

Delegated management of water and sanitation services in urban areas: experiences from Kumasi, Ghana

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Historically, water and sanitation service providers in low-income countries have struggled to accommodate rapid urban expansion, and particularly to serve the poor in peri-urban areas. One way to approach these challenges is to develop alternative approaches to service delivery, incorporating innovative institutional and contractual arrangements, and involving partnerships between communities, utilities, the private sector and regulators. This Topic Brief focuses on a delegated management model developed in Kumasi (Ghana), where a WSUP-facilitated partnership between the water utility, the Metropolitan Assembly and a community management committee is starting to play a key role in expanding the provision of clean, affordable water and improved public toilet facilities in the low-income district of Kotei. The Brief explores the nature of the model, the contractual arrangements, and the central role of the community management committee. It also examines the potential for scale-up and replication.

Background

Utilities struggling to supply urban areas

Ghana Water Company Limited (GWCL), along with its public operating entity Ghana Urban Water Limited (GUWL), has the mandate to supply water to all urban areas in Ghana. As in many developing countries service provision is not universal, with those living in low-income settlements and peri-urban areas being the worst served. Consequently people in these areas are dependent on unsafe and/or expensive sources of water. In 2009 it was estimated that water coverage was 59% in urban areas,¹ with a significant proportion of the urban population relying on informal, non-GWCL supplies. For sanitation, many people in low-income communities in Ghana rely on public latrines as their primary sanitation option. However, the WHO/UNICEF Joint Monitoring Programme (JMP) definition for 'improved sanitation' does not recognise public latrines and as a consequence the JMP reported coverage for improved sanitation in 2010 as only 18%.² Although there are some very good examples of public latrines in Ghana, many are very poor.

¹ Source: Ministry for Water Resources, Works and Housing: Ghana Water and Sanitation Sector Performance Report (2009).

² Source: WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation (2010).



³ Source: WSUP estimates.

⁴ Source: WSUP Survey report

⁵ GHS 2.8/m³

⁶ Source: WSUP Survey

Kumasi and the Oforikrom Water and Sanitation Programme

Kumasi, the second largest city in Ghana, is located in the south central part of the country and has a population of approximately 2.5 million. It is the commercial centre of Ghana and the main transport hub. The provision of urban services has struggled to keep up with recent population growth – it is estimated that more than 900,000 people (36%) lack access to safe drinking water and nearly 1.5 million (60%) lack access to sanitation facilities meeting the JMP definition of “improved”.³

In Kumasi, WSUP is supporting the Oforikrom Water and Sanitation (OWAS) project which seeks to address these issues by delivering clean water, access to improved sanitation and improved hygiene behaviours to approximately 108,000 inhabitants in five low-income urban areas in Kumasi’s Oforikrom constituency. Commencing in March 2010, the initial stage of the project, funded under the USAID “African Cities for the Future” project, has focused on the district of Kotei.

Kotei – a poorly served ‘absorbed village’

Kotei is a district of Kumasi located 10 km southeast of the central business district. Originally a separate village, it has now been absorbed into Kumasi; however, it has managed to retain traditional structures and a stronger sense of community than many other urban areas. Strong support, cooperation and interest from the local leadership have been a significant positive factor in the development of the innovative management arrangements discussed in this Brief.

Kotei is not served by GWCL’s water supply network. The majority (86%) of residents rely on water drawn from hand-dug wells or purchased at a high price from local boreholes or on-sellers,⁴ who charge approximately US\$ 1.65 per cubic metre.⁵ This is more than double the current GWCL standpipe tariff of GHS 0.78 per cubic metre, meaning Kotei’s low-income residents pay more than twice the price for a significantly worse level of service than their more affluent neighbours in the central networked areas of Kumasi.

A large proportion of Kotei’s residents (approximately 47% on average but up to 80% in the older residential areas) do not have access to household sanitation facilities and rely on Kotei’s three public toilets. These are old, poorly maintained and a public health nuisance, with residents on average walking 600 meters to use them. Of those residents with household facilities, 35% have WC facilities and 18% a pit latrine.⁶



⁷ The WSUP sponsored project is being managed from CARE's Kumasi office, which has also provided administrative support

The WSUP project

The WSUP project, supported by its members CARE and Water Aid,⁷ seeks to address this situation by providing grant funding to (a) demonstrate a new service model by facilitating a partnership between the community (represented by a Community Management Committee (CMC)), Ghana Urban Water Limited (GUWL) and the Kumasi Metropolitan Assembly (KMA), and (b) construct the necessary new water and sanitation infrastructure. Through this process, it is anticipated that an innovative, robust and sustainable management system will evolve for decentralised water supply in low-income urban communities and for more sustainable public sanitation services. This Topic Brief explains how the partnership in Kotei has been developed, with a particular emphasis on the institutional arrangements and the central role played by the CMC.

