale of donor support is resulting in WSMTs being neglected by CWSA and the government more generally, posing a risk to the gains that have been made via this management arrangement over the past several decades.

Donor influence, specifically cited by District Assembly respondents, is viewed as largely positive. Respondents pointed to the presence of some NGOs providing new water supply schemes and extension services for existing ones. In contrast to the bilateral and multilateral donors, smaller foundations and charities continue to offer support directly at the district and community levels in infrastructure provision and support for O&M to ensure sustainability. This new philanthropy is perceived as focusing on market-based principles to deliver water services through enterprises that operate with a business mindset (even as they are unable to function viably without external financial support). According to one key informant, *"in fact, their focus is more on sustainability; and so, they ensure that whatever management system is in place can sustain the water systems and even WASH systems for a longer period. That's why they're into this and helping the district as well."*

Nonetheless, critiques of donor behavior did emerge. Some at the Service Authority level raised concerns over the lack of information sharing and market distortion brought by donor programming: *"they sometimes come and drill boreholes ⋯. But [these facilities] were not handed over to the District Assembly, but ⋯ to the community directly. Who constructed? we don't know; the quality, quantity you don't know; the pumping test, you don't know. So, sometimes you've to take it like that's how the system is; because maybe they don't know that being an NGO you've to pass through the District Assembly before you enter a community."*

Finally, the donor support of the rural water reform and the conversion of CWSA into a public rural utility was noted, in contrast to the historically large donor emphasis on WSMTs, with the new focus possibly resulting in this arrangement becoming 'orphaned' under the reform process.

DECLINES IN DONOR FUNDING

<u>Key Finding</u>: The WSMT arrangement has been most affected by the decline in donor funding, which has not been off-set by increase in public funding; donor support for SWEs remains fairly stable for now.

Reductions in donor funding is highlighted by respondents across various levels, including the national government, development partners, district local government, and Service Authorities, as a significant factor influencing the performance of management arrangements.

Donor funding has been declining without a corresponding increase in government funding. This has affected monitoring and O&M, particularly at the District Assembly level, and hence affected the WSMT arrangement most. The government-level respondents indicated that the reduction in donor funding has affected the construction of new schemes, particularly under the WSMT management arrangement, and related activities by the District Assemblies. It is worth noting that no feedback was recorded at the service provider level. Some donors continue to support the SWE management arrangement.

During the previous decades of substantial donor funding starting from the early 1990s and tapering off in the mid-2010s (IRC 2017), the sector enjoyed resources for project preparation, implementation, O&M, capacity building, monitoring, and supervision. Key informants reported that during this period CWSA provided backstopping to the District Assemblies and the community-managed facilities. District Assemblies could supervise water supply schemes and monitor and ensure the timely execution of operations and maintenance tasks. As major bilateral and multilateral development partner funding diminished with Ghana's attainment of middle-income status, the country's rural water sector has relied more heavily on central government budgetary allocations, which are inadequate. One national government key informant opined that *"there is no funding and yes, no monitoring and capital maintenance is not being done regularly as it used to be."* Respondents from the district local government share similar views, arguing that during the era of strong donor support, there were significant gains for the WSMTs with respect to operation, maintenance, monitoring and reporting.

The decrease in donor funding has also led to a decline in the provision of new water supply infrastructure to address unserved and growing communities. From the national government level, respondents illustrate this challenge when they assert that *"investment in the actual provision of the facilities at the district level has drastically dwindled" and, "in the rural sector, as you have indicated most of the projects were financed by the donor. And when the grants reduced, we rely on GOG (Government of Ghana) funds to carry out projects in the rural water sector. And you know, there are a lot of competing demands on the government funds."* As a result, the rate of increase in new infrastructure under WSMT and the utility-managed arrangements (CWSA) has declined.

Another concern is support for sector capacity. One respondent at the district local government level shared their view of the earlier donor-supported era when, *"once the facility [was] provided, then they will give out money for training, and that training will actually equip those who are trained to manage the facility. And that's the kind of system we [had], which was working effectively because, after training, they don't leave it there; they then support the water and sanitation team to monitor and report. So, in those days, you see that water management in most of the community was very efficient."*

The decline in large-scale donor funding threatens sector capacity among WSMT arrangements in particular. Meanwhile, the key informants' perception is that donor-supported SWEs are less vulnerable to the broader sector funding reductions in Ghana.

4.2.5 INFRASTRUCTURE FACTOR AREA

The factor area for infrastructure spans such issues of selection of contractors, spare parts procurement, and electricity availability on the performance of rural systems.

IMPACT OF CONTRACTOR SELECTION

Key Finding: Service providers and/or Service Authorities routinely lack capacity or authority to scrutinize contractor competencies and carry out effective supervision and monitoring of hardware installation and repair, an issue compounded by a mismatch between national-level contracting and the expectation of district-level supervision.

Contractor selection was cited by district authorities to be a major obstacle to the good performance of WSMT arrangements, with poor capacity noted for effective supervision and monitoring of construction. One contributing factor may be interpreted as the decline in donor funding which has removed the potential demand for greater accountability and oversight, although this was not mentioned specifically by respondents. A well-designed and constructed water supply scheme remains robust and reliable with minimal operation and maintenance costs as against poorly executed work which incurs high operation and maintenance costs. This view was captured by the following: *"to take a decision that will have a major impact on the water system when eventually constructed, it's one thing that has to be done with the utmost integrity so that you select the best service provider who would deliver a product that would have minimal maintenance or relatively lower cost of maintenance after it has been constructed. Otherwise, if the work is done badly and after completion, you will keep on working and working and working to get it up to the level that is required. Service providers with the right capacity and then integrity, who can give you a product that will require minimal, relatively minimal maintenance after it has been completed".*

Key informants observed that the selection of contractors, most specifically for construction projects under the WSMT arrangement, can occur at the national level, often without the involvement of the host District Assembly in question. This creates a gap between the contractor and the district authorities; the District Assembly is handicapped, as they may have no idea of the scope of works and deliverables expected of the contractor, often resulting in poor service delivery. *"Even if we are not the supervisors of this, we are going to be the user agents, the final user agents, we should have some say, in how the contractor is going to be selected, we should have some say on how the project is going to be constructed and inspected. So, if these things are not being done by the [District] assembly, and if you don't have any documents, for instance, if a project comes in, there is no document for us to look through to see the scope of work for that contractor."*

One local government key informant mentioned perceptions of inflated contracts, corrupt practices, and sidestepping of procurement processes, leading to increases in construction costs, use of sub-standard materials, and poor-quality construction.

AVAILABILITY AND COST OF SPARE PARTS

Key Finding: SWEs and public utilities (CWSA) appear better able to manage spare parts procurement by building internal stockpiles or bulk purchasing agreements than the WSMT managed facilities.

The poor availability of spare parts in the local market was cited as one of the factors contributing to service interruptions and loss of revenue. Some spare parts are available at the community level, others are available at the district level while others categorized as slow-moving items may only be available at the regional capitals or even in Accra. In addition, it was noted that some of the spare parts were complex and were made of specialized components that at times can only be supplied by contractors that built the original water supply scheme. A respondent described this challenge when they reported,

"I think one of these communities, the pump they are using is [an] imported pump and the pump was broken, so replacements was a big issue because they have to order it from outside."

Spare parts procurement challenges are not uniform across the management arrangements: public utility model and SWEs have scale advantages that individual WSMTs (community service providers) lack.

HIGH COSTS OF ELECTRICITY

Key Finding: The high costs of electricity are a systemic challenge for rural water service provision, though some facilities are not (wholly) reliant on the national grid and are less vulnerable.

The cost of electricity is a major concern cited by all stakeholders across all management arrangements. The inability to pay electricity bills directly affects the operation of the water supply schemes, which often face disconnection. The issue of electricity debt accumulation and power disconnection has not been reported as a challenge for the donor-funded safe water enterprises, but it remains a major challenge for WSMTs and the public utility management arrangements. For CWSA, it has been a particular issue when taking over individual schemes from WSMTs, as most of these have outstanding electricity bills to settle.

4.2.6 SOCIO-ECONOMIC AND CULTURAL FACTOR AREA

MACRO-ECONOMIC FACTORS

Key Finding: Recent increases in inflation and devaluation of the Ghanaian Cedi have hampered performance across all management types, with WSMTs most vulnerable as this arrangement does not benefit from subsidies, unlike the public utility, CWSA. Meanwhile, SWEs enjoy financial support from external sources in foreign currency.

The changing macro-economic context in Ghana was a significant factor, particularly for respondents from national level, who highlighted high inflation and associated increased costs of (imported) spare parts, goods and services, including the price of electricity. Civil society respondents at national level also cited the fiscal crisis in Ghana and the inability of the government to channel funds to the rural water sector as a whole (not only CWSA), reducing both capital investment and the ability to meet recurrent costs (e.g. mobilization), particularly for District Assemblies in their role of monitoring and supporting WSMTs.

COVID-19 PANDEMIC FREE WATER POLICY

Key Finding: The covid19 pandemic free water policy was problematic for both SWEs and WSMT management arrangements, as the promised government reimbursements to make up revenue shortfalls during the tariff holiday was either inadequate, or disbursements were incomplete or delayed, or both. Because CWSA was tasked with overseeing and controlling the subsidy program, it was viewed as being less negatively affected than the other two management arrangements.

The negative impact of the pandemic water tariff holiday on revenues was most commonly cited by SWEs. Some SWEs also reported increases in water misuse or wastage, as users faced no financial burden from higher consumption. Several respondents made the point that because CWSA was overseeing the water tariff holiday reimbursement program, water supplies under direct CWSA management were less negatively affected, with the assumption that CWSA prioritized its own water schemes.

However, despite the mainly negative citations in this node, two service provider respondents noted a positive impact of the tariff holiday in terms of keeping water facilities running and encouraging greater levels of consumption: *"During the COVID time, it's like it was government who was taking care of the bills, so I think things were better for us during that time; consumption was good. And then, because they also know it's free. So, people use water and those who are not connected to their houses, they go to their neighbors to fetch, they don't have to go to look for water in the streets or somewhere to fetch so because it's free, our production, distribution and consumption was better, because they were not paying for it."*

IMPACT OF CHIEFS AND TRADITIONAL LEADERS

Key Finding: Chiefs and traditional leaders are viewed as having a mostly negative impact on the performance of management arrangements, often going unchallenged due to internal community dynamics and power structures. However, they can also sometimes play a supportive and positive role, particularly around community mobilization and in ad hoc financial inputs.

