

Case Studies

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Community Ownership and
Management in Peri-Urban Water
Supply in the Greater Accra
Region:

The cases of Abokobi and Pantang

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Tripartite Partnership (TPP) Project

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LIST OF ACRONYMS

CSOs	-	Civil Society Organisations
CWSA	-	Community Water and Sanitation Agency
DA	-	District Assembly
DANIDA	-	Danish International Development Agency
DCD	-	District Coordinating Director
DCE	-	District Chief Executive
DWST	-	District Water and Sanitation Team
EVORAP	-	Eastern and Volta Regions Assistance Project
GEMA	-	Ga East Municipal Assembly
GTZ	-	Gesellschaft für Technische Zusammenarbeit
GWCL	-	Ghana Water Company Limited
GWSC	-	Ghana Water and Sewerage Corporation
MA	-	Municipal Assembly
MCE	-	Municipal Chief Executive
MWRWH	-	Ministry of Water Resources Works and Housing
MWST	-	Municipal Water and Sanitation Team
NGO	-	Non-Governmental Organisation
O&M	-	Operation and Maintenance
PURC	-	Public Utilities Regulatory Commission
TPP	-	Tripartite Partnership
TREND	-	Training Research and Networking for Development
TSU	-	Technical Services Unit
WSDB	-	Water and Sanitation Development Board
WASH	-	Water, Sanitation and Hygiene
WRC	-	Water Resources Commission
UNDP	-	United Nations Development Programme

1. INTRODUCTION AND METHODOLOGY

1.1. Introduction

The Tripartite Partnership (TPP) Project is a joint collaboration between the Netherlands Water Partnership, TREND the lead implementer and some national actors and stakeholders in the water and sanitation sector in Ghana working to identify and promote innovative management models for the delivery of water, sanitation and hygiene (WASH) services to the urban poor. TPP started in January 2008 as a response to the lack of knowledge and capacity for dealing with the challenges of pro-poor urban water and sanitation services delivery. The overall goal of the TPP is to ensure a “Strengthened sector capacity for planning and delivery of pro-poor water and sanitation services.” The specific objectives of the project are to:

- 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.

TPP has reviewed various management models, both locally and globally to identify promising innovative ways of ensuring sustained delivery of WASH services to the urban poor. The best practices gleaned from various studies will inform the design of various tools and guidelines for replication within the Ghanaian WASH sector. Using knowledge management, advocacy and promotion of networking the results will be used to ensure improved services delivery at the decentralised level and strengthened policy at the sectoral level. Plans are advanced for TPP to pilot promising innovative management models with the support of the African Water Facility (AWF) of the African Development Bank (AfDB) for infrastructure development.

As part of project activities to achieve the above objectives, a scoping of existing Management Model and a GIS mapping exercise were carried out between April and November, 2008. At a meeting with stakeholders on 12 November 2008, the outcomes of the scoping studies were presented and a number of case areas were identified, covering a wide range of issues across the four main ecological zones of Ghana, for further studies to provide better understanding on the ways different management models affect WASH service delivery in 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 case study presents Community Ownership and Management (COM) Model in peri-urban communities of Abokobi and Pantang Greater Accra Region, as part of a series of case studies conducted under the TPP Project 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. Approach and Methodology

The methodology adopted for the study included a desk study of existing related/relevant documents, a review of sector policy objectives and extensive field work in the study area. The fieldwork involved:

- Desk study of existing related/relevant documents
- Visits to the project areas
- Interaction and discussion with related stakeholders – Water and Sanitation Development Board (WSDB), operating staff, Municipal Water and Sanitation Teams (MWSTs), community members, etc., thus ensuring a participatory approach.
- Inspection and analysis of recorded operational data

Interaction with community-level stakeholders involved discussions on management of the facility, benefits derived and constraints or problems faced, possibilities for improvement, and suggestions for improvement.

1.4. Organisation of the Report

This chapter has provided the introduction, objectives and methodology for the study.

Chapter 2 presents the overview of the Case Study Area and describes the initial challenge in the Abokobi and Pantang Townships before the project and the introduction of the Community Ownership and Management Model.