Box 1: Who's who: a summary of service providers in Kumasi

- Ghana Water Company Limited (GWCL) is a publically-owned water infrastructure asset holder which, along with its linked operating entity, Ghana Urban Water Limited (GUWL), is mandated to supply urban areas in Ghana. Until recently operations were managed under a public-private partnership with Aqua Vitens Rand Ltd (AVRL).
- The Kumasi Metropolitan Assembly (KMA) is the city authority. The Waste Management Department has overall responsibility for the provision and management of sanitation facilities.
- Many KMA functions, including waste management, sanitation and environmental health, are delegated to the Sub-Metropolitan Districts, including the Oforikrom Sub-Metropolitan District where the project is located.
- Numerous small-scale providers provide valuable but often unregulated services throughout the city, including private borehole owners and water vendors, public toilet owners and operators, de-sludging vacuum truckers, manual pit emptiers and latrine builders.

⁸ AMCOW/WSP 2010

The policy and institutional landscape

The National Water Policy and the service regulator support new approaches

Ghana's National Water Policy (GOG 2007) classifies water supply delivery as urban or rural. Urban water supply includes 82 systems in urban areas which the Ghana Water Company Limited (GWCL) is mandated to supply. Rural and small-town systems are the responsibility of District Assemblies: here a well-established community-based approach is used, with Water and Sanitation Development Boards and Committees responsible for all operations and maintenance, while asset ownership rests with the District Assemblies. However, despite the National Water Policy, there still remain 'grey areas' in relation to peri-urban areas, particularly with respect to how services are delivered and the role of key water agencies and communities in accelerating provision to the urban poor. Currently, the formal water sector has limited capacity to improve water supplies to poor and under-served communities in urban Ghana.⁸ The National Water Policy recognises that new methods and approaches are required (Box 2).

Box 2: Ghana's National Water Policy and the urban poor

Ghana's National Water Policy sets out '*to ensure improved and sustainable access to water by the poor for their basic needs at affordable cost*', by:

- Adopting a tariff structure that provides optimal benefit to consumers, including low-income consumers;
- Encouraging cooperation between private operators and small-scale independent providers, working in cooperation with GWCL; and
- Defining unserved and under-served areas and facilitating adequate and affordable provision of safe drinking water to them.

Regulation in the urban water sector is provided by the Public Utilities Regulatory Commission (PURC), an independent multi-sector regulator established in 1997, with a mandate covering tariff setting, performance standards and promoting fair competition. To carry out its mandate, PURC has issued a number of policy statements and guidelines for regulating service delivery, including a social policy which addresses the interests of the poor. This recognises the importance of community-utility partnerships and the role of NGOs and CBOs in some aspects of water supply provision. The PURC is actively promoting the concept of community participation, especially with regard to the provision of water to low-income and peri-urban communities, and is already undertaking pilot projects to generate lessons that will guide replication in regulatory decisions and future policy.

The National Environmental Sanitation Policy

The National Environmental Sanitation Policy is the primary document providing national guidance. Broadly, the policy supports the principle of subsidiarity in order to ensure participatory decision-making at the lowest level and the principle of community participation and social intermediation. Under the policy, the metropolitan, municipal and District Assemblies retain responsibilities for monitoring, regulation and facilitation roles, but are mandated to transfer management and maintenance of public toilets to the private sector, either by franchising existing facilities or granting concessions for the construction and operation of new ones.

Project supports policy objectives

National Water and Environmental Sanitation policies and PURC policy specifically support arrangements that promote partnership working between GWCL and third parties in order to serve low-income communities. This context has provided a policy backing for the new approaches being promoted by WSUP in the OWAS project.

“The most successful examples of delegated management are found where contractual agreements are well defined”

Delegated management – concepts, options and experience

Defining delegated management

Expanding water and sanitation services in low-income urban areas is a major challenge for utilities. Lack of space and access, administrative barriers, low incomes, loose social fabric and political interference typically make the situation very complex. Utilities themselves also often have insufficient capacity and lack appropriate models to address the situation. Historically, alternative service providers have played significant, but often informal and unregulated, roles in providing services to fill this gap. More recently and in many low- and middle-income countries, a range of more formalised approaches, often supported by donors, have been developed between utilities and organisations operating in low-income areas. While models vary widely in their specific characteristics, many can be defined as ‘delegated management’ approaches (Box 3).