Traditional leaders are cited as having a negative impact on management decision making and performance across all levels. These include diversion of funds collected from water tariffs to pay for things like funeral expenses, and exemption of powerful individuals or their relatives from tariff payments. These views were particularly important to Service Authority level respondents. In several cases, Service Authority stakeholders expressed that communities were reluctant to reveal these pressures or conflicts with outsiders. The negative influence of traditional chiefs on the management performance of rural water schemes was noted by District Assembly (local government) representatives only. Traditional chiefs are viewed as disruptive, challenging the control and management of schemes, demanding water without paying, as well as co-opting funds gathered from the sale of water (elite capture).

Another important theme was social conflict and how this influences management performance, cited by SWE service providers as a concern through the negative impact of chiefs and landowners on their ability to collect revenues and manage the water facility. It was also cited in terms of internal community dynamics restricting management practices. Finally, problems of institutional consumers as debtors with

significant levels of default and delays in payment (on the part of schools, fire service, police and even local government assemblies themselves) was cited by service providers as a major problem.

The third main theme in this node refers to influential leaders including traditional and religious leaders, with all occurring at the Service Provider level, reflecting the ability of such leaders to contribute financially or with other resources and being able to mobilize community participation (from MPs and traditional chiefs): *"They assist in mobilizing the community to provide support for the WSMT in repairing tasks, including activities like lifting tanks and laying blocks or pipes".*

CULTURAL VIEWS IMPACTING WILLINGNESS-TO-PAY

Key Finding: Cultural views and beliefs are a factor influencing some consumers on willingness-to-pay for water, but shifts in this view are also evident as expectations among consumers are changing and where service levels are improving.

Willingness-to-pay was the most cited theme with the majority having a negative interpretation and seeing willingness-to-pay as low. This was particularly the view from the Service Authority respondents. Reasons given include a cultural view that water should be 'free', that it is a government responsibility or that people prefer to use free, alternative sources. *"They expect that or it is their belief that since it is on their land that the [water] system is established, they should be given free water to drink. Secondly, they see it or it is believed that it's a natural resource that they don't see the need to pay for it".*

However, there is another, more positive, set of views on willingness-to-pay expressed largely at national level and at service provider level, indicating that there had been a shift in cultural views and that rural households are more willing to pay for water. As one service provider notes: *"People are becoming more enlightened, they feel that they're entitled to water, you give them the water. If it's for free, all well and good. Otherwise, I'll pay you. I don't need to go and sit at a long meeting and discuss water where at the end of the day I may not get to get it but it is my right. As happens in the big cities like Kumasi, you don't go to any meetings, a lot of things - the water is there when they need it. They just want to pay and they take it - I will say the engagement is changing now".*

4.2.7 VESTED INTERESTS: POLITICAL INFLUENCE

EFFECT OF POLITICAL PARTIES AND POLITICIANS

Key Finding: Political influence is viewed as having a significant, largely negative influence, but also with examples of positive impacts on the day-to-day operation and management of facilities. It is perceived as impacting WSMTs and public utility management arrangements more negatively than SWEs.

The impact of political players on management arrangements was of particular concern to stakeholders at the Service Authority level. Concerns centered on electioneering, the influence of Members of Parliament, chiefs and political party leaders on tariff setting, staff appointments (for both community managed and public utility management arrangements) and control of board members: *"Yes. In fact, if you look at the change from the water and sanitation development boards to the water and sanitation management teams, it was influenced by these political issues, because you remember, anytime there's a change*

in government, they change the boards. Yes. And that was at the national level, but that influenced what was happening at the local level."

Conversely, some key informants held positive opinions on the influence of politicians, expressed in two main ways. The first was that politicians bring money and resources to a water facility, and the second was that they can solve problems and align different stakeholders to work together: *"It's all about interests. So, a politician will always seek what will serve him better. That's the way politics plays. So the good aspects is that when they are in line and the political actors are in agreement with you, you find it very easily to operate at the system level. Be it the Assemblyman, the District Chief Executive Officer, the MP, the unit community members, if they agree with you or they work with you closely, or you work with them closely with a common goal of supplying potable water to the communities that are able to work and in communities that you find yourself that way, it works well."*

Finally, political interference was flagged through processes of elite capture and rent seeking behaviors by politically powerful individuals and groups. *"I have an example … where they have a small five town water system with three boreholes. A member, the chairman of the board, gave two of the boreholes to a powerful person in town. So at a particular time the town was relying on one borehole. So this powerful man who has a big hotel in the town, connected these two boreholes to his hotel, depriving the entire community, and is because the chairman of the board was his cousin, first cousin. So it was through an audit that it came out. ….. so in that regard, everywhere when there's a powerful individual in the community within the board, and there's hijacking the entire thing. So the [District] Assembly became powerless. So that supervisory role becomes zero."*

EFFECT OF GHANA'S TWO-PARTY STATE POLITICS

Key Finding: Politically motivated distribution of state resources is seen as a significant issue, including partisan appointments, reflecting the nature of Ghanaian politics, whereby the two competing political parties attempt to harness service delivery to serve their political ends.

The rural water sector is not immune from competition between the two main political parties in Ghana (i.e. the National Democratic Congress and the New Patriotic Party), each of which is seen to utilize strategies of reward through the distribution of state resources, or control over such resources. This theme was widely cited by stakeholders at all levels and seen as being of critical importance particularly for the on-going national sector reform processes in which the goal of establishing CWSA as a new rural utility may be compromised or overturned by a new political regime if there is a change of party following national elections. The second example of Competitive Clientelism is at the more operational level where the continuity of management and competency of water facility personnel may be undermined through political appointments and where partisan loyalties even extend to attitudes toward payment of tariffs: *"And once it [the political party] doesn't represent the community, you don't expect the community to contribute money to repair the system once it breaks down because they feel that is for one political party. And when that party goes off from power, the other side are trying to take it over again. Because now is their government that is in power, so they pick it up".*

ROLE OF MEDIA

Key Finding: The role of the media, and specifically radio, is seen as having an important influence on the attitudes of consumers and decision-makers, thereby indirectly contributing to improved performance across all management types.

Almost all citations of the role of the media were positive, with cases of the media airing problems, attracting water supply interventions through documentaries that highlight the poor and water deprived nature of communities, which then get attention from decision-makers in the district. The media were also cited as playing a public information and education role through campaigns and community engagement on the benefits of clean water, the health-related complications of untreated water, and cooperating with water service providers: "*They've been helpful whenever there is information that has to get to the consumers. If you take that the time that we want to do cleaning, cleaning of tanks and therefore we're going to maybe shut down the facility for maybe some hours, when you engage the media, they can help you disseminate this information.*"

4.2.8 VESTED INTERESTS: CORRUPTION

The factor area for vested interests (corruption) comprises two nodes, one dealing with the existence of corruption and the second addressing the impact of different forms of corruption on management arrangement performance.

EXISTENCE OF CORRUPTION

Key Finding: Corruption is viewed as stemming from lack of accountability, poor handling of funds (absence of cashless payments), and social pressures. Beyond local level irregularities, and despite the *perception* that corruption is widespread, key informants did not indicate it to be a significant or endemic problem (pointing to the absence of evidence).

The existence of corruption in the rural water sector was cited by national and Service Authority levels key informants only; no such responses were noted from Service Providers directly (possibly explained by Service Providers not wanting to implicate themselves or being uncomfortable with the question). While seeming to minimize corruption as a widespread problem, key informants did point to a general lack of formalized processes and accountability mechanisms in institutions and transactions, both within and beyond the rural water sector. Concerns were also flagged about the possibility of corruption in the supply of goods and services with a focus on padding of public contracts, overcharging for spare parts and lack of capacity to monitor (drilling) contractors.

At the Service Authority level, concerns about the presence of corruption referred to as what can be described as low-level petty corruption that is tolerated based on social relationships, reciprocal incentives and the role of local leaders. Examples include taking small bribes to avoid disconnection, providing favors for friends and families including connection to a pipeline or using water revenues to pay for community activities (e.g. funerals).

DIFFERENTIAL PREVALENCE OF CORRUPTION AND EFFECTS ON PERFORMANCE

Key Finding: Corruption is viewed as affecting the WSMT arrangements most directly, with public utility provision less affected. Donor-funded SWEs are seen as being more

insulated from corruption due to better funding, financial management systems, and more pressure to demonstrate cost recovery.

Corruption was of particular concern among District Assembly key informants, highlighting the inability to collect sufficient revenue for the one management arrangement that they are mandated to oversee and regulate (i.e. WSMT). Key informants pointed to the potential for misuse of funds due to lack of bank accounts, handling of cash, absence of cashless payment methods and social pressure to pay for non-water facility related community expenses: *"And for the WSMTs it is obvious because of the level of informality and accountability. They virtually do not account to anybody. The [District] assemblies were supposed to provide (back) stopping [sic]. They're supposed to be checking their books, making sure how much they are raising, what they are using the money for and so on and so forth. I don't know of many assemblies, where those kinds of things are done."*

Key informants also raised concerns regarding lack of transparency at CWSA, including the potential for - and actual cases of - corruption by utility management, with mishandling of cash, under-reporting the sales of water and pocketing the difference, and utility staff themselves making illegal connections and not paying for water consumed.

4.2.9 WATER RESOURCES

COMPETITION FROM ALTERNATIVE, LOWER COST, SUPPLIERS

Key Finding: Competition from other service providers using alternative sources, which may not be officially recognized, or providing water supply for free or at very low cost, threatens the financial performance of both public and SWE management arrangements.

The theme of competition from other service providers using alternative sources was a major concern cited by stakeholders, including the negative effect on revenue through competition from informal private providers, or selected NGO or charities (often religious institutions) providing water supply for free or at very low cost. Some of the sources are fetched for free; *"but there is a lot that the community members have to pay before fetching. For instance, most of the water systems constructed by the religious groups [referring to Christianity and Islam] are free. Some collect a token; they mostly take half of our tariff per bucket because the water is not metered and no cost of treatment is incurred".*

SEASONALITY AFFECTING REVENUE

Key Finding: Seasonality, affecting sales and therefore revenue, was cited by all three types of service providers as a significant concern and threat to scheme viability.