Chapter 3 discusses the management model and the processes of its introduction and implementation.

Chapter 4 assesses the management model

Chapter 5 highlights on the conclusion and lessons learnt from the study.

2. OVERVIEW OF THE CASE STUDY AREA

Abokobi and Pantang communities are located in the Ga East Municipal Assembly (GEMA) of the Greater Accra Region of Ghana. Abokobi is the administrative capital. About fifteen years ago, they were small Ga indigeneous communities of peasant farmers, located about 15 miles away from Accra, the administrative and commercial capital of Ghana. However within the past two decades, there has been rapid influx of people and the stretch of land between the study area and Accra is now fully inhabited. Consequently, there has been a rapid surge in population in the two communities due to both the availability of cheap land for housing, and migration of people from nearby Accra (and surrounding communities) in search of cheaper accommodation. As depicted in the figures below, the population of both communities has grown by over 50% within 6 years from 2002 to 2008.

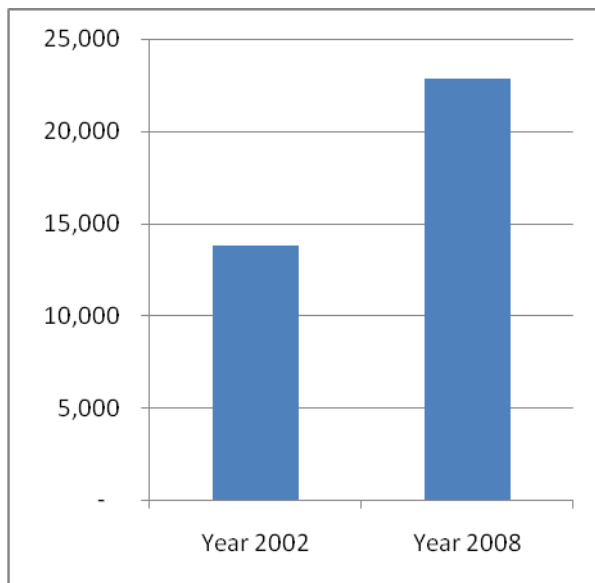
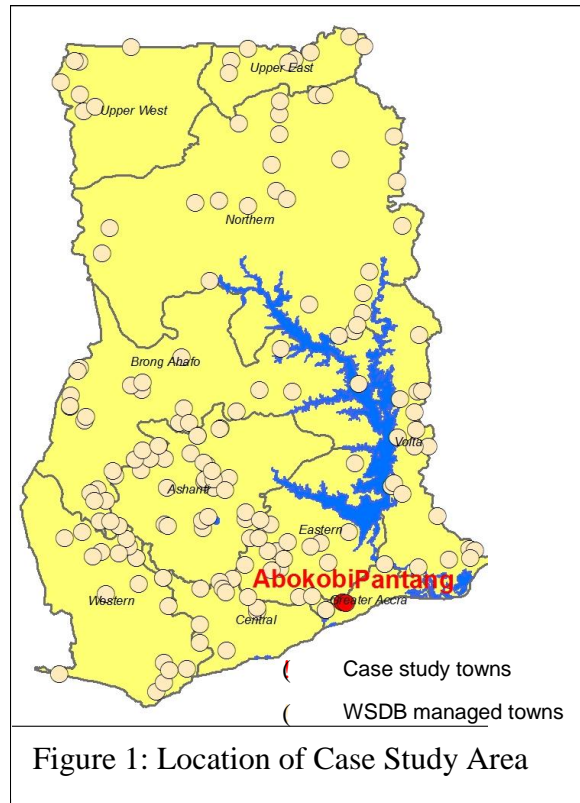