Key elements of success

Experience from elsewhere (including WSUP projects in Naivasha in Kenya and in Maputo in Mozambique) have shown that the most successful and sustainable examples of delegated management are found where (1) contractual arrangements are well defined and are clear about ownership, management and operation; (2) the service provider is close to their customers; (3) systems are financially sustainable at affordable prices; (4) there are financial incentives in place to improve performance; and (5) the regulatory and policy regime is supportive.

Ghana's experience

The experience of using delegated management for serving the urban poor is not well developed in Ghana. This gap and the positive policy environment provided a good basis for WSUP to engage with GWCL to support them to trial innovative delivery mechanisms based around delegated management and to support community groups to engage with this process.

Box 3: Defining delegated management approaches

Delegated management can be defined as the process of assigning or transferring authority, decision making or a specific administrative function from one entity to another. In low-income urban areas the public utility delegates a number of its functions, typically operation, maintenance, new connections or revenue collection to a third party, often a private company, an NGO, CBO or similar.

⁹ Under the Local Government Act 462 the Metropolitan Assembly has the authority to delegate some functions, other than legislative ones, to 'a sub-metropolitan council...or any other body... determined by the assembly'.

Developing a new approach – key roles for the Project Steering Committee and Community Management Committee

Promoting and facilitating development of a suitable and mutually agreed management model was a central focus of WSUP's involvement. This new approach required the formation of (1) a Project Steering Committee (PSC) as a forum for initial discussions and (2) a suitable community-based entity, the Community Management Committee (CMC), to which authority, decision-making and specific functions could be delegated. This allowed a process of discussion and negotiation, facilitated by WSUP, with all stakeholders –including traditional leaders, the community and GWCL– encouraged and required to push the project forward.

Project Steering Committee

A key component in the initial stages of the project delivery process was the establishment of a Project Steering Committee (PSC). This provided a valuable forum to discuss implementation issues, share problems and work to overcome challenges to implementation. Through the PSC, and prior to setting up the CMC, the community and representatives of GWCL and KMA were brought together to discuss the most appropriate management model for water supply and sanitation provision.

Community Management Committee

The proposed delegated management arrangements required a partnership between the community and the service provider, GWCL. Therefore, early establishment of the CMC was important.

The CMC was constituted as a legal entity under the Oforikrom Sub-Metropolitan Council, meaning that it is closely tied to the formal local government structure.⁹ The CMC has a constitution and a membership which is nominated by traditional leaders, opinion leaders, women's groups, the youth club and the District Assembly representative for the area. Importantly, and innovatively, the CMC also included membership from the KMA, the Oforikrom Sub-Metropolitan Council and GWCL, as a way of improving communication and integrating the new arrangements into the existing institutional system, rather than creating new, parallel structures.

The CMC became the community focal point for communications with GWCL. Formation of the CMC received strong support from the local chief, and was helped by the relatively strong social networks emanating from Kotei's 'absorbed village' status. As the community and the utility began to work together on project planning activities, initial mistrust and apathy were replaced with growing trust and a proactive working culture. The CMC provided a forum for the development and discussion of alternative management models between all parties.

Supporting a strong Community Management Committee

The CMC has been supported by a programme of formal and practical capacity building activities covering areas ranging from operation and maintenance of water and sanitation facilities, through to hygiene promotion, and business and financial management skills. Importantly, it has also included training on the roles and responsibilities of all parties under the new management arrangements, including record keeping, managing and reporting performance, budgeting and tariff setting.

Whilst initial support has been provided to the CMC, its long-term effectiveness will depend on it being financially viable (the income from sales of water and use of public toilet facilities being higher than the costs). This point has been central in discussions, and capacity building support has included financial and business planning (including development of a business plan) for the CMC, to ensure that they are aware of and working within a costing system that will be financially viable.



The water supply system under construction



The water supply system under construction

The new Kotei water supply

The water supply system

The new water supply system consists of two mechanised boreholes with a total maximum yield of 65 l/minute pumping to an elevated 50 m³ tank. This supplies eight public standpipes serving a population of approximately 4,000 people. Design and drilling of boreholes was undertaken by GWCL and construction was undertaken by a private contractor selected through a competitive tender process. The cost of the capital works was approximately US\$ 103,000 (GHS 175,000) or US\$ 26 (GHS 44) per person. Boreholes were considered the most suitable supply option as the utility network does not reach Kotei, and is not likely to in the short to medium term, although the pipework has been designed to connect in future if required.

Development of management approaches - three contractual models

Three alternative contractual models for management of the new system, each with varying degrees of community and utility involvement, were considered (Box 4). Key to the process was to develop a context-specific solution that met the needs of each of the parties.

Box 4: Options for the water supply contract

Option 1: Direct GWCL management as part of the urban utility service. The water supply system is completely handed over to GWCL on completion. The system is integrated into GWCL and is fully managed by GWCL with little or no local community involvement.