The issue of seasonality affecting sales and therefore revenue was cited by all three types of service providers and similarly to the above finding, focused on the reduction of water sales, and revenue, by consumers turning to rain water and using this as a form of self-supply through household storage: *"if it rains, nobody goes to the pipe, it rains you pump your water, and your tank gauge is still full and nobody will mind it. Those are the impact that it comes with so within the rainy season, income can go as low as 30% because they have alternative source of water. How are you able to convince somebody that when water there is drinking is not health and that is your water, they are treating that you think is healthy."*

4.3 HIGH PERFORMING AND POORLY PERFORMING WATER SUPPLY FACILITIES

To better understand the political economy factors which may have influenced or impacted on performance most directly we conducted interviews with management entities in high (or better) performing and poorly (failing) performing schemes, The selection of high and low performers was purposeful, based on three criteria: the performance information collected in the quantitative research, the subjective evaluation of the data collection teams, and representation across the study regions. Our goal was to incorporate additional qualitative insights that were not possible to collect in our quantitative research.

To assess performance, we computed a five-dimensional response parameter as follows:

- Performance Index = (MajorBreakdown + Unscheduled/Unavailable + Chlorine + (Days/week)/7) + (Hrs/Day)/24)) / 5

The results range from 0 to 1. Table 4 below shows that most of the selected high performers have higher composite performance values, while most of the low performers have lower composite performance values. However, we note two interesting exceptions: SEBESWE and SESECSWA.

TABLE 4: PERFORMANCE INDEX OF SELECTED HIGH AND LOW PERFORMING SCHEMES

CODE	CHLORINE SCORE	UNSCHEDULED UNAVAILABILITY SCORE	MAJOR BREAKDOWN SCORE	DAYS/WEEK	HRS/DAY	PERFORMANCE CATEGORY	PERFORMANCE INDEX
SEBESWE	1	1	1	6.5	24	Low	0.99
CEADCWSA	1	0.75	1	7	20.25	High	0.92
SOFOSWE	0.75	0.75	1	7	24	High	0.90
ASANSWE	0.5	1	1	7	24	High	0.90
WAKASWE	1	1	0.25	5	24	High	0.79
SESECWSA	0.75	0.75	0.5	5.25	10.75	Low	0.64
HOAMCWSA	0.5	0.5	1	6.5	6	High	0.64
HOVAWSMT	0	0.75	1	7	7.25	High	0.61
WEFUCWSA	0.25	0.25	0.75	7	11.75	High	0.55
KAPIWSMT	0	0.5	0.75	7	8.25	High	0.52
MAYOWSMT	0.375	0.25	0.25	7	15	High	0.50
NOVACWSA	0	0.25	0.625	7	2.75	Low	0.40
AFAMASO	0	0	0	0	0	Low (nonfunctional)	0

KASEI	0	0	0	0	0	Low (nonfunctional)	0
SANG	0	0	0	0	0	Low (nonfunctional)	0

The SEBESWE SWE system was included as a low performer because, during our initial visit, the scheme experienced a pump breakage that lasted for two months. Since this was supposed to be temporary, we revisited them at the end of the data collection period to capture performance indicators after the repair was done. At that point, their other performance indicators were above the mean compared to other facilities. This highlights the limitation of capturing performance at a single point in time, and the fluid nature of performance which can change dramatically, depending on the capacity of the management entity to make repairs or other improvements.

The CWSA system, SESECWSA, was selected as a low performer due to interesting qualitative insights from the fieldwork. Even though chlorine was present in the water, employees admitted they did not know how to achieve reliable and consistent chlorine levels. Furthermore, the data collection team noted the lack of professionalism and knowledge of the operator, as well as poor transparency and accountability practices. This facility was also interesting because it was in a region in which facilities of the same management arrangement type were considered professional and performance indicators were generally higher across the board.

We examined differences in the frequency of citations expressed by the service providers between high performing and poorly performing water facilities (see Annex 5). The scores for the number of citations are weighted to account for the different number of respondents (i.e. three service providers in the high performing group under each management arrangement type but only two respondents under the failing group). The following highlights the most significant differences in perspectives between the two groups of water facilities as identified through the analysis of themes within each node from the service provider responses across all three management types.

SUPPORT FROM DONORS

Key Finding: The positive impact of support from donors appears more frequently in citations from high performing water supply facilities and is mentioned as a negative by the key informants reporting on behalf of failing facilities.

Support from donors was cited twice as frequently by respondents in high performing facilities as compared to facilities which demonstrate low performance or failure. Both WSMT and CWSA arrangements in the high performing group framed support in overwhelmingly positive terms.

There is a higher frequency of WSMT provider respondents in the poorly performing group; with the trajectory of the ongoing sector reforms and declines in donor support more broadly, WSMT arrangements do not expect to benefit from donor support.

IMPACT OF SELECTION OF CONTRACTOR

Key Finding: The selection of contractor is important for both high performing and poorly performing groups but is articulated only in negative terms by all respondents in the poorly performing group and cited as (one) reason for poor long-term outcomes by all three management arrangement types from this group.

The node for selection of contractor was mentioned by all three management types, but more commonly by the WSMT group. High performing WSMTs were much more likely to mention contractor selection as a key factor than the poorly performing WSMTs. In general, WSMT service providers commented on both issues of corruption or problems with contractors and the importance of good oversight and doing due diligence on selection. CWSA service providers' responses highlighted positive experience, the importance of selecting competent contractors, and the need for strong oversight of the construction process (i.e. supervision consultant).

Key informants from poorly performing facilities all expressed concerns about unqualified contractors, resulting in substandard construction. Selecting a contractor from the same community was also perceived as nepotism and resulted in unsatisfactory outcomes, and lax processes surrounding the selection and oversight of the contract: *"I don't know how the contractor is selected though, but if indeed due diligence were to be done. I am sure whoever might have contracted the contractor did not do a good job. Because one thing I also observed apart from the contractor who refused to do his job and left it. That probably come from the leaders of my organization ⋯ who couldn't do a proper supervision. Because how on earth should; I am sure the certificate or whatever thing could have handed over to the contractor for his money. Meanwhile, some of the job is not done. So, as much as the contractor is a problem or a challenge the supervision by the agency is very much important."*

SPARE PARTS

Key Finding: The availability, cost and quality of spare parts to repair and maintain water facilities is a major obstacle reported by key informants from the failing facilities group.

The node for spare parts was cited across all three management arrangement types in the poorly performing group and almost twice as commonly as for the high performing group. The CWSA service provider respondents cited delays in being able to access spares from the local market and further field as well as the high price of spare parts. WSMT service providers shared these concerns over high prices and delays: *"Yes, it has an impact because like the materials we are using as at that time we couldn't get it at Tamale, unless we have to message Accra for them to send it down to us. Okay, so it was a disturbance for us. So it may take some days before it will get to us. And even as of now, some of them are still not in Tamale. When you get to Tamale and you couldn't get you have to message Accra, you have to send money in before they even bring it and the amount you buy if you buy you have to give them child to send it to the bus you have to put some extra charges. So the supplying too it has impact".*

SUPPORT FROM OTHER ACTORS

Key Finding: Service providers from high performing facilities reported having support from other actors (i.e. beyond only District Assemblies acting as Service Authorities) and cited this as an important factor in performance across all three management arrangement types. This is in contrast to the poorly performing group, and particularly for WSMT arrangements, which did not mention any form of external support.

Support from a number of sources was cited as being of significance for high performing facilities including influential community members, NGOs, the media and members of Parliament: *"Yes, see, for instance the NGOs, they help a lot just like what you came and did, the water quality analysis. They make you know where you are getting it wrong, and how you're supposed to correct it. The other thing is that they are able to mobilize funding for expansions as we came the last time i told you we even want to expand. So that is what they are able to do. Public education, most of them are into public education, on quality water, all those things. They also educate as well. Expansion works, if they have, they're able to support in a like manner".*

CULTURAL FACTORS

Key Finding: The way in which service providers perceive and engage with cultural beliefs and related community dynamics are seen to have an important impact on both high performing and poorly performing groups.

Cultural factors, including views on the value of water and intra-community dynamics such as allowing traditional or cultural leaders to take over control of facilities or refusal to pay for water were cited as important influences on management and payment for services in rural areas. However, there was a marked difference between responses from high performing and poorly performing facilities, with respondents from the former group expressing an understanding of the importance of entrenched cultural beliefs and giving examples of engaging with communities to change some of them in positive terms: *"So, it was a belief of those who earn living or who made money by selling water from the white volta directly to the indigenous that you are coming to kill our economic activity. Believe it or not, they were right. It was a chain of business. There were others who had pumping machines just at the river. Their duty is to fill barrels. ……. So, looking at it all those are other schools of thought and you can take it away from them. So, it goes a long way to play a role in your penetration. It has to come to a time where it is your relationship, your public education, your consistency in your supply, eventually that is able to erase this and I think i can tell you that [community x] we have done that solidly that the day you don't pump water, they will tell you that we can bring our river water again they are used to our system. It is a mark that we think we have that we have made"* . Conversely, the majority of responses from service providers in the poorly performing group framed these same issues as only being problematic and representing conflicts with communities they were serving.

WATER RESOURCES

Key Finding: The presence of alternative water sources (including rainwater harvesting) and/or competing providers offering lower cost water has a significant influence on both high performing and poorly performing groups.

The impact of multiple water sources, either from alternative sources being used in the rainy season or from privately owned boreholes, was cited most frequently by the WSMT arrangement type. Responses from those in the high performing group were divided between negative impacts and limited impact. However, several respondents from high performing facilities representing both CWSA and SWE service providers noted that consumers trusted the quality and safety of their water and preferred it even where

alternatives existed: *"... even though they have other alternatives, but they believe so well that clean water is life. Even people have those ones in their houses but they don't use them for domestic activities let's say for drinking and then maybe cooking and those stuff"* .

5. DISCUSSION

The findings from our PEA consolidate and analyze views, opinions and perspectives from a range of stakeholder groups operating at different levels within the broader institutional eco-system in Ghana's rural water sector. This provides us with insights that can improve our understanding of variations in water facility performance. Factors relate to both indirect, systemic factors and the more direct influences highlighted in the comparison of high performing and failing water supply facilities. Some of these findings are confirmatory and validate existing knowledge and studies, for example around the influence of seasonality on payments under the community-management model (Foster and Hope 2016). However, the findings flag new factors of importance and bring fresh perspectives on issues that are specific to the operating context in Ghana, both at operational and policy levels.

