Case Studies

January 2010

Private sector participation in small towns' water supply:
The case of Tumu - Ghana

Bernard A. A. Akanbang, Consultant

Tripartite Partnership (TPP) Project

LIST OF FIGURES

LIST OF PICTURES

LIST OF ACRONYMS

CIDA	-	Canadian International Development Agency
CSOs	-	Civil Society Oganisations
CWSA	-	Community Water and Sanitation Agency
CWSP	-	Community Water and Sanitation Programme
DA	-	District Assembly
DANIDA	-	Danish International Development Agency
DCD	-	District Coordinating Director
DCE	-	District Chief Executive
DISCAP	-	District Capacity Building Project
DMT	-	District Management Team
DWST	-	District Water and Sanitation Team
GAP	-	Ghana Water and Sewerage Corporation Assistance Project
GWCL	-	Ghana Water Company Limited
GWSC	-	Ghana Water and Sewerage Corporation
KVIP	-	Kumasi Improved Ventilated Pit Latrine
ISODEC	-	Integrated Social Development Center
MAGA	-	Material Adverse Government Action
MWRWH	-	Ministry of Water Resources Works and Housing
NGO	-	Non Governmental Organisation
ODA	-	Overseas Development Assistance
O&M	-	Operation and Maintenance
PPIAF	-	Public Private Infrastructure Advisory Facility
PPP	-	Public Private Partnership
PURC	-	Public Utilities Regulatory Commission
RCC	-	Regional Coordinating Council
RWST	-	Regional Water and Sanitation Team, Regional Office of CWSA
SOEs	-	State Owned Enterprises
TPP	-	Tripartite Partnership Project
TREND	-	Training Research and Networking for Development
VRA	-	Volta River Authority
WB	-	Water Board
WASH	-	Water, Sanitation and Hygiene
WHO	-	World Health Organisation
WRC	-	Water Resources Commission

1 INTRODUCTION AND METHODOLOGY

1.1 Introduction

The Tripartite Partnership Project is a joint collaborative project between the Netherlands Water Partners, TREND lead implementer and some national actors and stakeholders in the water and sanitation sector in Ghana which started in January 2008. The African Water Facility (AWF) of the African Development Bank (AfDB) would provide support with infrastructure development of pilot projects that would be undertaken under the project. The project seeks to identify and promote innovative management models for the delivery of water, sanitation and hygiene (WASH) services to the urban poor in Ghana. It had been designed as a response to the current lack of capacity for dealing with the challenges of pro-poor urban water and sanitation services.

The overall goal of the project is ensuring a "Strengthened sector capacity for planning and delivery of pro-poor water and sanitation services." The specific objectives of the project are:

- Identify a range of innovative management models for providing water services to the urban poor
- Test innovative models through selected demonstration projects
- Utilize the learning outcomes of the project to support the creation of the enabling environment (policy, regulation legislative frameworks) for these models to be scaled up.

The project will review various management models both locally and globally and identify the most innovative ways of ensuring sustained delivery of WASH services to the urban poor. The best practices gleaned from various studies would be applied in the design of various tools and guidelines for replication within the Ghanaian WASH sector. Knowledge management, advocacy and promotion of networking will be key strategies for ensuring improved services delivery at the decentralised level and strengthened policy at the sectoral level.

As part of project activities to achieve the above objectives, a scoping study and a mapping exercise were carried out between April and November, 2008. At a Learning Alliance meeting to present the outcomes of the study and to identify interesting and innovative cases for detailed study, a number of case areas were identified and a framework for conducting the case studies agreed upon.

This current activity is a follow up to the First Learning Alliance Meeting/dissemination workshop. The idea is to document between 6-10 case studies covering a wide range of issues across the four main ecological zones of Ghana. The case studies will bring out the interesting innovations currently available in the country by which the poor are served with water, sanitation and hygiene education– analysing them from the perspective of the impact of the innovations and factors responsible for the impacts.

This report contains the processes and initial outcomes, policy implications, and lessons of a management contract within a public private partnership arrangement for water delivery in Tumu, the district capital of the Sissala East District Assembly of the Upper West Region, one of the three poorest regions of Ghana.

1.2 Objectives and Scope of this Assignment

Bearing in mind the central theme of the TPP (innovative management models for services delivery to the urban poor), this assignment seeks to document the case of a management contract involving the Tumu Water and Sanitation Development Board (WSDB), TBL Resources Limited and Sissala East District Assembly in Water Delivery in Tumu as part of cases conducted on promising management models in the water and sanitation sector in Ghana.

The case study highlights on the following issues:

- A comprehensive picture of the WASH situation within the community
- An analysis of the management model and the process of introducing the model
- An assessment of the management model
- An assessment of 'next steps' in terms of knowledge and application at scale.

1.3 Methodology

The execution of the assignment involved the conduct of a desk study on public private partnerships initiatives globally and Ghana in particular and consultations with relevant stakeholders at the regional, district and community levels. In particular the CWSA Regional office of the Upper West Region, the District Water and Sanitation Team (DWST), Systems manager and the Tumu WSDB were interviewed using interview guides.

2 OVERVIEW OF THE CASE STUDY AREA

2.1 Location and Geophysical Characteristics

The innovation is located in the Sissala East District which is located in the North-Eastern part of the Upper West region of Ghana. It falls between Longitudes 1.30° W and Latitudes 10.00° N and 11.00° N. The district has a total land size of 4,744 sq km - representing 26% of the total landmass of the region. It shares boundary on the North with Burikina Faso, on the East with Kassena Nankana and Builsa Districts, to the South East with West Mamprusi District, South West with Wa East and Nadowli Districts and to the West by Sissala West District (Sissala East District Assembly, 2006).

The District is mainly covered by guinea savannah vegetation with few savannah trees such as the shea, baobab and dawadawa trees. A section of the district falls within the Mole Game Reserve. The topography of the District is gently undulating and characterized by altitudes of between 330m and 365m in the Northern part descending to 220m and 290m in the Valley of the Sissili River. The District is mainly drained by the Sissili River and its tributaries flowing in the South-Eastern direction to join the White Volta (Sissala East District Assembly, 2006).