Option 2: A delegated management model (community-utility partnership). An arrangement is made between GWCL and the CMC regarding the management of the water system, with the aim of combining the strengths of each of these organisations. Possibilities considered were (1) GWCL would own the assets and have a management contract with the CMC for both technical and commercial aspects of running the water supply system, including all operation and maintenance and revenue collection, and (2) GWCL would own the assets and retain responsibility for operations and maintenance whilst CMC would be responsible for the collection of tariffs and payment for bulk water to GWCL.

Option 3: Direct community management. The community would own the assets and take overall responsibility for the water system including water abstraction, distribution, billing and collection as well as operations, maintenance and asset management.

Reaching consensus - building mutual trust

A number of considerations informed the final selection of the institutional management model, which needed to (1) reflect the best possible arrangements to provide a sustainable approach to improving levels of service and coverage and (2) support GOG and PURC policy. The main aims of the management agreements are set out in Box 5.

Box 5 - Aims of the management agreement

The key aims of the management agreement are that it:

- supports GWCL to deliver services to the poor in a way which is innovative and has opportunities for replication;
- uses the relative strengths of community and GWCL and provides mutual benefits;
- uses economies of scale that GWCL can provide, resulting in lower costs of provision to consumers;
- is financially sustainable;
- is aligned with National and PURC policy of involving communities in the delivery of service to the urban poor, and
- builds on successes achieved and experience gained elsewhere.

“ Tariffs for a community-managed system would be around three times the official regulated standpipe tariff ”

WSUP facilitated a process of negotiation between the different parties to develop a preferred model from the three options. Initially, the CMC had been in favour of direct community management: they considered that they had sufficient capacity and structures in place to achieve this, either internally or by recruiting paid staff. This independent approach was in part fuelled by a mistrust of GWCL based on its past poor performance in supplying the peri-urban areas, and a feeling that the community would be able to manage the system more effectively on its own. There was an existing system in Kotei which had fallen into disrepair some years before: previous negotiations between the community and GWCL regarding its rehabilitation had come to nothing.

The initial view of GWCL was similarly polarised, with their original intention being that they would undertake overall management of the system. In their view this arrangement would benefit the community as it would allow the community access to water at the low urban utility tariff. GWCL were also influenced by evidence from previous projects where the total community approach had failed. They were adamant that if they were to be involved, they should be the asset owner.

Negotiations resulted in a softening of positions and an agreement on a delegated management model based around a community-utility partnership. Key to this repositioning was:

- A realisation by the community that they lacked the capacity and know-how to operate and maintain the system, which could be provided cost-effectively by GWCL.
- Financial modelling undertaken by WSUP which showed that the direct community management approach would mean higher tariffs as there would be no economies of scale, such as could be provided by GWCL (Box 6). It was estimated that tariffs for a community-managed system would need to be around US\$ 1.54/m³, which is more than three times the official regulated standpipe tariff of US\$ 0.47/m³.
- The offer by GWCL to drill the boreholes at its own expense. That GWCL would make a financial contribution to the project resulted in a considerable change of perception on the community's side.

Box 6: Better serving the poor through a revised tariff structure?

Scaling up pro-poor interventions country-wide requires financing and cost-reflective tariffs to extend distribution systems into unserved and under-served urban areas. GWCL, as the urban water monopoly provider, benefits from economies of scale to provide services at the cheapest cost. Yet the urban poor are clearly not getting the full benefit of GWCL's services. Given this, strategies for GWCL to use their existing business to leverage funding to extend their networks and achieve universal service obligation need to be examined in future. For example, the use of a revised tariff structure to generate dedicated funding to serve the urban poor could be explored by GWCL and PURC.

The preferred management model and contractual arrangements

Further negotiation, through a series of workshops with all parties, resulted in a mutually agreed division of roles and responsibilities, which formed the basis of two formal contracts that were subsequently developed: one between GWCL and the CMC, and the other between the CMC and the water vendors (Figure 1).