5.1 A POLITICAL VACUUM IN GHANA'S RURAL WATER SECTOR

A consensus emerges from the PEA findings around the status of the sector, expressed in different ways, but highlighting a number of systemic challenges. First, there is the apparent lack of political authority and leadership within the sector to provide clear direction and guidance on different management arrangements and how these are financed, regulated and 'fit' together in practice. Although the new sector development program (MSWR 2023) and National Water Policy (MSWR 2024) set out different arrangements, there are significant grey areas and gaps in how these will be implemented. Secondly, even though CWSA is operating as a public utility and donor-supported SWEs operating as 'mini utilities' are growing – as well as the more informal private providers which remain largely off the radar - there is as of yet no effective regulation via a dedicated agency for these utilities. The existing regulatory arrangements are poorly applied, and those institutions with current responsibility either lack capacity (in the case of District Assemblies) or are focusing on other priorities (in the case of CWSA).

The result is a fragmented sector landscape which allows for almost any management option to be established or promoted by interested stakeholders. This could be viewed as beneficial and encouraging innovation and promoting increased competition. But on the other hand, unrestricted and unregulated expansion and competition among the various management arrangements – CWSA, donor-supported SWEs and other private sector models – is likely to inhibit investment, regulation and effective water resource management. It is also highly likely that the loser in this 'free for all' will be – and some would argue already is – the WSMT arrangement, particularly those managing point sources, increasingly left as "sector orphans", with under-resourced District Assemblies and a distracted CWSA unable to provide effective support in a context of dwindling donor funding.

5.2 POLITICAL ECONOMY FACTORS DRIVING PERFORMANCE

The political economy factors that are seen to have the greatest direct influence on management performance, including those identified in the analysis of high performing and poorly performing water facilities, can be summarized as follows.

5.2.1 SUPPORT AND ACCOUNTABILITY

Rural water service providers of all types require support to operate effectively. Our key informants indicate that as donor funding has declined, the rural water sector has increasingly relied on inadequate government budgetary allocations, whereby many District Assemblies are either less able (due to lack of resources and staffing) or less willing (because rural water is not a high enough political priority) to play their mandated role in rural water. In general, support from the District Assemblies specifically for the WSMT management arrangement is often inadequate. This trend has been accelerated by Ghana's promotion to lower-middle income status and the shift in the rural water sector from reliance on external grant funding to repayable financing in the form of concessionary loans for infrastructure investment (IRC 2017). Respondents also mentioned philanthropic funders as providing co-financing or blended financing, and in particular directing their support towards the donor-supported SWE utility model. As the District Assembly capacity has been degraded, the accountability balance between service providers and District Assemblies has been eroded. Reinforcing the capacity of District Assemblies in turn requires increasing the scale of transfers from central to local government and addressing delays in disbursement of funding to address current challenges.

5.2.2 EXTERNAL PRESSURES AND INFLUENCES

To a greater or lesser extent all management arrangement types remain vulnerable to political interference, which manifests as resistance by local political and traditional leaders to proposed tariff increases and provision of free water to privileged groups or individuals for political gain, among others. This vulnerability is linked to other political economy factors, such as the limited reach of regulatory oversight. This means that tariff setting remains a politicized process, particularly for WSMT arrangements and has the knock-on effect to the detriment of financial viability. Key informants report embezzlement of funds, diversions of water revenue to cover personal expenses (i.e. funerals), and exemption of powerful individuals or their relatives from tariff payment. But where service providers invest in engaging with communities, the net effect of political influence can become positive. In a smaller number of cases, external actors, including politicians, are viewed as positive and contributing to solutions through provision of financing or resolving community conflicts.

In this context therefore, politicians and other informal leaders act as a counterbalance to the generally low capacity for oversight and support from District Assemblies, absence of effective regulation and inadequate public financing by formal institutions of the state. Their influence, interventions and positions are seen as significant and are viewed either positively or negatively by different stakeholders. Likewise, in the absence (or very limited nature) of accountability mechanism, the role of the media, and specifically radio, acts as an informal accountability tool and is seen as having an important influence on the attitudes of consumers and decision-makers, thereby indirectly contributing to improved performance across all management types.

5.2.3 CONSTRUCTION CONTRACTOR SELECTION, SPARE PARTS, AND ELECTRICITY COSTS

The selection of contractors and the quality and integrity of these actors is of critical importance, including the subsequent impact this can have on individual scheme performance and long-term operation and maintenance costs. District Assemblies are responsible for executing procurement processes (issuing tenders, evaluating bids, and awarding contracts) for water system development projects within their jurisdiction, following national procurement laws. Some thresholds guide the

procurement modalities, including requirements for national or international bidding. In most cases, the District Assemblies do not have sufficient funds for direct procurement and most water systems are actually through projects and procurements managed by the central government or non-state actors. In such cases the accountability role of District Assemblies is diminished or eliminated altogether, and they cannot provide supervisory or quality assurance roles.

The availability, cost, and quality of spare parts to repair and maintain water facilities is an important factor. WSMT arrangements are generally less able to overcome these challenges than donor-supported SWEs and public utility providers, which typically can rely on internal supply chains, bulk purchasing and stockpiling. Finally, the high costs of electricity have a negative impact on all management arrangement types, but the effect is cushioned for water supply facilities that are not (wholly) reliant on the national grid, therefore technology choice and the associated type of power supply (e.g. solar) will have a significant impact on operating costs and therefore financial viability. A greater diversification of energy sources in the rural water sub-sector would be beneficial.

5.3 IMPLICATIONS FOR THE RURAL WATER SECTOR IN GHANA

Our findings point to a range of political economy factors that are seen to have the greatest influence on rural water management performance both directly and indirectly. The importance of linkages among these political economy factors, including institutional and personal behaviors, illustrates the complexity of the sector in Ghana and the need for a systemic approach to addressing individual challenges or bottlenecks, consistent with current global sector systems-based thinking on rural water service delivery (Huston and Moriarty 2018; Valcourt et al. 2020). It is clear that some of these factors are structural in nature and will likely take a long time period to change and are beyond the sphere of influence of sector actors. These include important limiting factors in the political economy that transcend the water sector and the remit of its institutions to resolve. For example, the inadequacy of funding and human resources of District Assemblies, revising centralised procurement processes to give District Assemblies a greater accountability role and better enforcement of (state) institutions which run up large scale debts to service providers, including for energy supplies. These are important issues of governance writ large which affect the traditional focus of WASH aid on expanding services and are important for both government and development partners to consider. Conversely, there are several factors which could be potentially addressed and are within the scope of influence of key stakeholders from government actors, civil society, service providers to development partners. To better understand these interventions and the potential of stakeholders to address them, it is useful to consider how different political economy factors can be characterized as follows (Whaites et al. 2023):

a. **Foundational or structural:** long-term factors that do not change rapidly but may have an important impact on management performance, such as demographics, decentralization trends, social or cultural views on payment for water and use of different sources.
b. **Formal and informal processes and rules:** laws, policies, norms, values and expected functions which may explain, for example, why certain management arrangements may receive more support than others on the part of public bodies or why proposals for tariff increases are blocked.
c. **Stakeholders or actors:** individuals, organizations or groups that may have a disproportionate influence on the performance of different management arrangements.

Table 5 below summarizes our main findings from this PEA taking into account the above categories and the feasibility of addressing them through concrete actions, hence some factors such as cultural dynamics and aspects of political influence are not included in the table (see Annex 6 and Annex 7 for a detailed breakdown of these categories, the levels at which they are addressed, linkages, potential stakeholders, timeframes and level of difficulty). It is also important to recognize that there are significant costs and tradeoffs in terms of supporting certain of the recommended priority actions against a backdrop of finite resources in the sector and the public fiscus more widely. In particular, the extension of regulatory arrangements to the rural water sub-sector and improving capacity of District Assemblies and national level local government entities that support WSMTs would be costly. Perhaps most importantly is the question of the transition of CWSA into a rural public utility. Prioritizing this organizational shift means allocation of scarce public resources for rural water, which is likely to happen to the detriment of other requirements, notably the need to better support and oversee WSMT arrangements. Ultimately, these are political decisions as much as they are technical.

TABLE 5: SUMMARY OF POLITICAL ECONOMY FINDINGS AND PROPOSED POLICY AND OPERATIONAL RESPONSES

FINDINGS	PRIORITY ACTIONS	ACTORS / STAKEHOLDERS
A political vacuum in Ghana's national rural water sector is driving fragmentation that potentially inhibits investment, regulation and effective water resource management. Without greater clarity development partners may contribute to this fragmentation.	Finalize sector policy and reform processes, including clarification of management arrangements, roles and service areas Development of new/revision of existing legal instruments. Ensure that support functions for non-piped rural schemes are adequately addressed in policy terms and through more structured support for WSMTs. Expand regulation for utilities in rural areas, establish differentiated tariff regimes across management arrangements and address alternative service providers who undercut and distort the market. Greater alignment of development partner investment with (clarified) government policy direction.	Ministry of Sanitation and Water Resources Ministry of Local Government Office of the Head of Local Government Service Office of Auditor General Public Utilities Regulatory Commission Development partners (USAID, World Bank, UNICEF, Hilton Foundation etc.) Service providers
Political economy trends disproportionately undermine the WSMT management arrangement, which will be exacerbated by the transition of CWSA into a rural public utility and the continued inadequacy of public financing.	Develop a strategy to insulate WSMTs' governance structures from political influence. Stricter enforcement of development partner coordination at district level. Sensitization and engagement with MPs and district level political and traditional leaders. Expand regulatory frameworks specifically for tariff setting and ring-fencing of revenues to counter political influence. Design, fund and implement communication campaigns (radio, print/social media). Designate OHLGS as a regulatory entity for decentralized water supply (outside of CWSA). Encourage the local private sector to support MMDAs and WSMTs by using entrepreneurship to professionalize and formalize community piped water services.	Ministry of Sanitation and Water Resources Ministry of Local Government Office of the Head of Local Government Service. Ministry of Finance Civil Society organizations Development partners Service providers Local Private Sector Firms Private Individuals
Local government/District Assemblies have insufficient capacity, resources and incentives to play the role of Service Authority effectively for all management arrangements and particularly the WSMT.	Improve adequacy of DACF and to increase % share controlled by DAs. Capacity building for District Assemblies. Establish incentive structures for DAs to improve performance in rural water service delivery. Improve capacity of DAs to manage public contracts. Improve regulation and accountability through the mandate of the OHLGS for MMDAs.	Ministry of Sanitation and Water Resources Ministry of Local Government Office of the Head of Local Government Service Ministry of Finance Civil Society organizations Development partners
Quality of infrastructure and influences over contractor selection, as well as power supply options, can lead to long-term operational challenges and increased O&M costs.	Revise, strengthen and codify contractor vetting and selection processes. Revise centralized procurement processes to give DAs a greater accountability role. Stricter enforcement of non-state actors in selection of contractors and coordination with DAs. Revise policy on technology type and power supply, to reduce dependency on mains grid.	Ministry of Water Resources and Sanitation Ministry of Local Government Private sector contractors and drillers Development partners

5.4 LIMITATIONS

The study investigated sensitive subjects such as corruption and political influence within the domain of rural water systems, and the sensitivity of these topics may have deterred respondents from providing completely honest accounts, thereby introducing bias and compromising the accuracy and depth of the acquired data. In addition, although this study represents a significant effort in understanding political economy issues, the sample size of service providers from both high performing facilities (nine interviews) and poorly performing facilities (six interviews) is small.