2.2 Demographic and Socio-Economic Characteristics

The District population, as at 2006, was estimated at 51,182 with an annual growth rate of 1.7%. The population density was 12 persons per sq km which is lower than the regional and national averages of 24 and 77 respectively. Patches of high density are found in the relatively bigger settlements such as Tumu, Wellembelle, Sakai, Nabugubelle, Nabulo and Bujan. The male/female ratio of the population is 96 male to 100 females. Tumu is the only urban settlement in the district with an estimated population of 12,000 (2009). According to the 2000 Population and Housing census, population of Tumu was 8,858 (GSS, 2002) and this shows a population growth of about 35% over the nine-year period.

The 2000 population and housing census showed that 76% of the population of the Sissala East District is engaged in agriculture production and involved in the cultivation of cereals, tubers, and vegetables for home consumption and some surplus for the market.

Cash crops such as shea and dawadawa also contribute greatly to income generation. Livestock rearing also plays a key role in the agriculture development in the district since many families produce them for both home consumption and the market. Illiteracy level in the district is generally high estimated at 92%. A large percentage (84%) of the population lives below the poverty line, earning far less than GH₵90 (about US$ 64) per month. Only about 11% of the households mainly from Tumu have access to electricity from the national grid. Telephone services including mobile phone services are more concentrated in Tumu Township and its surrounding communities. The district also enjoys services of one hospital, one Post Office, one police station, and a magistrate court, all situated in Tumu (Sissala East District Assembly, 2006).

2.3 Spatial Planning Issues

The settlement pattern is highly dispersed not less than 10km apart. Majority of these settlements are rural by nature and inhabit more than 85 % of the districts population. The dispersed nature of settlements implies that these communities require greater investments per capita in hardware and software services.

The Tumu Township lacks proper physical planning and exhibits non compliance with building regulations. Poor housing quality, unplanned building construction and poor waste disposal system characterize the built environment.

2.4 Water and Sanitation Infrastructure Situation

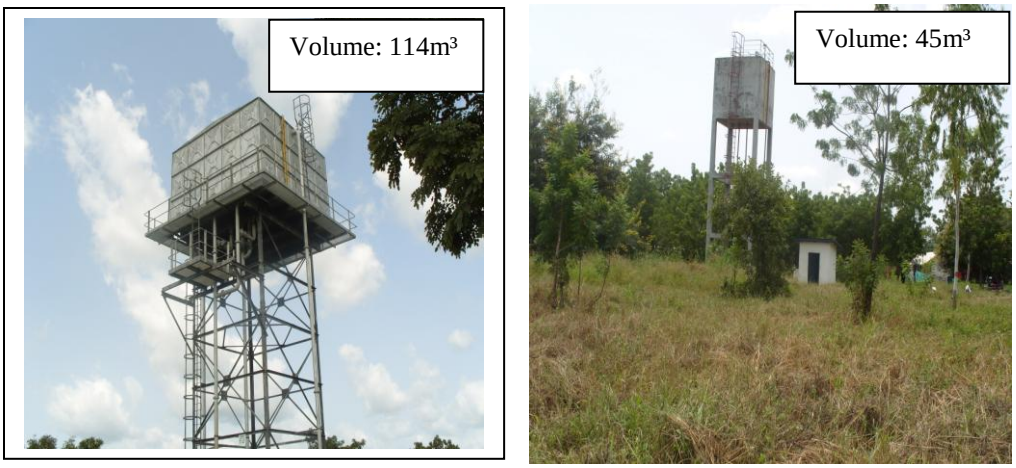
There are four (4) main sources of water in the Sissala East District. These are the small town water supply system serving Tumu, and its environs, boreholes, hand-dug wells fitted with pumps and dams. Forty (40) communities out of the total of 65 in the Sissala East District are provided with at least one of the water sources afore-mentioned. This represents 62% of the communities and covers over 70% of the population (Sissala East District Assembly, 2006).

The majority of households share toilet facilities with one or more households. The toilet facilities provided in the district are water closet, KVIP and pit latrines. While water closets are used mainly in government bungalows mainly in Tumu, KVIPs and pit latrines are provided at both community and institutional levels such as schools and health centres.

Tumu has the only one functioning small town pipe system in the district. There are five boreholes from which water is pumped into three overhead tanks for distribution to inhabitants of the town. Picture 1 below is one of the mechanised boreholes serving the towns population

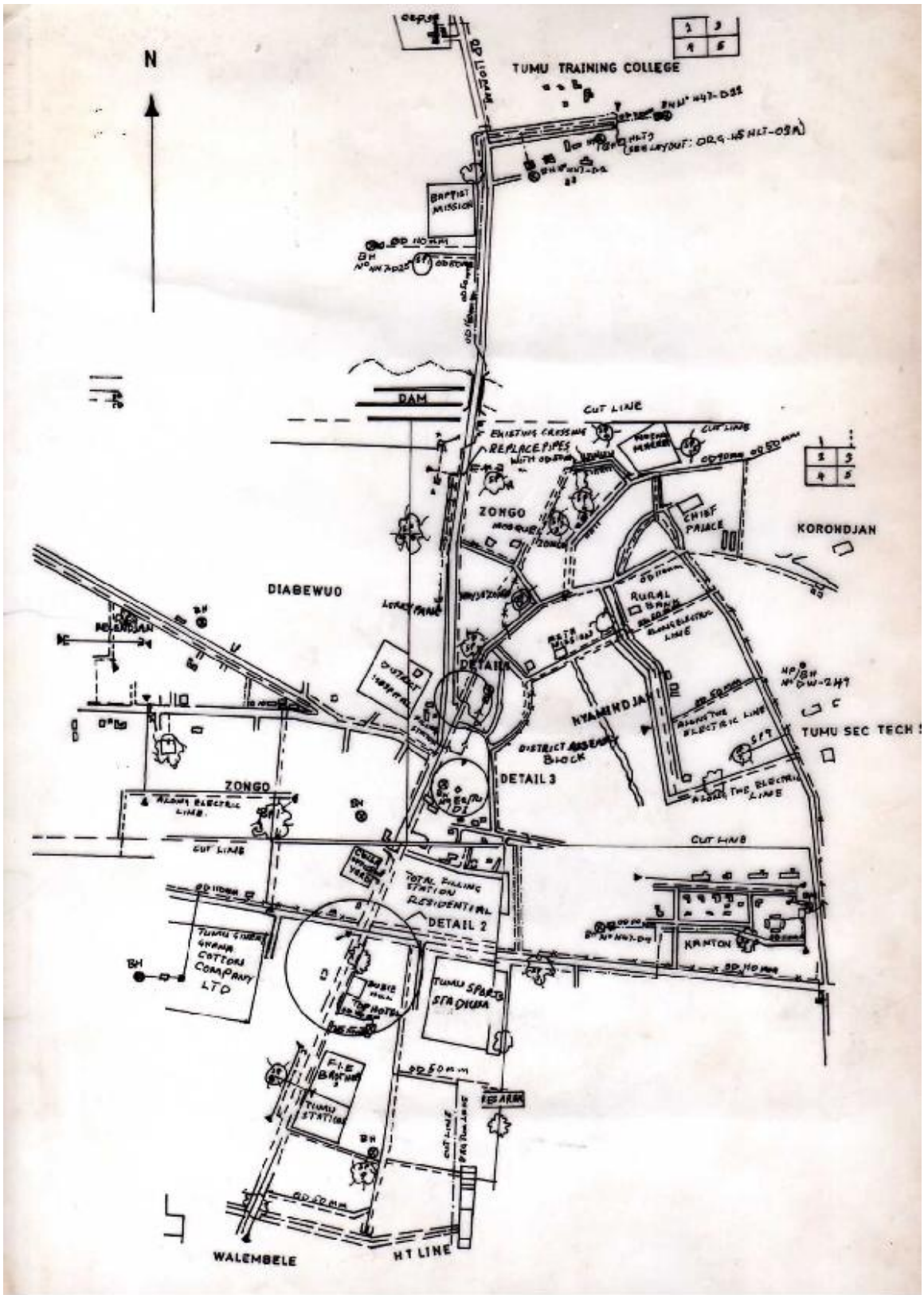
Picture 1: One of the Five Mechanized Boreholes of the Tumu Water System