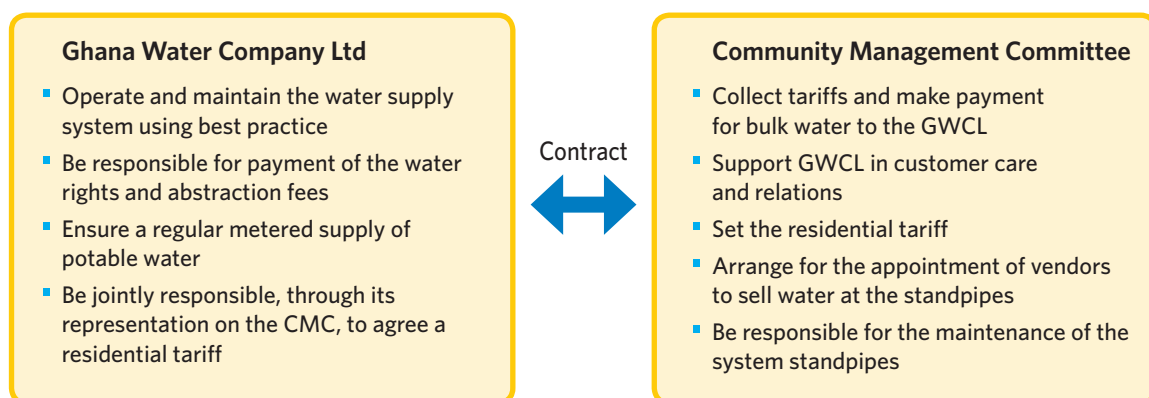
Figure 1. Contractual arrangements: delegated management for Kotei water supply



The contract between GWCL and CMC

The contract between the GWCL and CMC clearly defines the roles and responsibilities, as set out in Figure 2.

Figure 2. Roles and responsibilities: contract between CMC and GWCL

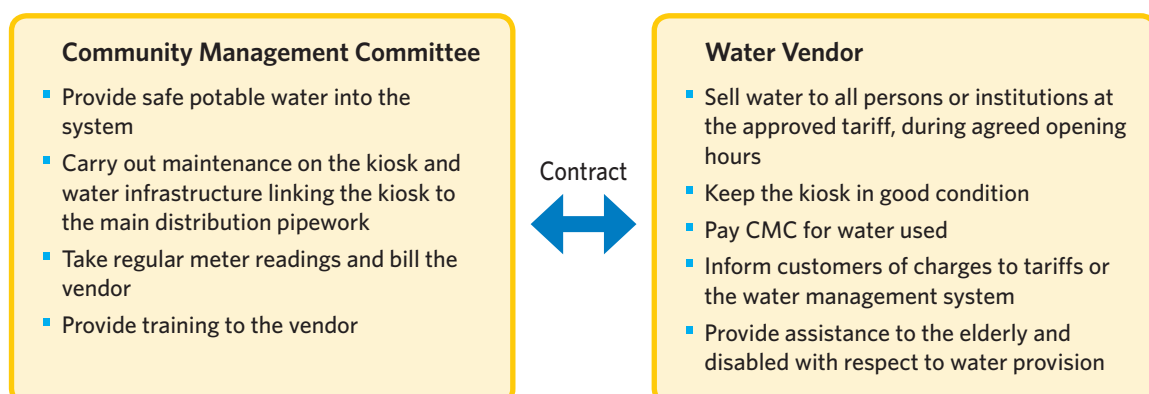


The contract also puts a number of obligations on the CMC regarding sound financial management, particularly in relation to maintaining proper records, opening and maintenance of bank accounts, and auditing.

The contract between CMC and water vendors

This contract clearly defines the role of the water vendors, and their relationship with the CMC (Figure 3). Here, the water vendor is responsible for the management of the standpipe or water kiosk, and has the right to sell water to customers for a price which is set by the CMC.

Figure 3. Roles and responsibilities: contract between CMC and Water Vendors.



Summary of roles and responsibilities

The roles and responsibilities for the management of the water supply system are summarised in Table 1.

Table 1. Roles and responsibilities: management of Kotei water supply system.

Function	Responsibility				
	GWCL	CMC	Regulator	Customers	Vendors
Asset ownership	✓				
Asset renewal	✓				
Provision of bulk water	✓				
Payment of bulk water tariff		✓			
Operation and maintenance (source and network)	✓				
Operation and maintenance (standpipes)		✓			✓
Customer revenue collection at standpipes					✓
Tariff setting (bulk water supply)			✓		
Tariff setting (residential)		✓			
Customer/community relations		✓			✓
Payment for water				✓	
Reporting illegal connections, vandalism etc.				✓	✓



Sanitation block under construction

The new public sanitation block

Operation and management of public sanitation facilities in Ghana's urban areas is extremely challenging. Given this, the project identified the development of a new management model for improving this situation as a priority, alongside the construction of facilities to improve access, level of service and hygiene standards for the residents of Kotei.

Public toilet facility

The new public toilet facility consists of a 20-seat latrine block designed to serve 800 people. The design of the block was developed with significant inputs from the community resulting in appropriate, locally developed designs to address particular needs of women, children, the elderly and people with disabilities. As with the water supply, construction of the toilet facility was carried out by a private contractor selected through a competitive tender process, at a cost of US\$ 45,000.