ANNEX 1: INTERVIEW PROTOCOL

INTERVIEW PROTOCOL OVERVIEW

RESEARCH QUESTION	METHOD
Question 2.a How can the different social and contextual factors at different levels help explain variations in water facility performance under different management arrangements that are not captured by our quantitative analysis?	This qualitative research uses a modified framework originally developed by the World Bank[†], bounded by an examination of factors relating to management arrangements and their performance only. The framework identifies three inter-connected levels, all of which will be investigated: i. The **national context** of management arrangements ii. The **Service Authority arena**; and iii. The **service provision arena,** Semi-structured interviews with stakeholders at the three levels will be conducted to understand the influence of different factors on the performance of rural water service delivery under three different management arrangements. These are: a) supported community-based management (Water and Sanitation Management Teams; b) not for profit (donor-supported), privately-owned and operated schemes (Safe Water Network, Water 4, and Project Maji) – Safe Water Enterprises for short referring to the Ghanaian context; and c) public utility provision (Community Water and Sanitation Agency or CWSA). The format of semi-structured interviews allows for some flexibility to deviate and follow more insightful lines of discussion if the opportunity presents itself. We define performance of the water facility by three main indicators, namely i. the functionality of the water infrastructure (assessed by availability, flow rates); ii. the reliability of supply (continuity, weekly reliability, seasonal shortages and major breakdowns); and iii. water quality (as measured by levels of free chlorine and turbidity). [†]https://documents.worldbank.org/en/publication/documents-reports/documentdetail/571741468336058627/the-political-economy-of-policy-reform-issues-and-implications-for-policy-dialogue-and-development-operations Data Analysis The interviews will be conducted in English, recorded and transcribed verbatim. These will then be analyzed and coded in NVIVO software to index segments of text to themes, and to understand possible relationships between the themes. The interviews' transcripts will be coded by two researchers not involved in the interviews to avoid bias and the inter-rater variability (also known as a coding comparison query).

PROTOCOL 1: KEY STAKEHOLDERS AT A NATIONAL LEVEL		
WHAT INFORMATION DO YOU NEED?	**WHAT QUESTIONS WILL YOU ASK?**	**WHAT PROMPTS MIGHT HELP YOU GET THE INFORMATION?**
Background and introduction Current position details to evidence sampling frame [it is important in these early questions to build rapport].	*What is your current position?*	
	Are you happy for us to use this job title for research reporting purposes?	
	What has been your experience in the rural water sector?	
	Provide a quick overview of the different management arrangements that we will refer to in the interview	
Policy and Institutional The impact of changes in the relative emphasis given to management arrangements on the performance of management arrangements.	*[II] How do you think changes in national policy have impacted the performance of management arrangements for rural water on the ground?*	*Is this factor more important or relevant for one arrangement as compared to another?*
Policy and Institutional The impact of policies and legal instruments on the performance of management arrangements.	*[II] Do you think that the presence – or absence – of a clear policy provision and supporting legislative instruments - and sector leadership - has an impact on the performance of management arrangements on the ground?*	*For example, currently, the new role of CWSA has not been fully formalized – do you think this makes a difference in terms of the performance of CWSA-managed schemes and why?* *Likewise for private provision, are the rules of the game clear for a new entrant to the sector, and how does this affect performance?*
Policy and Institutional The impact of the lack of an independent and dedicated regulatory actor for rural water supply services on the performance of management arrangements.	*[II] Do you think the absence of an independent and dedicated regulatory actor for rural water supply services has made any difference to the performance of management arrangements for rural water services on the ground?*	*Do you think the DAs can provide sufficient oversight of different management arrangements? What about the regulation of CWSA's new role and its performance without clear regulatory oversight?*
Vested interests (political influence) The impact of champions, exceptional leaders, and opponents on the performance of management arrangements.	*[III] What positive impacts have champions or exceptional leaders had in driving the improved performance of management arrangements for rural water service delivery?*	*Can you think of an individual at the Ministry or within CWSA – or elsewhere - who has been instrumental in supporting management arrangements nationally? And how has this been manifested at the level of individual water supply schemes?*
	[III] What negative impacts have opponents to certain management arrangements had that have constrained or undermined the performance of different management arrangements?	*Linked to the previous question, can you think of someone, a group of people or an organization who have opposed a certain way of organizing the sector in terms of management arrangements, and how do you think this has affected performance?*
Legislative and Decentralization Context The impact of decentralization on the performance of management arrangements.	*[I] How do you think the current status of (fiscal) decentralization has impacted the performance of management arrangements for rural water services on the ground?*	*How does the devolution of authority to District Assemblies and the resources required to establish positions and functions at DA level – the Water Units within the District Works Departments - affect the performance of different*

	Amount transferred from Central level to the DA (Common fund, DDF etc.) and the DAs allocation (discretionary) to rural water.	*management arrangements, particularly for community management under the WSMT model?* *Are DA's free to allocate devolved resources that are ear-marked as used by the District Authorities, or does central government pre-assign these and how do you think this affects performance under different management arrangements?*
Socio-Economic and cultural The impact of Ghana's changing macro-economic context on the performance of management arrangements.	*[I] More recently, Ghana has had a number of economic shocks – inflation, devaluation of the Cedi and the pandemic tariff holiday for water payments – how do you think these events have affected management arrangements and their respective performance?*	*For example, do you think these developments have had a greater or lesser impact on any of community-management, public utility or private/safe water enterprise performance?*
Socio-Economic and cultural The impact of changing demographics on the performance of management arrangements.	*[I] Ghana is an urbanizing country, and the line between urban and rural is getting increasingly blurred – how do you think these changes in demographics affect the performance of management arrangements for rural water service provision?*	*For example, do you think rural growth centres and small towns are more conducive to better performance of piped schemes managed by CWSA or to Safe Water Enterprises?*
Sector Financing The impact of changes to the extent of different sources of financing (public and donor) to the performance of arrangements.	*[I] How have changes to the levels of public expenditure and investment for the rural water sector impacted on the performance of management arrangements?*	*For example, do you think that current levels of public budgets going into rural water sector has impacted on the performance of different management arrangements - and if so, how?*
	[I] Historically, the rural sector in Ghana has relied heavily on overseas development assistance or donor financing. How do you think the changes in donor financing have impacted on the performance of management arrangements for rural water services?	*Ghana attained lower middle-income country status in 2011, which has led to a decline in grants to the rural sub-sector and less funding for organizations such as CWSA – do you see this as important for different management arrangements?*
Vested interests (political influence) The support and influence of particular politicians or political allegiances has had on the promotion of different management arrangements	*[III] Do you think politicians, or political parties, have had an influence on the promotion or performance of different management arrangements for rural water and if so, how?*	
Financial interests (corruption) The presence and impact of corruption or rent-seeking on the performance of management arrangements.	*[III] Do you think there is corruption or integrity issues facing the rural water sector and if so, how have these impacted on the performance of management arrangements?*	*This could include padding out of contracts for procurement of goods and services, drilling contracts or the mis-management of revenue from household tariffs for example*
Development Partner Influence The support and influence of development partners on policy choices around management arrangements for rural water.	*[III] How do you think development partners such as bilateral donors or INGOs influence policy choices by government on how to improve the performance of management arrangements?*	*Are there any specific examples of this that you are aware of? For example, relating to the increased role of CWSA and Safe Water Enterprises in the direct delivery of services in recent years?*
	[III] What impact do you think development partner support is having on the performance of management arrangements?	*For example, more direct and targeted support from social enterprises or support to certain arrangements such as the new role of CWSA?*