Three elevated tanks consisting of 114 m³, 45 m³ and 45 m³ capacities serve the town. Two are depicted in Picture 2 below.



Picture 2: Elevated Tanks of the Tumu Water Supply System

The 114 m³ tank is currently not working due to leakages. The town is divided into three electoral areas which have formed the basis for the formation of Watsan Committees from which the WSDB is formed. These electoral areas are: Nanyuah Zongo, Kusunjan and Nyamejan. In all, the system has 667 customers of which only 241 of them are metered due to inadequate meters available. The map below shows the Tumu Water System and its network.


N
TUMU TRAINING COLLEGE
BAPTIST MISSION
DAM
CUT LINE
EXISTING CROSSING
REPLACE PIPES
ZONGO
CHIEF PALACE
KORONDJAN
DIABEWUO
RURAL BANK
DETAIL
KYAMERDJAN
TUMU SEC TECH
DISTRICT ASSEMBLY BLOCK
DETAIL 3
ZONGO
CUT LINE
TOTAL FILLING STATION
RESIDENTIAL
DETAIL 2
KANTON
TUMU SPARES STADIUM
FIRE BARRACKS
TUMU STATION
WALEMBELE
HT LINE

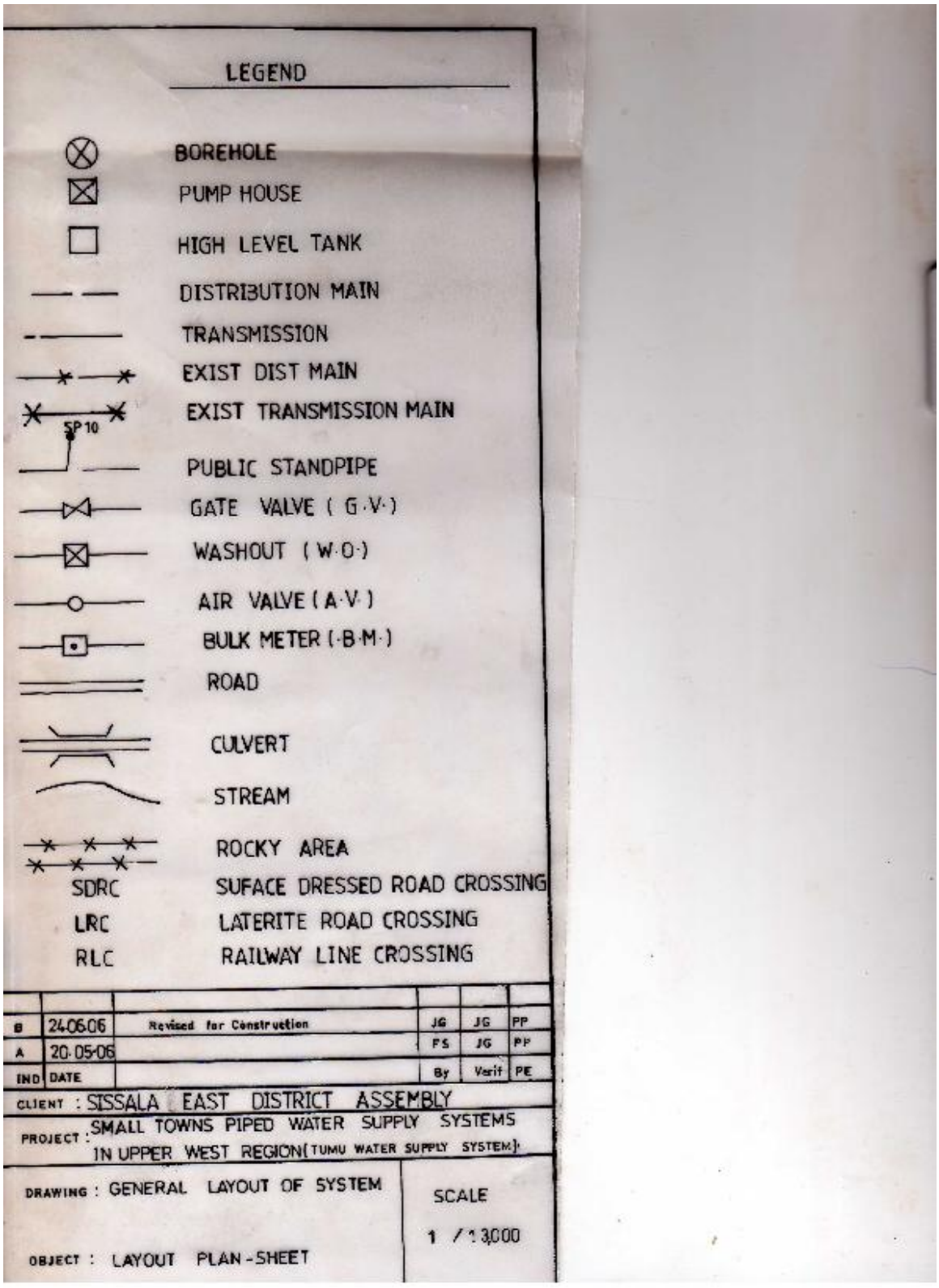


Figure 1: Map of Tumu Water System and its Network

3 DESCRIPTION OF THE INITIAL WASH CHALLENGE

The Tumu Water System was constructed initially around the 1950s by a Canadian International Development Agency (CIDA) Water Project Support along with water systems such as Lawra, Jirapa and Nandom in the Upper West Region. The system then consisted of 3 boreholes with an overhead tank. Like the other three water systems, the Tumu water system was under the management of the then Ghana Water and Sewerage Corporation (GWSC), the national utility. The management model then was a centralized system with responsibility for operation and maintenance, rehabilitation and expansion of the system placed on GWSC. Over time, the Tumu system had its share of the general operational challenges of the utility. This created delayed response to system breakdowns and an inadequate maintenance culture resulting in systems defects such as leakages of valves, pipes and frequent breakdowns of the system.

In response to these problems, the Ghana Water and Sewerage Assistance Project (GAP 1), a CIDA initiated project, was launched in the early 1990s to rehabilitate the system. The system was rehabilitated, transferred from GWSC to a Water and Sanitation Development Board (a community-based organisation) consisting of mainly water user groups. As part of the process to transfer the system to the community, a software consultant was hired by GAP to prepare the community for this new role they were going to assume. The software consultant among others undertook the following: community sensitization, identification of water user groups, formation of the WSDB and facilitation of the mobilisation of the 5% community contribution towards capital cost of the project; preparation of baseline socio economic and feasibility studies; support to communities to open bank accounts; training of WSDB and WATSANs; and preparation of Facility Management Plans (FMPs).