Background to sanitation in Kumasi

Management of public toilet blocks in Kumasi is delegated to Sub-Metropolitan District Councils, who accrue a significant percentage of their revenues from user charges. Provision remains a huge challenge for the city authorities, with an estimated 1.5 million residents without access to improved sanitation facilities in 2010.¹⁰ Public toilets are an important form of sanitation in Ghana (Box 7) and have become the best available solution for many people in low-income, densely populated and informal settlements.

¹⁰ Source: WSUP estimates



Sanitation block under construction

Box 7 – Public toilets in Kumasi

Although there is a huge range in the standard of public facilities in Kumasi, the majority do not reach acceptable standards of service and represent a public health risk. In Ghana and Kumasi public toilets are widely accepted across all sections of society. There is widespread reliance on them: the number of people in Kumasi who regularly use the 365 public toilets is estimated to be upwards of 40% of the population, or 400,000 people. They range from clean, well-constructed and maintained modern blocks, to dirty ‘hole in the floor’ facilities with no running water supply, while prices vary according to level of service from US\$ 0.06 to up to US\$ 0.18 per visit. Public toilets are also characterised by who uses them: some are used at the community level by regular customers, whilst others, for example in markets and at bus stations, have a more transient customer base. This distinction is important in the case of Kotei, as toilets in residential areas are likely to enable a greater role for community management.

¹¹ Guidelines for the Provision, Operation and Maintenance of Public Toilets – Ministry of Local Government and Rural Development.

¹² Although the term ‘franchise’ is used widely in Ghana, it covers diverse contract types ranging from what would more commonly be called BOT through to concession or management-type contracts.

¹³ In practice there seems to be no transfer back to the SMDs, KMA or other franchisor at the end of the period.

Existing management arrangements

Kumasi currently relies on three main models for the management of public toilet facilities, which have evolved from a complex pattern of policy changes and political manoeuvring:

Model 1: Facilities run by the Sub-Metropolitan Districts: The asset is owned by the KMA with Sub-Metropolitan Districts responsible for the operation and maintenance of the facility and for collection of user fees, a proportion of which should be returned to the KMA for redistribution across the city.

Model 2: Facilities run by Assembly Members: Almost all of the 60 elected Assembly members for Kumasi claim ownership over a public toilet, and the revenue it generates. Although technically prohibited,¹¹ this system has become enshrined practice since the 1990s.

Model 3: Facilities run by private franchisees under Build, Operate and Transfer (BOT) contracts:¹² Introduced in the mid-1990s, investments are funded by the private sector, which owns, operates and maintains the facility for the length of the franchise, over which period user fees allow the franchisees to recover the initial investments and make a profit.¹³ Franchisees pay the Sub-Metropolitan Districts a tax, which is reviewed annually based on the number of users.

Arguably, none of these approaches have worked well, particularly in low-income areas where the potential profits to be made are considerably lower than in prime sites in the city centre. Toilets have consistently been poorly managed – despite significant efforts and progress in franchising and involving communities in their management.

Development of a new approach

In Kotei, WSUP has been supporting development of an innovative approach for management of the new public toilet facility funded under the project; this approach gives the CMC a key role. Before agreeing a preferred management approach a number of options were developed and were used as a basis for discussion between the CMC, the KMA and the Oforikrom Sub-Metropolitan Council (Box 8). A process of negotiation facilitated by WSUP has resulted in a locally developed solution, where the KMA’s original intention of franchising the sanitation block through a public tender (as elsewhere in the city) was modified to include a central role for the CMC in operation and maintenance. Key to this process was the strength of the CMC and the conviction of the KMA that the CMC possessed the required capacity and skills to take on management of the facility.

“The KMA is responsible for regulation of user fees”

The preferred solution: developing a hybrid community-managed model

The process of negotiation resulted in a contractual arrangement being drawn up between the Oforikrom Sub-Metro Council and the CMC, which contracts out the operation and management of the facility to the CMC for a time-limited period (initially 2 years), in return for a share (20%) of the profits generated (Figure 4). The contract clearly sets out the scope of services and obligations of the CMC, including maintenance and cleaning (including de-sludging), collection of user fees and employment of necessary personnel. The KMA retains an oversight function, is responsible for regulation and approval of user fees, and is also the legal owner of the facility on behalf of the community. The KMA will also have the power to annul the contract or take over the facility if the CMC is unable to meet its obligations.

Figure 4. Contractual arrangements for management of communal toilet block.



Financial sustainability of the water and sanitation models

The financial sustainability of the arrangements are key to ensuring services are sustainable, particularly that the CMC can be self-funding and that water vendors can make sufficient income from water sales. Figures 5a and 5b show a summary of financial flows for each of the parties involved in the delegated management arrangements.