PROTOCOL 2: KEY STAKEHOLDERS IN THE SERVICE AUTHORITY ARENA		
WHAT INFORMATION DO YOU NEED?	**WHAT QUESTIONS WILL YOU ASK?**	**WHAT PROMPTS MIGHT HELP YOU GET THE INFORMATION?**
Current position details to evidence sampling frame. [it is important in these early questions to build rapport.]	*What are your responsibilities in the role of your current job?*	
	Are you happy for us to use this job title for the research reporting purposes?	
Context	*In your region or district, which management arrangements for rural water supply are in place?*	- *Community-based management (WSMT)* - *Not for profit (donor-supported), privately-owned and operated schemes (or Safe Water Enterprises)* - *Public utility (CWSA)* - *Other (please describe)*
Socio-Economic and Cultural The impact of the socio-economic context and the cultural practices of different regions on the performance of management arrangements.	*[I] Important social and economic differences naturally exist between Ghana's regions. What impact do you think the socio-economic status of your region/district (XXXX) makes on the performance of management arrangements for rural water?*	*For example, do you think that the levels of poverty/wealth in your region (or district) have an influence on how well the different management arrangements work and why?*
	[I] Similarly, what impact do you think the cultural practices of your region/district (XXXX) have on the performance of management arrangements?	*Are there any particular cultural beliefs or opinions about water, payment for water and who should provide it that impacts the performance of different arrangements?*
Legislative and Decentralization Context The impact of decentralization on the performance of management arrangements.	*[I] How do you think the current status of decentralization has impacted on the performance of management arrangements?*	*How does the devolution of authority from central government to you at the District Assembly/Regional level and the resources required to establish positions and functions at DA level – the Water Units within the District Works Departments - affect the performance of different management arrangements, particularly for community management under the WSMT model?*
Policy and Institutional The impact of the lack of an independent and dedicated regulatory actor for rural water supply services on the performance of management arrangements.	*[II] Do you think the lack of an independent and dedicated regulatory actor for rural water supply services in your region/District has made any difference to the performance of different management arrangements?*	*Do you think the DAs can provide sufficient oversight of different management arrangements? What about the regulation of CWSA's new role and its performance without clear regulatory oversight?*
Sector Financing The impact of changes to the extent of different sources of financing (public and donor) to	*[I] How have changes to the levels of public expenditure for the rural water sector impacted the performance of management arrangements in your region or area?*	*For example, do you think that current level of fiscal decentralization has impacted the performance of different arrangements (and specifically*

the performance of arrangements.	*Amounts transferred from Central level to the DA (Common fund, DDF etc.) and the DAs allocation (discretionary) to rural water.*	*community management) - and if so, how?*
Financial Interests (corruption) The existence and impact of different forms of corruption on management arrangement performance.	*[II] A range of different forms of corruption are found in the WASH sectors of many countries, including financial mismanagement and wider integrity failures. What different forms of corruption have you witnessed or heard about in the application of management arrangements for rural water?*	
	[II] And relating to the previous question, what impact do you think that these different forms of corruption have on the performance of management arrangements?	*Does this affect the ability, say, to reinvest in repairs, maintenance, spare parts etc. in different ways for CBM, public or private arrangements?*
Vested Interests (political influence) The impact of key actors and dynamics on the performance of management arrangements.	*[III] Political actors can both support or undermine the effective application of any management arrangement. What impact do you feel that political actors have on the performance of management arrangements?*	
Vested Interests (political influence) The impact of interest groups outside government on the performance of management arrangements.	*[III] What impact do you think that interest groups outside government – and not politicians - such as the private sector, NGOs, consumer groups and the media have on the performance of management arrangements for rural water in your region or district?*	
Development Partner Influence The impact of development partners on the performance of management arrangements.	*[III] Development partners continue to be responsible for a significant proportion of the financial resources entering Ghana's rural water supply sub-sector and constructing many water supply facilities. What impact do you think development partners, including INGOs and donors, have on the performance of management arrangements in your region or district?*	*Does this impact different management arrangements in different ways? If so, which ones and how?*
Infrastructure The impact of construction contractors, well drillers and other service providers which may affect the long-term performance of management arrangements	*[III] Thinking about initial construction or large-scale capital maintenance works, what impact do you think that the selection of contractors, well drilling companies and other providers in have on the performance of management arrangements?*	*For example, do you think that the contracting mechanisms, contract design or profit motives may have a bearing on the quality of construction?*
	[III] Related to the above, what impact do you think that spare parts supplies and suppliers have on the performance of management arrangements in terms of the volume, quality, availability and pricing of parts?	

PROTOCOL 3: KEY STAKEHOLDERS IN THE SERVICE PROVIDER ARENA

WHAT INFORMATION DO YOU NEED?	WHAT QUESTIONS WILL YOU ASK?	WHAT PROMPTS MIGHT HELP YOU GET THE INFORMATION?
Current position details to evidence sampling frame. [it is important in these early questions to build rapport.]	*What are your responsibilities in the role of your current job?*	
	What management arrangement would best describe your water supply facility or scheme?	
	Are you happy for us to use this job title for research reporting purposes?	
Socio-Economic and Cultural The impact of the socio-economic context and the cultural practices of different regions on the performance of the management arrangement in question.	*[I] As a service provider in XXXX District, what impact do you think that the income or wealth of your customers on the performance of your management of the scheme?*	*For example, do you think that the levels of poverty/wealth in your district have an influence on how well your scheme performs and why?* *How did the COVID 19 pandemic affect your ability to manage your water supply scheme and its performance?*
	[I] Similarly, what impact do you think the cultural practices in your district (XXXX) have on the performance of your scheme?	*Are there any particular cultural beliefs or opinions about water, payment for water and who should provide it that impacts on your ability to successfully manage your scheme?*
Legislative and decentralization The impact of decentralization on the performance of the management arrangement in question.	*[II] Do you receive any support from the regional level government or District Assembly for managing your water supply scheme? – this may include things like investment planning, capital maintenance investments and technical support for specific problems*	*Do you think this support positively affects the performance of your scheme? Alternatively, do you feel that you don't get enough support and how does this affect the performance and in what ways?*
Vested Interests (political influence) The impact of political actors and dynamics on the performance of the management arrangement in question.	*[III] What impacts do you feel local political actors have on your ability to manage the water supply scheme and its overall performance (could be either positive or negative?*	
Vested Interests (political influence) The impact of interest groups outside government on the performance of the management arrangement in question.	*[III] How do you feel that interest groups outside government such as the private sector, NGOs, consumer groups and the media impact the performance of the water supply scheme under your management?*	
Development Partner Influence The impact of development partners on the performance of the management arrangement in question.	*[III] What impact do you think that development partners, including INGOs and donors, have on the performance of your water supply facility?*	*Has your scheme received support in any way by donor programmes or the work of big NGOs or other charities? How has this affected the performance of your water supply scheme?* *Do you feel that their actions have undermined your ability to manage your*

		scheme effectively in any way? If so, tell me about this.
Vested interests (political influence) The impact of known champions, exceptional leaders or opponents in driving or constraining the performance of the management arrangement in question.	*[III] How have influential local leaders impacted on your ability to manage your water supply scheme in anyway?*	*These leaders could include local government staff, religious or tribal leaders or businessmen in your community. They may have supported you or undermined your ability to perform well in some way – please describe if this is the case and how.*
Policy and institutional The impact of the presence of alternative management arrangements in the same or contiguous service areas on the performance of the management arrangement in question.	*[II] Users can often access multiple water sources, especially in the rainy season. What impacts have you found that the presence of alternative water source managed under an alternative management arrangement in the same or nearby service area has on the performance of your water supply scheme?*	*For example, do your customers stop paying in the rainy season or use less water? Do they pay for water from alternative schemes for different uses (e.g. drinking)?*
Infrastructure The impact of construction contractors, well drillers and other service providers which may affect the long-term performance of management arrangements	*[III] Thinking about the initial construction or large-scale capital maintenance works, what impact do you think that the selection of contractors, well drilling companies and other providers in have on the performance of the water supply scheme that you manage?*	*For example, do you think that the contracting mechanisms, contract design or profit motives may have a bearing on the quality of construction?*
	[III] Related to the above, what impact do you think that spare parts supplies and suppliers have on the performance of the water supply scheme that you manage in terms of the volume, quality, availability and pricing of parts?	

ANNEX 2: MATRIX CODING QUERY ALL LEVELS: HEATMAP

		Frequency of coding		
Factor areas	Nodes	A : National	B : Service Authority	C : Service Provision
Policy and institutional	1 : Clarity on policy and legal instruments	25	4	
Policy and institutional	2 : Impact on changes in national policy	29	0	
Policy and institutional	3 : Policy drivers	41	0	
Policy and institutional	4 : Absence of dedicated regulatory actor	42	29	
Policy and institutional	5 : Lack of information for decision-making (new node)	10	0	
Sector financing	6 : Changes in public expenditure and investment	30	12	
Legislative and decentralization context	7 : Effects of fiscal decentralization	27	9	0
Legislative and decentralization context	8 : Effects of decentralization	19	29	3
Legislative and decentralization context	9 : Service Authority support	16	18	36
Legislative and decentralization context	10 : Economic status of the SA	1	0	0
Development Partner Influence	11 : Reduction in donor funding	23	4	0
Development Partner Influence	12 : Support from donors	13	19	18
Infrastructure	13 : Impact of the selection of contractors	3	21	19
Infrastructure	14 : Spare parts	0	28	30
Infrastructure	15 : Electricity (new node)	1	2	1
Socio-economic and cultural	16 : Changes in demographics in rural areas	19	0	2
Socio-economic and cultural	17 : Macro-economic factors	19	2	1
Socio-economic and cultural	18 : Pandemic water tariff relief	15	0	20
Socio-economic and cultural	19 : Customers' wealth	3	27	25
Socio-economic and cultural	20 : Cultural factors	5	33	29
Socio-economic and cultural	21 : Other (new node)	1	15	15
Influence others (new factor)	22 : Support from others	0	27	24
Vested interests (political influence)	23 : Effects of other actors	17	14	27
Vested interests (political influence)	24 : Effect of political parties and politicians	38	33	16
Financial interests (corruption)	25 : Impact of corruption on performance	4	21	0
Financial interests (corruption)	26 : Existence of corruption	27	25	0
Capacity of service providers (new factor)	27 : Limited capacity at the SP level	9	5	3
Water resource	28 : Water resources issues (new node)	0	1	4
Water resource	29 : Various water sources	0	2	32

ANNEX 3: NODES AND FACTOR AREAS THAT DIFFER ACROSS STAKEHOLDER GROUPS AT THE THREE LEVELS.

NATIONAL LEVEL:

Development partners, government and service providers at the national level all cite the **absence of a dedicated regulator** (42), although this was cited least often by civil society respondents. **Policy drivers** (41) was an important node for all stakeholder groups, except national level service providers (CWSA and SWEs). **Political parties and politicians** (38) were flagged as being important for all groups, but less so for civil society. The **changes in public expenditure and investment** (30) node was highly relevant for national government stakeholders (citing 20 of the 30), but far less so for service providers and civil society. Development partners cited **changes in national policy** (29) along with government, but this node was not cited very much by the other two groups. Although of somewhat lesser frequency, both the **effects of fiscal decentralization** (27) and the **existence of corruption** (27) are shared nodes at the national level. Government and development partner stakeholders share a higher frequency of responses regarding the importance of fiscal decentralization, whereas corruption is cited as a node most often by development partner stakeholders. The node for **clarity on sector policy issues** (25) is cited most frequently by government and development partner stakeholder groups.