The WSDB members were eighteen in all and were made up of representatives of water user groups from the three electoral areas of the town, the two second cycle institutions taking their water supply from the water system and a representative of market women. Female representation constituted around 20% of the WSDB. Members of the WSDB were either elected or nominated by the groups they represent onto the WSDB. Under the WSDB is the executive committee - consisting of a Board Chairman, a Vice Board Chairman, Board Secretary, and Treasurer who are elected among the representatives that make up the WSDB. WSDB members are expected to provide voluntary services and received only sitting allowances since their work is not a full time job. Initially, GWSC was to continue to support the system with major technical challenges at a fee to be paid by the WSDB. With time however, the WSDB could source support from any service provider with the requisite capacity.

There were still technical difficulties with the system. Design defects resulted in water flowing from a 4 inch pipe into a 6 inch pipe leading to unevenness in the distribution of water to the various sections of the town. There were also managerial challenges with the system. Oversubscription of the system (more household connection customers than public standposts against design requirements which proposed 80% to be served from

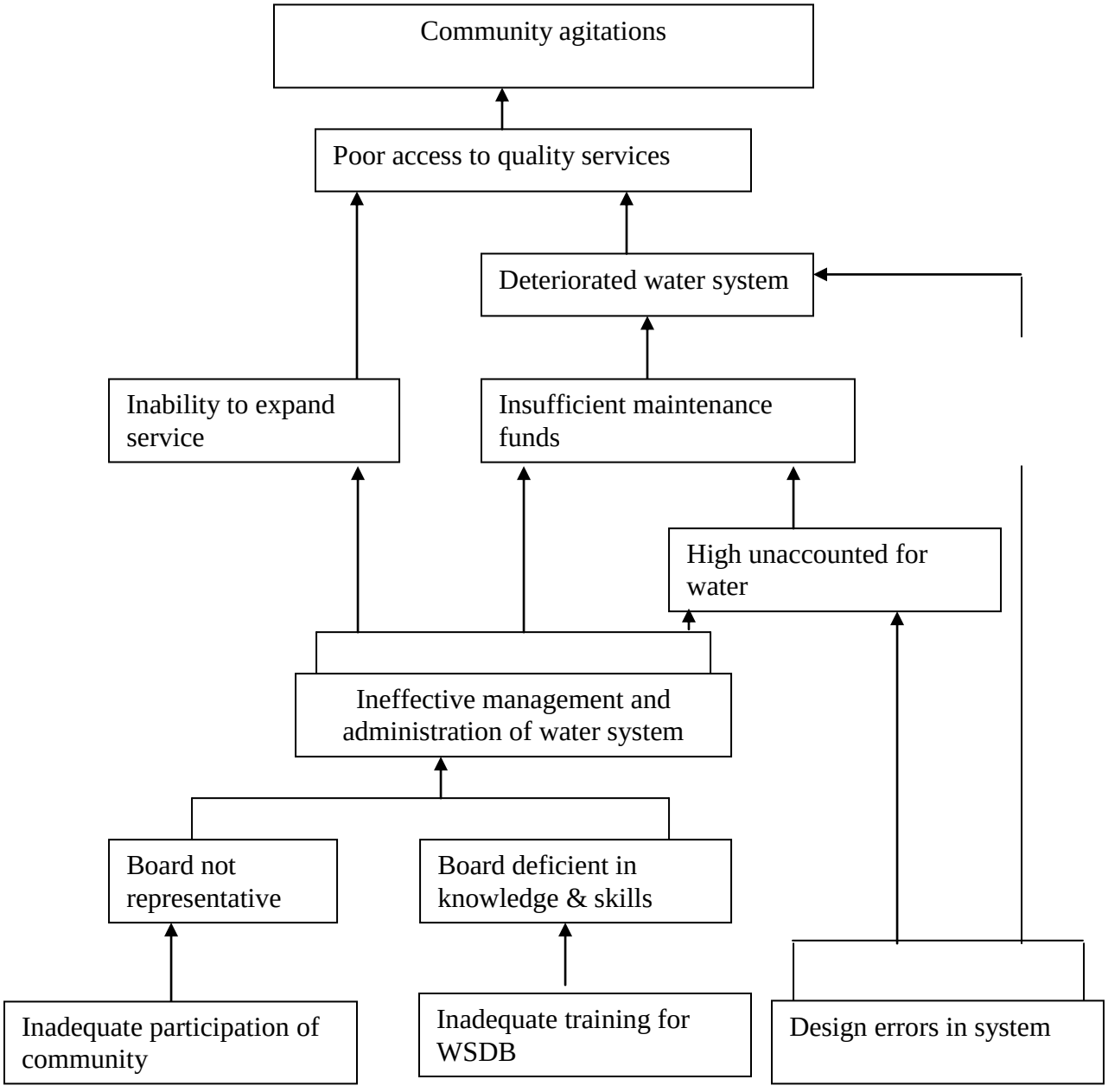
public standposts while 20% were to be served from private connections (CWSA, 2004)[1], low pressure, large unmetered customers, accumulation of electricity bills (bills were in arrears of US$5,700 as at 2006) and lack of revenue to pay salaries of workers (salary areas average six months as at 2006) were attributes of the system. These problems associated with the absence of an effective system for process and physical monitoring meant that vendors of public standposts and private connections sold and consumed water that was not billed. Illegal connections and leakages were also rampant. This has meant high record of unaccounted for water. Thus while some vendors made abnormal profits; the system could not recover costs. These resulted in ineffective and inefficient delivery of services by the WSDB and consequent discontent and agitations from community members.