Figure 5 - Population Dynamics in Abokobi, 2002 – 2008

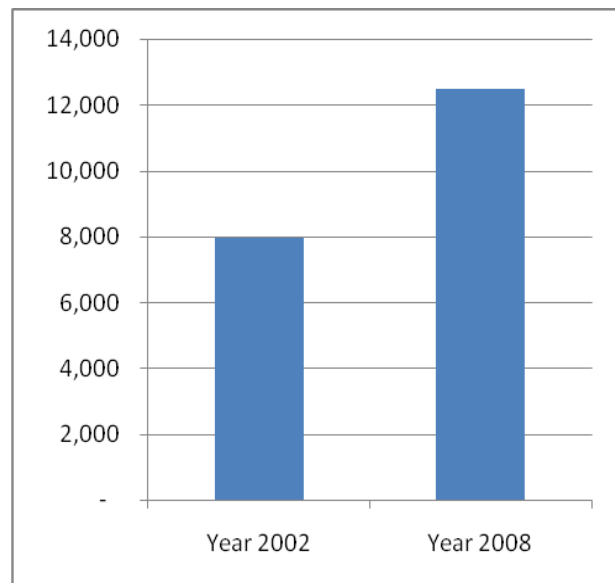


Figure 6 - Population Dynamics in Pantang, 2002 - 2008

Both communities have now become peri-urban communities, serving as satellite communities that provide shelter for a large number of workers, traders, artisans and students in Accra, Ghana's national capital. Now, they are characterized by rapidly increasing population and modern housing units, most of which are not meant for renting by average and low-income workers. It is believed

that about 20 households, most of them in the poor bracket, migrate into the case study area every quarter. The migrant population of both towns constitutes over 60% as shown on figures 4 and 5..

The indigeneous section of the communities, where the poor live, continues to be crowded and over-populated, giving rise to slum conditions. Poor housing units, mostly unplanned, overcrowded yards and overstretched facilities (sleeping rooms, bathrooms, toilets, drains, etc) continue to develop. It is estimated that the population has grown about five-fold within the past two and half decades from its original of about 1,800 in 1984, thus the migrant/settler population far outstrip the indigeneous people. The two communities have therefore become highly heterogeneous.

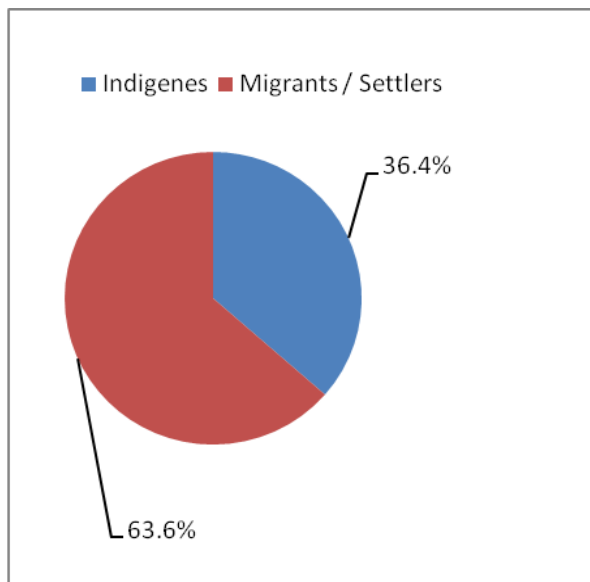


Figure 7 - Indigene-Migrant Distribution, Abokobi

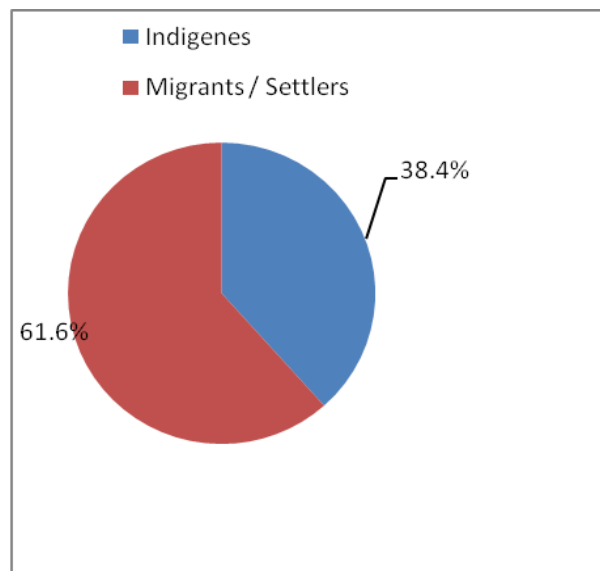


Figure 8 - Indigene-Migrant Distribution, Pantang

2.1. Demography

Presently, as earlier indicated, the communities are heterogeneous. The earlier dependency ratio of one active/economic person to about 15 has given way to about 1:3 ratio. This nevertheless has improved the influx of money into the community. The current age range is evenly distributed. The picture below shows the age-sex distribution (2008, CWSA-TREND O&M assessment of the study area)