SERVICE AUTHORITY LEVEL:

Stakeholders at this level provided a high number of citations for nodes relating to **cultural practices** and the **effect of political parties and politicians** (both 33), the **impact of decentralization** and **absence of a dedicated regulator** (29 each), the support from others (political influence) and the **wealth of rural consumers** (27 each).

SERVICE PROVISION LEVEL:

The most frequently cited nodes across all service provider types relate to **support from Service Authorities** (36) and the presence of **alternative water sources** (32). Other areas that were more commonly cited include **spare parts** (30), **cultural practices** (particularly for public utility and community management arrangements) (29), the **effects of other actors** (political influence factor, 27), **the pandemic tariff relief payments** (20), **wealth of customers** (25), and **support from other actors (**24). Interestingly, corruption was not cited at all by any Service Provider stakeholders as an important political economy factor.

ANNEX 4: MATRIX CODING BY REGION: HEATMAP

		Service Authority			Service Provider		
Factor Area	**Node**	**Northern**	**Volta**	**Ashanti**	**Northern**	**Volta**	**Ashanti**
Policy and institutional	1 : Clarity on policy and legal instruments	0	3	1			
Policy and institutional	2 : Impact on changes in national policy	0	0	0			
Policy and institutional	3 : Policy drivers	0	0	0			
Policy and institutional	4 : Absence of dedicated regulatory actor	7	11	11			
Policy and institutional	5 : Lack of information for decision-making (new node)	0	0	0			
Sector financing	6 : Changes in public expenditure and investment	3	6	3			
Legislative and decentralization context	7 : Effects of fiscal decentralization	5	3	1	0	0	0
Legislative and decentralization context	8 : Effects of decentralization	7	12	10	1	2	0
Legislative and decentralization context	9 : Service Authority support	8	7	3	12	13	11
Legislative and decentralization context	10 : Economic status of the SA	0	0	0	0	0	0
Development Partner influence	11 : Reduction of donor funding	0	4	0	0	0	0
Development Partner influence	12 : Support from donors	4	9	6	6	9	3
Infrastructure	13 : Impact of the selection of contractors	8	8	5	5	11	3
Infrastructure	14 : Spare parts	6	12	10	9	8	13
Infrastructure	15 : Electricity (new node)	2	0	0	1	0	0
Socio-economic and cultural	16 : Changes in demographics in rural areas	0	0	0	0	2	0
Socio-economic and cultural	17 : Macro-economic factors	0	2	0	0	1	0
Socio-economic and cultural	18 : Pandemic water tariff relief	0	0	0	6	6	8
Socio-economic and cultural	19 : Customers' wealth	9	14	4	12	3	10
Socio-economic and cultural	20 : Cultural factors	11	12	10	11	9	9
Socio-economic and cultural	21 : Other (new node)	8	1	6	2	7	6
Influence others (new factor)	22 : Support from others	8	9	10	8	8	8
Vested interests (political influence)	23 : Effects of other actors	2	8	4	5	12	10
Vested interests (political influence)	24 : Effect of political parties and politicians	10	16	7	6	6	4
Financial interests (corruption)	25 : Impact of corruption on performance	7	8	6	0	0	0
Financial interests (corruption)	26 : Existence of corruption	7	11	7	0	0	0
Capacity of service providers (new factor)	27 : Limited capacity at the SP level	2	3	0	0	0	3
Water resource	28 : Water resources issues (new node)	0	0	1	1	3	0
Water resource	29 : Various water sources	1	0	1	9	11	12

ANNEX 5: HIGH PERFORMING AND FAILING WATER FACILITIES: WEIGHTED HEATMAP

		High Performing			Failing		
Factor Areas	**Nodes**	**CW SA**	**SW E**	**W SMT**	**CW SA**	**SW E**	**W SMT**
Legislative and decentralization Context	7 : Effects of fiscal decentralization	0	0	0	0	0	0
Legislative and decentralization Context	8 : Effects of decentralization	2	1	0	0	0	0
Legislative and decentralization Context	9 : Service Authority support	8	7	8	9	6	4.5
Legislative and decentralization Context	10 : Economic status of the SA	0	0	0	0	0	0
Development Partner influence	11. Reduction of donor funding	0	0	0	0	0	0
Development Partner influence	12 : Support from donors	5	2	7	1.5	1.5	3
Infrastructure	13 : Impact of the selection of contractors	3	3	9	1.5	1.5	3
Infrastructure	14 : Spare parts	3	4	6	7.5	10.5	7.5
Infrastructure	15 : Electricity (new node)	0	0	0	0	0	1.5
Socio-economic and cultural	16 : Changes in demographics in rural areas	1	0	1	0	0	0
Socio-economic and cultural	17 : Macro-economic factors	0	0	1	0	0	0
Socio-economic and cultural	18 : Pandemic water tariff relief	4	3	6	3	6	1.5
Socio-economic and cultural	19 : Customers' wealth	2	5	8	6	4.5	4.5
Socio-economic and cultural	20 : Cultural factors	9	2	8	4.5	6	4.5
Socio-economic and cultural	21 : Other (new node)	3	3	2	1.5	4.5	4.5
Influence others (new factor)	22 : Support from others	6	6	6	3	6	0
Vested interests (political influence)	23 : Effects of other actors	5	5	8	6	4.5	3
Vested interests (political influence)	24 : Effect of political parties and politicians	7	1	2	1.5	4.5	3
Financial interests (corruption)	25 : Impact of corruption on performance	0	0	0	0	0	0
Financial interests (corruption)	26 : Existence of corruption	0	0	0	0	0	0
Capacity of service providers (new factor)	27 : Limited capacity at the SP level	0	0	0	3	0	1.5
Water resource	28 : Water resources issues (new node)	0	0	2	1.5	0	1.5
Water resource	29 : Various water sources	6	7	10	6	6	1.5

ANNEX 6: POLITICAL ECONOMY FACTORS BY CATEGORY, LEVEL AND LINKAGE TO OTHER FACTORS

PE FACTORS BY CATEGORY OF FACTOR, LEVEL AND LINKAGES WITH OTHER FACTORS

PE FACTOR	CATEGORY OF PE FACTOR	LEVEL	LINKAGE
Clarity on policy and legal instruments	**Formal and informal processes and rules:** current policies are insufficiently defined and there is on-going doubt over sector reforms, leading to fragmentation and a 'free for all' in which different actors promote favored management arrangements. Weak sector leadership in finalizing/determining coherent sector policy and legal instruments. Development partners free to influence policy development and promote preferred management arrangement.	National	Links with absence of regulatory actor and highlights need for strengthened sector leadership.
Absence of a regulatory actor	**Formal and informal processes and rules:** failure to apply regulation in rural sector has led to inconsistency in service levels and lack of control over tariffs for utility providers. Service Authorities are unable to adequately fulfill mandated roles for regulation and oversight. Capacity and focus of CWSA is shifting to rural utility provision at expense of support functions.	National Service Authority	Links with clarity on policy and legal instruments.
Reduction in Development Partner financing and support	**Foundational:** resulting from transition to lower-middle income status and shift away from large-scale bi-lateral grant funding to concessional loans. **Formal and informal processes and rules:** fiscal decentralization is currently inadequate to replace reduction in funding from DPs, particularly affecting community management arrangements. **Stakeholder or actors:** philanthropic donors are moving into the space vacated by conventional DPs and are mainly supporting SWE management arrangements.	National	Links with support from Service Authorities and limited fiscal decentralization.
Support from Service Authorities	**Formal and informal processes and rules:** service providers of all types should expect to receive relevant and adequate levels of support to ensure that the management arrangement can perform. Service Authorities unwilling or unable to adequately play mandated roles for support, regulation, oversight and accountability.	National Service Authority	Links with reduction in Development Partner funding and absence of regulatory actors (or frameworks).
Political influence	**Formal and informal processes and rules:** politicians and other elites interfering in operation and management, specifically in resisting tariff revisions. **Stakeholder or actors:** prevailing attitudes to payment for water. Influential and traditional leaders disrupting effective management for political gain and sometimes finding solutions on an ad hoc basis. Competitive clientelism impacting on technical leadership of sector agencies for political patronage purposes.	National, Service Provision	Links with lack of effective regulation and codification of tariff setting as well as clarity on policy and legal instruments and cultural practices.

Cultural factors	**Stakeholder or actors:** cultural attitudes; lack of accountability mechanisms and resources to enforce them can all affect willingness-to-pay for services. **Formal and informal processes and rules:** misuse of funds and elite capture of resources by leaders, coupled with tacit social acceptance on behalf of communities.	Service Provision	Links with the lack of support from Service Authorities and absence of (good enough) accountability mechanisms.
Infrastructure	**Foundational:** cost of electricity supply outside influence of sector unless specific subsidies can be negotiated for rural water service providers. **Formal and informal processes and rules:** selection of contractors may be compromised and can bypass formal accountability mechanisms at Service Authority level leading to higher O&M costs and potential to affect long-term (financial) viability. Mixed ability to reliably access quality spare parts and economies of scale for pricing. Technology type (e.g. simple pumping, or gravity or complex treatment/distribution) and type of power supply (e.g. mains connection, alternative generator or solar) affecting technical performance and increasing long-term O&M costs. Legacy debts for electricity built up by individual schemes and institutional consumers which affect financial performance of service providers.	National Service Authority Service Provision	Links with support from Service Authorities and capacity to provide oversight/hold contractors accountable.
Various Water Sources	**Foundational:** seasonality and access to alternative sources during rainy periods or access to bodies of surface water cannot be controlled. **Formal and informal processes and rules:** whether intentional or not competition from alternative providers, including charities and religious groups, that undercut and undermine the willingness-to-pay negatively impacts on tariff revenue and financial viability of formal providers. Alternative providers are not currently regulated.	Service Provision	Links with regulation and oversight by Service Authorities to apply consistent tariff regimes and minimize market distortion.

ANNEX 7: CONSIDERATIONS FOR ADDRESSING PE FACTORS, STAKEHOLDERS, TIMEFRAMES AND LEVELS OF DIFFICULTY.