Picture 3: An Excavated worn Out Pipeline during System Maintenance

The Water system by the close of 2006 could best be described as being in crisis. The community had grown in physical size and in population (over 10,000 people) requiring extensions to be made while required capital for extension and rehabilitation of the system was not forth coming. Capital requirement for operation and maintenance was also lacking. According to CWSA standards (CWSA, 2004), the system was becoming a complex system (systems that serve populations more than 15,000). Figure 1 below diagrammatically illustrates the initial WASH situation of the water system

[1] CWSA (2004c) Design Guidelines for Small Towns Water Systems

Figure 2: Flow Chart of Initial WASH Situation



4 THE CURRENT MANAGEMENT MODEL

4.1 The Development of the Management Model

The current management model is the outcome of efforts aimed at addressing the problems associated with the water system. The genesis of the model began with the process of refurbishing the water system. Preparatory work for the refurbishment of the system started in 2000 under the Community Water and Sanitation Programme (CWSP) 2/1. As part of the preparatory work, a consultant was hired to conduct a feasibility study on the water system. Draft designs of the system were produced and by 2004, a contract was nearly signed for rehabilitation of the system. CWSP 2/2 which focused mainly on small town's water supply reviewed the draft designs. These designs were finalized in 2006 and rehabilitation completed in late 2008.

Following from the initiation of rehabilitation, the Regional Water and Sanitation Team (RWST), that is CWSA at the regional level, commenced the process to involve private sector in the management of the water system. It was apparent to the RWST from the monitoring visits that the problems of the system were largely the result of managerial deficiencies. Taking motivation and anchorage from CWSA policy on management options for small towns water systems (preference for private sector management for systems serving more than 15,000 people)[2], coupled with the managerial challenges associated with the system, the RWST initiated the process of involving private sector as a way to improving upon the effectiveness and efficiency in the operation and maintenance of the water system.

The process of introducing the management model started with holding of informal discussions by RWST with the WSDB, the District Assembly (DA) and the Regional Coordinating Council (RCC). Armed with support by policy level stakeholders to the process, the RWST initiated community sensitisation meetings with community members to orient them and to solicit their views on the process. Following broad community acceptance of the model, the RWST initiated all the requisite steps towards the procurement of the services of a private operator. In line with public procurement processes, an advert was placed in the print media on 14 March 2007 for firms to express interest in partnering with the WSDB and the DA in the management of the water system. Eleven firms responded to the advert and six were shortlisted. Request for proposals were sent out to the shortlisted firms on 17 September, 2007. Two of the six firms submitted proposals. Following opening of bids and evaluation of the proposals, TBL Resources Limited was selected and a contract signed on 29th January, 2008 while actual operations started in April, 2008.

[2] CWSA (2004b) Operation and Maintenance Guidelines for Small Towns Water Systems

4.2 Description of the Management Model

The model consists of partnership involving TBL Resources Limited (a private operator), WSDB (a community based management organisation) and the Sissala East District Assembly (SEDA). The partnership is a management contract in which the private operator has responsibilities for operation and maintenance of the water system while the WSDB has governance roles and environmental sanitation and hygiene promotion while the SEDA maintains the role as the legal owner of the Water system and for expansion and major rehabilitations. Under the partnership, revenue generated is to be shared among the partners in the ratio of 75:15:10 for the operator, the SEDA and the WSDB respectively.

The essence of the model is strengthening of capacity of the management of the system to bring improved service delivery to the people. Besides, the model is seen as a long term measure for building the capacity of the community for the sustainable management of the system. The idea is that, the private operator will use mostly local staff for the running of the system as an indirect way of building capacity of local staff to, in the long term, takeover the running of the system. To this end, the operator as part of contract negotiation was impressed upon to retain the operating staff hired by the WSDB which he did.

Performance indicators were established for the operator. Specifically, the private operator was tasked to reduce water loss to the Community Water and Sanitation Agency (CWSA) standard of 10% while capacity for operation and maintenance, revenue generation, office equipment and logistics were also to be improved by the operator.

4.3 Introduction of the Management Model in the Case Study Area

The Regional Water and Sanitation Team (RWST), the facilitator of the change management process, that is, from WSDB with hired staff management to private operator management recognised the sensitive nature of the management model intended to be introduced. Thus, the approach to implementation involved the use of participatory processes involving consultations with relevant stakeholders, the use of dialogue, and strategically relaying relevant information to stakeholders to prepare the mindset of especially the WSDB and the general community to gradually accept and embrace the management model. The process was undertaken and driven by a genuine motivation to finding lasting solutions to problems affecting the water system.

4.3.1 Activities Involved in Introducing the Model:

National Level Study Tour to Projects Implementing Public-Private Partnerships:
The RWST organised a national level study tour to water systems that were implementing public-private partnership management arrangement – Bekwai and Atebubu Water systems. This tour was intended to give stakeholders insight into the management model for them to make a decision whether to adopt it or not. The tour had representation from all the major players in the management of the water system – the

WSDB made up of the Vice Chairman, Secretary, and the DWST – technical officer. It afforded the team the opportunity to find out what works and what does not work and why things work or do not work. The tour was successful in generating interest among the players in the management model and also knowledge on what makes the management model work and what does not make it work. To this extent, it helped them to appreciate the perspective of each of the partners in the successful implementation of the model.