2.2. Socio-economic features

Economic activities include mainly petty trading in kiosks and on tables. Hawking is very common. Common items sold include those for domestic use such as beverages, toiletries, foodstuffs, clothing, etc. Services provided include sewing/dressmaking, hairdressing and food vending. Various artisans and tradesmen such as masons, carpenters, plumbers, etc. operated alongside light local manufacturing such as blocks, ironmongery (steel works), craftsman, etc. The majority of residents travel to Accra to make incomes as either government workers, self-employed workers, traders (mostly hawkers), etc. Nevertheless, about 22% of indigeneous residents are unemployed. A further 16.1% are apprentices with no income.

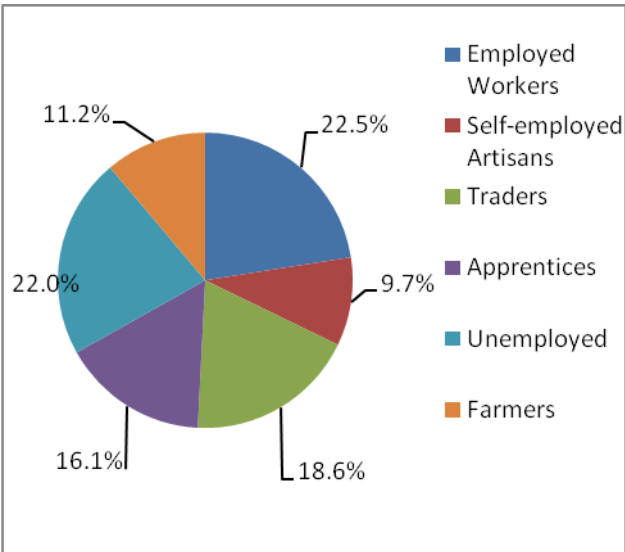


Figure 6 - Distribution of Livelihood Activities, Abokobi

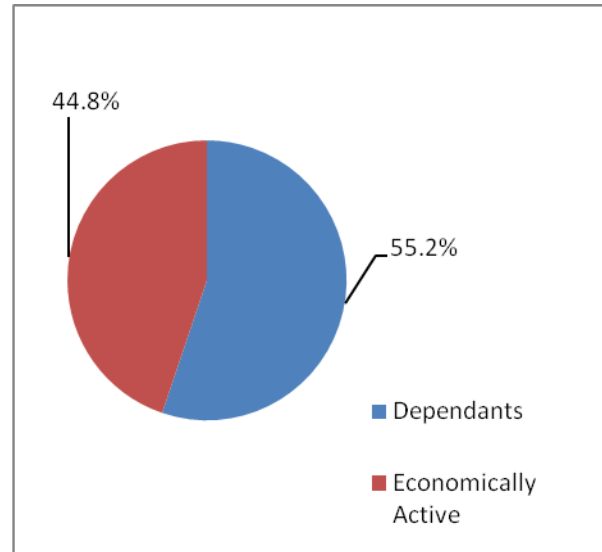


Figure 7 - Dependency Ratio, Abokobi

Public and Private basic schools exist in the community. However, no second cycle or tertiary educational facility exists and students have to board vehicles or walk to nearby Madina and farther Accra and its suburbs. In Pantang, there is a widely-known psychiatric hospital, whilst Abokobi houses the buildings of the municipal assembly. The Presbyterian Church has a famous mission house and women’s training institute in Abokobi.