CONSIDERATIONS FOR ADDRESSING PE FACTORS. STAKEHOLDERS, TIMEFRAMES AND LEVELS OF DIFFICULTY

PE FACTOR	CONSIDERATIONS	STAKEHOLDERS	TIME FRAME	DIFFICULTY
Clarity on policy and legal instruments	• Progress and finalize revised sector policy with clarified roles and legal instruments. • Fund policy revision and provide capacity support to the MSWR. • Conditionality for further external funding to rural water sector.	• MSWR, MoLG, MoF, civil society, academia • Development partners • Development partners	• Short term (within 6 to 12 months)	• Moderate: existing draft policy but requires convergence by multiple stakeholders and parliamentary approval.
Absence of a regulatory actor	• Support expansion of PURC mandate for new rural utility and strengthen regulatory functions of DAs. • Stricter enforcement of regulation of service levels and tariff structures for non-utility providers including those currently undercutting tariffs. • Stricter enforcement of (state) institutions which run up large scale debt. • Conditionality for further external funding to rural water sector.	• MSWR, PURC, MoF, CWSA, GWL, civil society • Development partners • MSWR, PURC • Development partners	• Medium term (12 to 36 months)	• Moderate: requires convergence by multiple stakeholders and significant expansion of PURC capacity and reach into rural and strengthening of District Assemblies.
Support from Service Authorities	• Lobby for improvements in DACF and to increase % share controlled by DAs. • Address roles and mandates in revised sector policy for DAs. • Fund capacity building for DAs and leadership • Stricter enforcement of development partner coordination at district level.	• MSWR, MoF, MoLG • MSWR, MoLG, MoF, civil society, academia, District Assemblies • MoLG, MoF, Development partners	• Long-term [> 36 months)	• High: requires changes to public expenditure patterns and working through MoLG and public administration frameworks.
Political influence	• Sensitization and engagement with MPs and district level traditional leaders. • Expand regulatory frameworks to rural water provision, specifically for tariff setting and ring-fencing of revenues to counter political influence and elite capture.	• MSWR, Parliamentary authorities, civil society, academia, development partners • District Assemblies	• Long-term [> 36 months)	• High: requires long-term engagement to address entrenched behaviours and political patronage system.

Cultural factors	• Sensitization and engagement activities with communities and leaders as part of investment in rural water provision. • Fund, design and implement communication campaigns [radio, print/social media etc).	• MSWR, PURC, civil society, academia, development partners • District Assemblies	• Long-term [> 36 months)	• High: requires long-term, sustained engagement to change cultural attitudes to the use and value of (safe) water.
Infrastructure	• Revise, strengthen and codify contractor vetting and selection processes. • Stricter enforcement of non-state actors in selection of contractors and coordination with DAs. • Revise centralized procurement processes to give DAs greater accountability roles. • Establish spare part 'banks' for WSMTs schemes • Revise policy on technology type and power supply options, to reduce dependency of mains grid.	• MSWR, PURC, CWSA • MSWR, District Assemblies, development partners • MSWR, CWSA, development partners	• Medium term (12 to 36 months)	• Moderate: requires coordination with construction sector and commissioning of research on technology and power supplies.

BIBLIOGRAPHY

Appiah, Daniel, and Abdull Gafaru Abdulai. 2017. 'Competitive Clientelism and the Politics of Core Public Sector Reform in Ghana'. Working Paper No. 82. https://www.ssrn.com/abstract=2954598.

Aquaya Institute. 2020. 'Ghana Institutional Framework for Water Provision'. Institutional Framework Brief. https://www.aquaya.org/wp-content/uploads/2020_Ghana-Institutional-Framework.pdf.

Brown, Julia, and Marije van den Broek. 2017. 'Better the Devil You Know? A Relational Reading of Risk and Innovation in the Rural Water Sector'. The Geographical Journal 183 (3): 210–22. https://doi.org/10.1111/geoj.12215.

Chowns, Eleanor (Ellie). 2014. 'The Political Economy of Community Management: A Study of Factors Influencing Sustainability in Malawi's Rural Water Supply Sector.' Doctor of Philosophy, University of Birmingham.

——. 2015. 'Is Community Management an Efficient and Effective Model of Public Service Delivery? Lessons from the Rural Water Supply Sector in Malawi: Is Community Management Efficient and Effective?' Public Administration and Development 35 (4): 263–76. https://doi.org/10.1002/pad.1737.

Edelmann, David. 2009. 'Analysing and Managing the Political Dynamics of Sector Reforms: A Sourcebook on Sector-Level Political Economy Approaches'. Working Paper 309. London: Overseas Development Institute.

ESAWAS. 2022. 'The Water Supply and Sanitation Regulatory Landscape Across Africa; Content Wide Synthesis Report'. Synthesis Report. Eastern and Southern Africa Water and Sanitation Regulators Association. https://esawas.org/repository/Esawas_Report_2022.pdf.

Foster, Tim, and Rob Hope. 2016. 'A Multi-Decadal and Social-Ecological Systems Analysis of Community Waterpoint Payment Behaviours in Rural Kenya'. Journal of Rural Studies 47 (October): 85–96. https://doi.org/10.1016/j.jrurstud.2016.07.026.

Ghana Statistical Service. 2014. '2010 Population and Housing Census: Housing in Ghana'.

Harris, Daniel, Michelle Kooy, and Lindsey Jones. 2011. 'Analysing the Governance and Political Economy of Water and Sanitation Service Delivery'. Working Paper 334. London.

Harvey, Adam. 2021. 'Ten Factors for Viable Rural Water Services'. Research Report. Sustainable WASH Systems Learning Partnership. USAID.

Hirvi, Marja, and Lindsay Whitfield. 2015. 'Public-Service Provision in Clientelist Political Settlements: Lessons from Ghana's Urban Water Sector'. Development Policy Review 33 (2): 135–58. https://doi.org/10.1111/dpr.12095.

Hope, Rob, Patrick Thomson, Johanna Koehler, and Tim Foster. 2020. 'Rethinking the Economics of Rural Water in Africa'. Oxford Review of Economic Policy 36 (1): 171–90. https://doi.org/10.1093/oxrep/grz036.

Huston, Angela, and Patrick Moriarty. 2018. 'Understanding the WASH System and Its Building Blocks'. Working Paper. The Hague, The Netherlands: IRC International Water and Sanitation Centre.

IRC. 2017. 'Community Water and Sanitation Agency Organisational Assessment'. Final Report. IRC, Aguaconsult.

Jones, Stephen David. 2015. 'Bridging Political Economy Analysis and Critical Institutionalism: An Approach to Help Analyse Institutional Change for Rural Water Services'. International Journal of the Commons 9 (1): 65–86.

Lockwood, Harold, Pranav Chintalapati, Caleb Cord, and Anna Libey. 2021. 'A Roadmap for System Strengthening for Proffessionalized Rural Water Maintenance Services.'

Lockwood, Harold, and Stef Smits. 2011. Supporting Rural Water Supply: Moving towards a Service Delivery Approach. Warwickshire, UK: Practical Action Publishing. https://www.ircwash.org/sites/default/files/Lockwood-2011-Supporting.pdf.

Lust, Ellen. 2009. 'Democratization by Elections? Competitive Clientelism in the Middle East'. Journal of Democracy 20 (3): 122–35. https://doi.org/10.1353/jod.0.0099.

Manghee, Seema, and Alice Poole. 2012. 'Approaches to Conducting Political Economy Analysis in the Urban Water Sector'. Water Papers 74741.

Moriarty, Patrick, Stef Smits, John Butterworth, and Richard Franceys. 2013. 'Trends in Rural Water Supply: Towards a Service Delivery Approach'. Water Alternatives 6 (3): 329–49.

MSWR. 2023. 'Ghana WASH Sector Development Programme (GWASHSDP)2021-2030'. Accra, Ghana: The World Bank; Sanitation and Water Project.

MSWR. 2024. 'National Water Policy'. Ministry of Sanitation and Water Resources, Government of Ghana, April 2024Nyanyofio, Joseph Gerald Tetteh, Kwame Ameyaw Domfeh, Thomas Buabeng, Theophilus Maloreh-Nyamekye, and Nana Nimo Appiah-Agyekum. 2022. 'Governance and Effectiveness of Public–Private Partnership in Ghana's Rural-Water Sector'. International Journal of Public Sector Management 35 (7): 709–32. https://doi.org/10.1108/IJPSM-05-2021-0129.

Oates, Naomi, and Evance Mwathunga. 2018. 'A Political Economy Analysis of Malawi's Rural Water Supply Sector'. The University of Sheffield.

Odijie, Michael Ehis, and Mohammed Zayan Imoro. 2021. 'Ghana's Competitive Clientelism and Space for Long-Term Stable Policies'. SAGE Open 11 (3): 21582440211031513. https://doi.org/10.1177/21582440211031513.

OECD. 2017. 'Getting Infrastructure Right: The Ten Key Governance Challenges and Policy Options'. The OECD Framework for the Governance of Infrastructure.

Pichon, Florence. 2019. 'Rural Water Supply in Ethiopia: A Political Economy Analysis'. ODI Report. London: Overseas Development Institute (ODI).

RésEAU. 2023. 'Why Political Economy Matters in the Water Sector'. Brief no. 4. Brief Series.

Sève, Miriam Denis Le. 2018. 'A Political Economy Analysis of Uganda's Rural Water Supply Sector'.

Valcourt, Nicholas, Jeffrey Walters, Amy Javernick-Will, Karl Linden, and Betelhem Hailegiorgis. 2020. ' Understanding Rural Water Services as a Complex System: An Assessment of Key Factors as Potential Leverage Points for Improved Service Sustainability'. Sustainability 12 (3): 1243. https://doi.org/10.3390/su12031243.

WaterAid. n.d. 'Political Economy Analysis Toolkit'. WaterAid.

Whaites, Alan, Laure-Hélène Piron, Alina Rocha Menocal, and Graham Teskey. 2023. 'Understanding Political Economy Analysis and Thinking and Working Politically'. UK: Foreign, Commonwealth & Development Office: Thinking and Working Politically Community of Practice (TWP CoP).

World Bank. 2022. 'Water Supply and Sanitation Policies, Institutions, and Regulation: Adapting to a Changing World'. Synthesis Report. Washington, D.C: The World Bank.

World Bank Group. 2008. 'The Political Economy of Policy Reform: Issues and Implications for Policy Dialogue and Development Operations'. 44288-GLB. Washington, DC: Social Development Department Environmentally and Socially Sustainable Development Network.

——. 2017. 'Sustainability Assessment of Rural Water Service Delivery Models: Findings of a Multi-Country Review'. Policy Brief. Water Papers. Washington, DC: World Bank. https://doi.org/10.1596/27988.