Consultations with Regional Coordinating Council (RCC) to Get them approve the Project

Beyond the dropping of hints at the WSDB and community level of the need for a change management as a conscious effort at preparing their mindset for the introduction of the innovation by RWST staff, there was recognition of the critical role policy level stakeholders play in facilitating change. To this end, RWST leader of the change process sought consultation and audience with the Regional Minister and key staff of the Regional Coordinating Council (RCC) to brief them of the initiative. Through this process, they got the blessing of the regional minister who was generally, of the view that, if this innovation will solve the existing water problems, he was in agreement with the proposal.

Consultations with the District Management Team (DMT)

Armed with the blessing of the RCC, audience was sought with the District Management Team (DMT) consisting of the District Chief Executive, the District Coordinating Director, the District Planning Officer, Budget Officer, and Finance Officer where the innovation was extensively discussed. The DMT welcomed the initiative. They saw it as way of solving one of their main problems in the district.

Organisation of fora at the Community Level

Following release of information in parts to the WSDB, some WSDB members were apprehensive of the innovation and started causing agitations. This was compounded by the stand of ISODEC, a local NGO against the involvement of private sector in the management of water. After securing the political commitment at the regional and district levels, several fora were organised to discuss the innovation with the opinion leaders of the community. Community sensitisation programmes and durbars were organised to prepare the community to participate actively – attending meetings and making their voices heard, reporting pipe bursts and illegal connections. The durbars were used to introduce the operator to the inhabitants where their cooperation for the smooth operations of the system was sought.

4.4 Institutional Arrangements under the Management Model

The new management model involved the transfer of the operation and maintenance functions of the WSDB to a local private operator while the WSDB retained only governance functions of the water supply. The innovation was modelled along the lines of the Bekwai Water system, one of the successfully Piloted systems under the ***Public Private Infrastructure Advisory Facility (PPIAF) of the World Bank/European Union and GOG Small Towns Water Supply Project.***

The management arrangement is a five year contract but renewable after the first five years for a two year duration subsequently. The operator is generally responsible for the commercial aspects of the system involving revenue generation and daily operations of the system. Revenue once generated is to be shared in a ratio of 75:15:10 for the Private Operator, the District Assembly and the WSDB respectively. The 75% share of revenue for the operator is to be used to cover administrative cost including salaries, electricity, minor maintenance or extensions. Minor work is defined to include extensions up to 250m, repairs of leakages on service and transmission lines. The WSDB on the other hand is responsible for the governance of the water system, for environmental sanitation and for monitoring and supervising the operator to ensure that work is done according to the contract. The 10% share of the revenue allocated to the WSDB is to be used for organising meetings, undertaking community sensitisation programmes including environmental sanitation education and awareness creation. The District Assembly (DA) is the legal owner of the water system including all the hardware and is responsible for major rehabilitations and expansions of the water system. The DA's 15% share of revenue from the operations of the system is to be used to support major rehabilitations and for major expansions. Picture 4 is the office block used by WSDB and the Operator.

Picture 4: WSDB/Private Operator (TBL Resources Limited) Office Building

4.5 Tariff Setting and Cost Recovery

As in the contract, tariff proposals by the operator have to be presented to the WSDB for onward presentation to the assembly for approval. Since the intervention, no new tariffs have been proposed. The old tariff of GH₵ 1.1/m³ for household connections and GH₵0.78/m³ for standpost (vendors) is charged. The components of the tariff include the following according to CWSA guidelines: all water production expenses, all distribution expenses, routine maintenance and other contracts, repair work (by staff and private maintenance contracts), water quality monitoring at plant level, tariff collection expenses (up to 20% of total tariff). For major rehabilitations and depreciation the following criteria is used:

1) Major rehabilitation/depreciation.
    i) Boreholes: 4% of original cost after it has been adjusted for inflation (design life 25 years).

    ii) Pumping Equipment: 10% of original cost after it has been adjusted for inflation (design life 10 years).
    iii) Electrical Works: 10% of original cost after it has been adjusted for inflation (design life 10 years).
    iv) Pipe and civil works: 4% of original cost after it has been adjusted for inflation (design life 25 years).
2) Expansion (2% of production and distribution costs)
3) Contingency (8% of total).

Each standpipe is metered. Readings are taken daily and monies collected daily and paid into the bank account of the company. At the end of the month, 20% commission is calculated on the total sales and paid to the vendor. The monthly payment of commission to vendors encourages compulsory savings on the part of the vendor and feeling of being in employment. Picture 5 shows a standpipe in the town.

Picture 5: Public Standpipe

A payment point for water bills for consumers with household connections and other institutional establishments and businesses other than public stand posts manned by vendors has been established in the centre of town to facilitate payment of bills by customers. Picture 6 depicts below the revenue collection point of the system.

Picture 6: Water Bills Payment Point

5 ASSESSMENT OF THE MANAGEMENT MODEL

5.1 Transparency and Accountability

Provision for contract renewal

The provision in the contract for the renewal of the contract by the WSDB and DA provides a mechanism for ensuring that the operator is accountable to the people. Besides the requirement for the operator to furnish the WSDB, DA and CWSA with monthly, quarterly and yearly reports, the contract ensures that information is available and accessible to the public. In practice, however, perhaps because of weak archival and storage systems, accessibility to reports, contract documents are hard to come by.

These transparency and accountability mechanisms have placed responsibility on the operator to adopt innovative strategies to ensure that he delivers according to the contract. Strategies such as intensive education of customers, improved customer relations and responsiveness to customer complaints have provided opportunities for customers to be more informed of the water system and helped the operator to achieve the marginal gains made so far. Thus renewable contracts are incentives enough to motivate the operator deliver effective and efficient services. CWSA guidelines on operation and maintenance require that internal auditing be carried out at least quarterly, and technical, Administrative and Financial Reports must be read out to the Community at least once every six months to guarantee minimum accountability.

Contracting process

Open bidding during the contracting process, provision for bidders to have free access to the water system ensured transparency in the process and that bidders had adequate information before going into bidding process.

Bureaucracy in DA

The DA has an important obligation in the contract. It is responsible for infrastructure development. However, delayed processes and sometimes perceived lukewarm attitude on the part of DA can undermine effectiveness of the model. For instance, even though, provision has been made in the contract for 15% of revenue to be lodged with the DA for expansion and rehabilitation, several requests to the assembly to use part of this money to procure meters for the system has fallen on deaf ears. Thus, the operator can do his part but if the public sector is not willing to do its part; the full benefits of private sector participation may not be realised.