With the increasing migrant population of very diverse socio-economic status, disparities in income levels are widening, and gaps conspicuously exist between the ‘haves’ and ‘have-nots’ (mostly the indigenes and the unemployed, etc.). Despite the springing up of modern buildings and improvement in the social strata, there is increasing concentration of the poor, and poverty level seems to widen horizontally. This is evident in over-crowded households, poor sanitation, increasing demand for water, high cost of housing rentals, etc.

There is a government hospital at Pantang, but this is a psychiatric specialist hospital that offered little health service to residents. Only a few shops dispensed drugs, and one private clinic existed. Generally, access to health service was poor. The nearest government health facility accessible to the poor was located about 5 kilometres away.



Figure 8 - WSDB Office, Pantang

2.3. Description of the Interventions in the Study area

Abokobi now has a CWSA-facilitated water supply system, which it shares with two other communities. The system was constructed with funds provided by DANIDA (90%), the Ga East Municipal Assembly (5%), and the Abokobi and allied communities (5%). Funds for training and capacity building in hygiene & sanitation promotion were also provided by DANIDA. Pantang (with 11 allied communities) also has similar facility under similar funding. Characteristics of the intervention in the study area are captured in the table below.

Table 1: Characteristics of Abokobi and Pantang Systems

Abokobi	Pantang
<ul style="list-style-type: none"> • CWSA-facilitated water system • DANIDA-funded intervention • 1 mechanized borehole with a yield of about 50m³/hr as source. • 1No. Ground-level tank of capacity 150m³ • About 12 kilometres of distribution network • 21No. Public standpipes • 374No. private subscribers • Shared water supply facilitywater system serving 3 communities • Tariff of Gh3p per 18-litre bucket proposed by WSDB and approved by MA in operation in WATSAN-based WSDB - WATSAN Committee representatives form WSDB • Direct Management model of system by WSDB through System Manager • O&M staff made up of System Manager, Accounts Officer, 2 Operators, 2 Plumbers and Vendors. • Standpipe revenue handed over to WATSAN Treasurer • Limited authority given to System Manager • Hygiene promotion undertaken by WATSAN Committees 	<ul style="list-style-type: none"> • CWSA-facilitated water system • DANIDA-funded intervention • 1 mechanized borehole with yield 45m³/hr as source. • 1No. Ground-level tank of capacity 200m³ • About 10 kilometres of distribution network • 22No. Public standpipes • 267No. private subscribers • Multiple system – water system serving 10 communities • Tariff of 3Gp proposed by WSDB and approved by MA in operation • WATSAN-based WSDB – WATSAN Committee representatives form WSDB • Direct Management model of system by WSDB through System Manager • O&M staff made up of System Manager, Accounts Officer, 2 Operators, 2 Plumbers and Vendors. • Standpipe revenue handed over to WATSAN Treasurer • Limited authority given to System Manager • Hygiene promotion undertaken by WATSAN Committees

2.4. Description of the Initial WASH Challenge

2.4.1. Water Supply

Abokobi had a borehole fitted with handpump provided by the 31st December Women’s Movement (DWM) and one owned privately. However, both handpumps broke down after about 4 years use (in 1990) because of pressure and over-use. The facility provided by the 31st DWM was not paid for (no tariff or user-fee charged).

The Presbyterian mission operated a borehole with handpump on its premises. The facility was made available to the public who paid user-fees – pay-as-you-fetch (PAYF) of ₵20.00 (redenominated by 10,000 to 1 in 2007) between 1990 and 1995

With the break-down of the facility provided by the 31st DWM, majority of community members, mostly the poor who could not afford 'paid-for' water supply, resorted to the use of ponds, rain water and tanker services.

Residents depended on a nearby stream which dried up in the dry season. The acute water problem was aggravated by the rapid increase in population. Tanker service operators took advantage of this and made some brisk business at prices considered out of reach and only affordable by the privileged migrant settlers. Poorer residents walked long distances to nearby communities where potable water existed. To say the least, residents in the study area faced acute water supply.

Pantang community had no potable water source before the DANIDA funded intervention the community. Residents depended on a nearby stream and hand-dug wells for their water needs. A privileged few patronized tanker services. Pantang thus had more acute WASH problems than Abokobi.