Figure 5a. Summary financial flows: water supply.

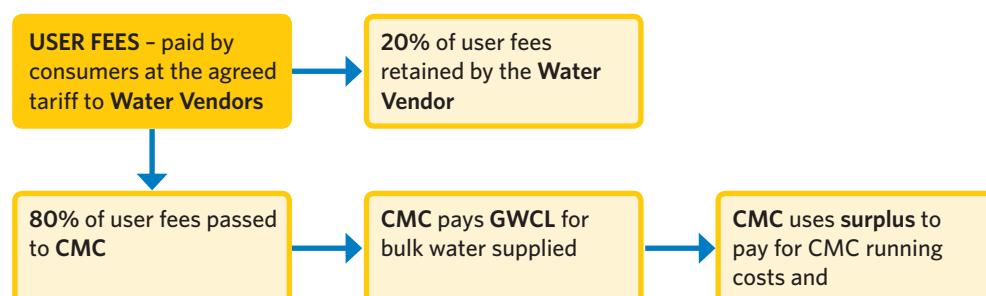
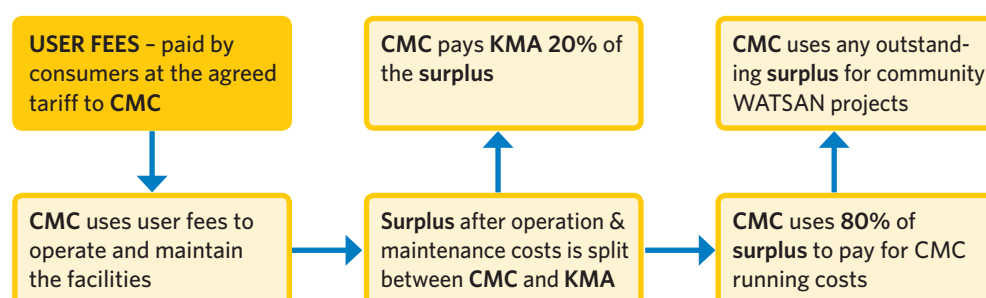


Figure 5b. Summary financial flows: sanitation.



¹⁴ But as noted above, profitability of facilities varies considerably from site to site, depending on location and willingness and ability of residents to pay.

Financial projections

As part of the process of development of this model, WSUP has assisted the KMA and CMC in undertaking financial forecasts of the proposed facility, to ensure that it is a viable option. This included estimating the customer base and the corresponding income and expenditure for three different scenarios: high, medium and low usage of the facility (Table 2). The financial forecast confirmed evidence from elsewhere in Kumasi, which indicates that ownership of a public toilet facility (even one with relatively low usage) represents a good business opportunity providing a stable and secure income.¹⁴

Table 2. Financial projections for public toilet facility in Kotei.

	Scenario 1	Scenario 2	Scenario 3
Number of users	1000	800	500
Revenue			
User fee (GHS)	0.1	0.1	0.1
No. of visits/person/day	2	2	2
Daily income (GHS)	200	160	100
Monthly income (GHS)	6000	4800	3000
Costs			
Staff costs	870	870	870
Water	1008	806	504
Electricity	50	50	50
Detergents	300	300	300
Tools	50	50	50
De-sludging	540	540	540
Anal cleansing materials	225	225	225
Monthly costs (GHS)	3043	2841	2539
Monthly profit (GHS)	2957	1959	461
Monthly profit (US\$)	1745	1239	292
Monthly profit sharing			
Franchisee - CMC (80%)	2366	1567	369
Oforikrom sub metro (20%)	591	392	92
Exchange rate US\$ 1=1.69 cedi			

An idea that is currently being explored by the CMC is to use profits from the toilet facility to create a fund to promote household latrines provision and hygiene awareness and promotion within Kotei, and possibly to establish a micro-finance scheme that could provide easy access to credit for construction of household latrines.

Other related income-generating options that are being considered by the CMC are incorporation of small business activities (e.g. water vending, advertising, shoe shine and sale of small household items) into the operation of the new public toilet, to increase the revenue stream. This has not been possible in the past because of the poor condition of the facilities.