Advocacy support

There is currently weak support for private sector involvement in the management of water against the negative perception that private sector involvement will lead to increases in tariff levels, even though some evidence of improved service delivery by private involvement exists in the country.

5.2 Operation and Maintenance (O&M) Capacity

The operator has a staff strength of ten made up of a systems administrator, two pump attendants, 1 plumber, two meter readers, 1 revenue collector, 1 office assistant and 2 security officers. The company relies on causal labourers from time to time and when necessary. Staff morale was observed to be generally good. They have a conditions of service in which they are entitled to sick leave, annual leave, welfare, telephone allowance among others. Management regards staff as critical for the success of the company. Telephone lines have also been installed for the company. Refresher training in meter readings and data collection for meter readers, fault detection on panels and persons to contact for immediate help for pump operators, cash management using computer based system for revenue collectors and record taking for vendors are organised on a continuing basis.

CWSA guidelines (CWSA, 2004b) for day-to-day operation and routine maintenance of small towns require the following minimum staffing level and qualifications:

a. A Technical Manager, to be responsible for the overall management of Technical, Financial and Administrative Staff. The incumbent shall posses at least SSSCE/GCE A-level or equivalent academic qualification and shall have good oral and communication skills with at least three (3) years working experience. A technical background may be advantageous. The Manager shall be accountable to the WSDB, and shall prepare and present reports at WSDB meetings.
b. An Operator/Caretaker, to carry out technical operations and routine maintenance (shall possess post SSSCE, GCE O-level qualification).
c. An Administrative/Financial Clerk (shall posses at least RSA stage II or equivalent).
d. A Cashier (shall possess at least SSSCE). The WSDB Treasurer may play this role.
e. A PRO (for communities above 10,000 inhabitants). A WSDB member may be appointed to play this role.
f. Vendors, to be responsible for sale of water. All Vendors shall be literate.

In addition to the above minimum requirements, an accountant (possessing CA part II or higher) shall be engaged on retainer basis to review available financial records and prepare monthly financial reports while a Technician Engineer shall be engaged as the Technical Manager for large systems – communities above 15,000 inhabitants. Skilled personnel shall carry out periodic breakdown and major maintenance. These may include agents of Equipment suppliers, sub contractors, masons, electricians, mechanics, plumbers, etc. (CWSA, 2004).

5.3 Cost Recovery

The expenditure incurred by the operator including repairs, electricity, salaries and other administrative expenses such as telephone bills etc ranges between GH₵ 1500 and GH₵ 2500. Given that, the lowest amount of revenue ever generated by the operator is GH₵1659.78 in December, 2008 and that, in February 2009, GH¢ 2,655.21 was mobilized, the system can be said to be achieving cost recovery.

It is worth mentioning that revenue has more than doubled since the private operator took over the operations and management of the system in April 2008. Information from the operator and corroborated by the vice chairman of the WSDB showed that the lowest ever revenue collected in a single month by the operator was more than twice the highest revenue ever collected by the WSDB when it was in charge of the operations and management of the water system.

However, one problem still affecting the optimal operations of the model is the inability to track the amount of water consumed for it to be appropriately billed largely because of inadequate metering of points of fetching. For instance, out of total customers of 667, only 241 constituting 36% are metered. The consequence of this is that water loss is still relatively high according to CWSA standards. Out of total water produced in February 2009 of 8,796 m³, 4, 063 m³ has been billed. Thus the quantity of unaccounted for water is above 50%.

5.4 Special Measures for Ensuring Pro-poor Focus

Effective private sector participation can only succeed in serving the poor if the necessary regulatory capacity and a pro-poor governance framework is in place. In particular, clarification of roles, access to information, transparency and accountability, stakeholder consultation, freedom of choice and reversibility, emulation through comparison, confidence and strong partnership, evaluation and local democracy, are key elements of a pro-poor water and sanitation governance framework. These conditions even though are available, they need to be translated into practice through empowerment of community members through regular interaction of the WSDB and community members and increased accessibility to information through publication of reports and financial statements at appropriately designated places so that the public can freely access the information.

Specialised provisions such as the institution of special consumption or connections subsidies targeted at the poor (Komives et al, 2005) have not been provided for under the management model. Even though it appears that, the unit price of water charged to vendors at the public standposts mostly patronised by the poor is smaller (GH₵ 0.78 per m^3) compared to GH₵ 1.1 per m^3 household connections, what the consumers of public standposts pay (GH₵ 0.02 per 18 litre bucket) adds up to GH₵ 1.11 per m^3. However, the difference between the bill and sales makes it possible for vendors to exercise discretionary powers in selling water free of charge to disadvantaged persons in the society without fear of incurring loses. This, however, cannot be monitored.

5.5 Health, Hygiene promotion and Environmental Considerations

In principle, the management model has given boost to environmental sanitation in the town. The WSDB now has been tasked to concentrate their efforts on health and environmental sanitation education compared to the previous arrangement where they were actively involved in the daily operation and maintenance of the water system. Apart from allowing the WSDB to focus on environmental sanitation, the innovation specifically commits 10% of revenue generated to the WSDB for use for promoting environmental sanitation and other running expenses. However, the effect of the innovation on sanitation is yet to be realised because, the WSDB is yet to adjust and assume their new role.

5.6 Sustainability

It is important to state that the innovation is barely a year old and therefore it may be premature to pass judgment on the sustainability or otherwise of the innovation. However, some measures implemented by the operator and the immediate results so far points to some remarkable progress. For instance the lowest revenue mobilized by the company so far was GH₵1659.78 in December, 2008. However, this amount was more than twice the amount ever realised by the WSDB when it was operating the system. The volume of water has also increased by 1000m³ from 7000m³ to 8000m³. Similarly, between January and February 2009, the quantity of water produced increased from 8,401 m³ in January to 8,796 m³ in February. Bill recovery rate is around 80%. Of the February bills of GH¢3,169.14, GH¢ 2,655.21 was recovered representing about 85.5% of total billings of the month.