Figure 9: 2 of the 3 MWST members, Ga East Municipal Assembly

2.4.2. Hygiene & Sanitation

In the area of sanitation, the only VIP facility in the Pantang community got filled up, collapsed and was abandoned. A few households earlier operated the pan latrine type but this was phased out. Majority of residents often used the bush between houses to defecate. A project that subsidized the construction of household VIP and KVIP latrines was implemented with support from UNDP. A few interested residents (about 120 households) took advantage of this intervention, and this improved the sanitation coverage in the community.

Refuse generation was low and was disposed off in the nearby bushes. However, with the increased volume of domestic waste, there is now little ground for disposal and this has become a major problem. There is now indiscriminate disposal by residents. Collecting containers placed at vantage points become full and spill over earlier than service providers can collect. Similarly, waste water, mainly from bathhouses was minimal and posed no major threat. However, this has now become a major issue because artificial drains have now silted and have outgrown their

carrying capacity. Most rainfall leads to pools of runoff which join the already stagnant waste water and encourages the breeding of mosquitoes and other harmful flies.

Refuse and domestic waste were disposed of by dumping them in some selected areas of the project communities when there was enough land for use as secondary dumping site. Unfortunately, with increase in the sale of land for residential use, little land was left, or no one was willing to give off his land for public refuse dumps. This has resulted in indiscriminate disposal of domestic wastes and other refuse.

Waste water was disposed of through the few drains constructed along the road. No stagnant waste water used to exist. However with the increased population and the silting of the drains, waste water and runoff easily forms stagnant pools of water behind bath-houses, and low-lying areas, and these give an unpleasant sight and scent.

Environmental and personal hygiene practices in the project area had been average during the days when Sanitation Inspectors (SIs) existed. However with the facing out of the SIs, around 1994, environmental practices deteriorated until the implementation of the present CWSA-facilitated intervention.

2.4.3. WASH Implementation Strategies in Abokobi and Pantang

Based on CWSA's WASH implementation strategy outlined in Annex 1, the following processes and activities led to the provision of the present intervention in Abokobi and Pantang.

The table below summarizes activities undertaken by different stakeholders in implementing the intervention.

Regional CWSA facilitated the implementation of the intervention in the communities. Project related staff, the MWST, disseminated information about the availability of funds from DANIDA to improve WASH situations in communities. This was done through community meetings, district workshops and local community information broadcasts.

Communities were encouraged to form the relevant committees that would spearhead their mobilization, participation and fund-raising activities. Guidelines for forming the WATSAN Committee were spelt out. By contracting the private sector, the MA working through the MWST assisted communities to form, inaugurate, document/give legal backing, train and build the capacities of WATSAN Committees. Representatives of each WATSAN Committee were selected to form the WSDB. With the establishment of community-level WASH organizations, the way was paved for project intervention and implementation

Table 2: Activities Undertaken by Different Actors in Project implementation, Abokobi & Pantang