“The strengths of the CMC, GWCL and KMA are utilised to best effect resulting in lower prices”

Key project benefits

The partnership for management of the water and sanitation facilities, although encouraging, is in its early stages and time is needed before a full assessment of the practical impacts of the models can be made. However the anticipated key benefits are that:

- Day-to-day management of the water and sanitation facilities is the responsibility of the CMC, leading to a more responsive service.
- The relative strengths of the CMC, GWCL and KMA are utilised to best effect, particularly in relation to the economies of scale that GWCL can bring, resulting in lower water prices than if a stand-alone community-based approach had been developed.
- The capacity of the community has been and will continue to be developed through the greater level of responsibility given to the CMC. The arrangements will allow for local income-generating opportunities and employment.
- The CMC was constituted as a legal entity under the Oforikrom Sub-Metropolitan Council, meaning that it is closely tied to the formal local government structure, and includes members from the KMA, the Oforikrom Sub-Metropolitan Council and GWCL as a way of improving communication and integrating the new arrangements into the existing institutional system, rather than creating new, parallel structures.

Additional project benefits

In the short term, the project has generated additional benefits through a process of dialogue and a strengthened working partnerships between WSUP and GWCL, and between KMA and GWCL, which would not have otherwise been possible, including:

- Development of financial models to allow GWCL to simulate different delivery mechanisms for the poor (Box 9).
- Development of a financial model to allow KMA to model different levels of private sector investment for providing public latrine facilities in future.
- Mapping of all public latrines in Kumasi: the mapping exercise has identified essential information for each block such as the management and ownership arrangements and the kind and quality of service provided, allowing them to be ranked for investment priority.

The linkages and working relationships formed through the project therefore also provided a sound basis for on-going collaboration to address additional over-arching issues regarding water and sanitation in Kumasi's peri-urban areas.

Box 9: Water and sanitation financial modelling

WSUP has supported GWCL in developing a financial model which assesses alternative delivery options to ensure that low-income consumers obtain the benefit of utility-derived economies of scale without imposing an unmanageable burden in revenue collection. The 'Low-Income Service Selector Tool' assesses the relative merits of different water delivery mechanisms such as delegated management of branch lines, sub-contracting out defined sections of the network, and stand-alone decentralised systems; this tool can be used to investigate more thoroughly the business case for extending water services to low-income areas, and was used as a basis of discussion between GWCL and the regulator.

“Active involvement of communities and utilities in a partnership is needed to provide an effective solution”

Looking to the future – replication and scaling up

The partnership between GWCL, KMA and the CMC in Kotei is in its early stages but demonstrates how harnessing their relative strengths can result in the development of a promising model for delivery of water and sanitation services in Ghana's peri-urban areas.

Barriers to scaling-up

If the approach is to be widely implemented then the policy and institutional environment needs to improve. The experience in Kotei indicates that key areas which need to be addressed are:

- (1) **Policy and practical guidance needs to be developed for community-based partnerships.** The Ministry of Water Resources, Works and Housing needs to take the lead to guide future projects supplying low-income urban areas of Ghana, based on the Kotei model and other projects elsewhere.
- (2) **The business case for expansion of services in the peri-urban areas needs to be clearly made.** GUWL's forward planning needs to include the peri-urban areas as an integral part. PURC should require GWCL and GUWL to provide a plan with the cost-benefit implications of ensuring universal service including services to low-income communities.
- (3) **Institutionalisation of delegated management models within GUWL.** GUWL is in a good position to secure funding for water improvements in peri-urban areas. However, new approaches need to be institutionalised within GUWL, with full support of senior managers.
- (4) **Capacity development within GUWL.** To support community engagement GUWL should establish a specific team with staff of appropriate skills to develop and promote the importance of pro-poor service expansion and universal service within the company.
- (5) **A review of current tariff structures is required.** A review of urban water tariff policies needs to be undertaken with a view to support better service provision to the urban poor, possibly through transparent cross-subsidies or using the tariff structure to generate a dedicated funding stream to improve coverage in low-income areas. Furthermore, bulk water tariffs are currently unclear and not regulated. Clear guidance from PURC needs to be given on supplies of bulk water for community management (which are a key factor in determining the financial sustainability of such systems), and tariffs that can be charged by community-based organisations and groups.

A promising model for the future

The delegated management model developed by WSUP to improve access to service delivery in Kotei, although still in its early stages, has brought to the urban context elements of community management which have been successful in rural areas for many years throughout Ghana. A key element of this success is recognising that active involvement of communities and utilities in a strong partnership is needed to provide an effective local context-specific solution. WSUP, along with other development partners working in the water and sanitation sector, is well positioned to support the Government of Ghana, GWCL, GUWL and communities in further monitoring, evaluation and development of the approach. This is both through continued involvement with the project, and more widely in terms of the development of approaches appropriate for expanding services to the urban poor.

WSUP believes that models of this type are useful to municipal governments and service providers worldwide who are interested in achieving pro-poor water and sanitation service delivery. WSUP intends to continue to develop, monitor and evaluate them over the coming years, ensuring all processes and outcomes are documented properly, so that a clear case for ongoing support and implementation can be made. We invite requests for further information.

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