Intensive education programmes using the local radio, disconnection of defaulters (53 metered customers and 70 unmetered customers have been disconnected so far) have accounted for the success of the operator in recovering bills from customers. In spite of these improvements, certain situations give concern for the sustainability of the programme. The commitment of the WSDB since ceding off part of its responsibility to the private operator has waned steeply to the effect that since the partnership took effect, the WSDB has not held a single meeting with the Community even though they are mandated to hold at least two meetings in a year with the community. The existence of significant (about 50%) proportion of unaccounted for water closely related to the prevalence of many unmetered customers, frequent power outages coupled with resentment on the part of customers to the operator requires hard work in order to guarantee the long term sustainability of the water system. These have also been partly because, the private operator was not specifically obliged to bring capital injection required to respond to operational deficiencies such as unaccounted for water emanating mainly from high proportion of non metered customers. For sustainability to be realised, meters must therefore be installed on all standpipes and house connections.

5.7 Regulatory Framework

The issue of regulation is key to attracting private sector participation and ensuring that each partner in the contract performs its obligation in accordance with the contract. At the urban systems level, PURC is well positioned to undertake this role. At the community level such partnerships suffer from the absence of regulatory framework beyond the confines of the contract. For instance, if the assembly which is a partner in a contract, fails to perform its responsibility, who should bring it to order remain an unanswered question under the existing framework. Besides, the overall context of pro-poor policies needs to be addressed under a pro-poor governance framework. Key principles of good governance and tools, such as appropriate regulatory and tariff structures, which can extend water and sanitation services to poor communities by either a public or private sector provider, need to be put in place.

6 CONCLUSIONS AND LESSONS LEARNED

Processes of Model Introduction

Processes are very important in the realisation of innovations. Inappropriate processes can cause well intended and viable innovations to fail. This is more the case when the innovation seems to have controversial nature or touches on sensitive parts of people's livelihoods or does not seem to be in conformity with what is the norm in a society. A strategy that wins political support at all levels is vital and should involve a combination of bottom up and top down advocacy approaches. Evidence based advocacy will involve data collection and analysis of the existing problematic situation which would then provide basis for the education of affected population on the need for change. The data gathered could also be used for soliciting for political support which is critical in facilitating community acceptability of the innovation. This two pronged approach to advocacy was effectively utilized by this innovation.

The adoption of study tours as part of the process of introducing the innovation provided overwhelming evidence of the potential benefits in public private partnership. This was particularly significant because of the skepticism generated among inhabitants by the activities of civil society groups against private sector involvement in the management and delivery of water in the country. The tours to a very successful and a bad case did not only reinforced the genuine and unbiased commitment on the part of the facilitators to finding solutions to problems, the approach won the trust and confidence of the WSDB which was very skeptical of the process. It also prepared them adequately for the challenges and the benefits associated with the innovation and what must be done to ensure that the innovation is successful. These tours should therefore involve, in particular, the people most likely to be affected by the innovation and should expose actors to both success and bad cases so that they can have both perspectives to enable them make informed decisions and prepare adequately for the realisation of the innovation and overcome challenges that may crop up during implementation and post implementation stages

Community Involvement

Use of participatory process and involvement of stakeholders ensured that in the mist of negative publicity, project implementers remain focused knowing very well that they have the blessing of all the relevant stakeholders. The consultation process brought to bear the fears of the customers and the WSDB and these concerns became an essential part of contract and contract negotiations ensuring a win-win case for all parties involved.

Contracting Process

The contracting process provides the private operator an opportunity to undertake an independent assessment of the system to enable him to make informed decisions during contract negotiation. This though laudable has proven not to be adequate to have a comprehensive knowledge on the status of the system. Often, some of the information regarding the status of the system may not be wholly accurate and it will take a few months of operating of the system to detect some of the defects associated with the system. Since it is impracticable and not good practice to allow a period of between 6 and 12 months for the operator to run the system before final signing of contract, the operator must make a thorough assessment of the water supply system before entering the bidding process and should factor in any uncertainties into his rates.

It is equally important that conditions of engagement are clearly stated in unambiguous terms to allow for clarity of responsibility. Such qualitative terms such as minor expenses should further be defined quantitatively to avoid ambiguity. Also the contract should be very realistic/practical and avoid idealism. This will require that contract takes into consideration the existing situation in setting targets for achievement and not what is desirable or what should be the standard

Strategic Role of TPP as a Pilot Project

Pilot projects serve important usefulness as bench marks for project implementation and thus facilitating useful change in society. The visit to Bekwai and Atebubu two of the pilot projects under the Public-Private Partnership engendered interest in the model and how each of the partners needed to conduct themselves in order for the model to work effectively. In this regard, TPP in principle as a project of testing innovative management models for pro-poor delivery of water and sanitations services should endeavour to implement the pilot project component of the project to guide future implementation of pro-poor projects.

Building Trust

Trust is a serious problem in establishing partnerships. Fear emanating from lack of trust is not peculiar to any one side of partnership. It cuts across all partners. Communities are skeptical about the private operator while the operator is also skeptical about the community to cooperate and the WSDB to stick to the terms of engagement. Building trusts among partners is a major challenge and needs to be explored under the TPP project. Mechanisms such as study tours as part of introducing innovation, participatory planning processes, maintenance of information flow, transparent and accountable administration combined with evidence based advocacy at all levels will enhance trust among partners

Strengthening Capacity for Advocacy

Private sector service delivery in the developing world has received a mixed press. The shortcomings or failures are proclaimed loudly by opponents of private sector participation, while the quiet successes remain just that – quiet successes. Strong local advocacy support for local private sector participation is yet an unexplored innovative area. The TPP project could therefore carve an additional niche for itself through revitalizing the activities of PRUSPA which is already a member of the project core partners gorup to ensure visibility of the organization at the regional level and to build their capacity to do advocacy on behalf of members.

Local private sector investment in infrastructure as well as in the operation and maintenance is lacking but vital if private sector participation is to contribute to increasing access to the poor and sustainability in service delivery. The local private sector must be grown from scratch as was the case with partner organizations, area mechanics, and hand-dug well and piped system contractors in the sub-sector. Operators cannot appear overnight. Access to services by the poor is not only the result of managerial and technical deficiencies in knowledge and skills but largely a question of adequacy and quality of the infrastructure base.

LIST OF REFERENCES

CWSA (2004c) Design Guidelines for Operation and Maintenance of Small Towns Water Systems

CWSA (2004b) Operation and Maintenance Guidelines for Small Towns Water Systems

Komives K. etal (2005) Water Electricity and the Poor: who benefits from utility subsidies. The World Bank 1818 Street, NW, Washington DC20433

Sisala East District Assembly (2006) District Profile, ghanadistricts.com

.