Actor	Role	Activity Undertaken
<p><u>Communities</u></p> <p>1. WSDB/WATSAN of Abokobi & 2 other communities</p> <p>2. WSDB/WATSAN of Pantang and 9 other communities</p>	<ul style="list-style-type: none"> • Beneficiary • User • Trustee 	<ul style="list-style-type: none"> • Applied for intervention (improved facility) from GEMA • Formation and inauguration of WATSAN Committees & WSDB • Awareness creation, sensitization and mobilization of community to raise 5% contribution • Developed Facility Management Plan (FMP), drafted Constitution/Bye Laws • Promotes Hygiene, sanitation and environmental issues • Manages, Operates and Maintains WASH facilities • Patronizes WASH facilities
<p><u>Municipal Assembly</u></p> <p>1. GEMA</p> <p>2. Mucipal Water and Sanitation Team (MWST)</p>	<ul style="list-style-type: none"> • Legal Owner/ Provider • Lease Holder • Monitor • Auditor 	<ul style="list-style-type: none"> • Prioritized and approved Application for assistance • Inaugurated WATSAN Committees in various communities • Formed and contracted training of WSDBs • Created awareness, sensitized and mobilized community to raise 5% contribution • Identified, selected and established management model for operation and maintenance • Monitors management, operation and maintenance of WASH
<p><u>Regional CWSA</u></p> <p>1. Regional Water and Sanitation Team (RWST)</p>	<ul style="list-style-type: none"> • Facilitator • Regulator • Monitor 	<ul style="list-style-type: none"> • Monitored the formation and training of WSDB • Facilitated contracting of software activities to private sector • Facilitated contracting for carrying out of feasibility studies, preliminary and detail design, tendering, construction, and construction supervision to private sector • Facilitated the identification, selection and establishment of management model for operation and maintenance • Handed over facility to MA and communities
<p><u>Collaboration</u></p> <p>1. DANIDA (for Government of Ghana)</p> <p>2. GEMA & Communities</p>	<ul style="list-style-type: none"> • Donor/ Financier • 	<ul style="list-style-type: none"> • Agreed to fund intervention, and transferred funds to CWSA & Municipal Assembly
<p><u>Private Sector</u></p> <ul style="list-style-type: none"> • Maple Consult • Regional Water and Sanitation Team / Technical Services Unit (TSU) 	<ul style="list-style-type: none"> • Implementer 	<ul style="list-style-type: none"> • Mobilized each community to form a WATSAN Committee • Trained WATSAN Committees and WSDB • Assisted in awareness creation, sensitization and mobilization of community to raise 5% contribution • Carrying out of feasibility studies, preliminary and detail design, tendering, construction, and construction supervision • Development of Facility Management Plan (FMP), drafting/customization of Constitution/Bye Laws • Trained WATSAN Committees and WSDBs in hygiene and sanitation promotion



Figure 10: Oyarifa community leaders at a meeting

The start of the process up to the time physical facilities were installed and handed over spanned a 4-year period, starting from 2002 and ending in 2006. The process could have taken less. The long span for implementation was attributed to:

- a. Slow response (and high resistance to change) from community on paradigm shift from supply-driven approach to the demand-driven community participation and cost-sharing approach
- b. Elaborate software activities to instil the proper playing of roles, responsibilities and relationships among all relevant stakeholders
- c. The on-going development of institutional and legal frameworks, design guidelines, and O&M procedures hitherto not available during the CWSA set-up
- d. Difficulty and slowness on the part of the MA and community to raise their share of capital cost
- e. The long procurement process of tendering, contracting and contract administration
- f. Slow delivery by local private service providers

3. THE CURRENT MANAGEMENT MODEL

Both the Abokobi and Pantang water supply systems operate the same management model. This is the DIRECT Management Model. It is a WATSAN-based WSDB management model.

The model recognizes the management of WASH activities under the direct control of the WSDB. In this case, the WSDB is not only taking decisions and making certain proposals to the MA for approval, it also acts as Manager. The WSDB thus:

- a. directly employs, pays, supervises, monitors and fires its staff;
- b. handles its finances and are signatories to the WSDB bank account;
- c. prepares and presents its monthly, quarterly and annual reports to the MA
- d. sets and proposes tariffs to the MA for approval
- e. proposes annual budgets to MA for approval
- f. approves and undertakes private connections
- g. contracts Maintenance Service personnel to undertake major maintenance works
- h. undertakes water quality tests are carried out

3.1. The Development of the Management Model

The community-based management of water and sanitation facilities is the result of a consistent advocacy by interest groups in the water and sanitation sector. It was the result of findings made which revealed that central governments scarcely used funds generated from water systems to maintain and improve the facilities, and this, to a large part, contributed to the frequent breakdown of facilities. It was strongly advocated that any community-based management of small town water system should be independent of the control of any government agency – the district assembly, particularly, and be largely autonomous.

The Pantang and Abokobi WSDB management model is WATSAN based. This is because the WSDB comprises of representatives from the different WATSAN Committees of communities that benefit from the intervention. In identifying and developing the model, the following merits of a direct WSDB management as against that of a private operator were considered. It was concluded that the direct management model would be appropriate for the management of the water system because:

- a. It will ensure a sense of ownership
- b. Management is resident in the community
- c. Cost of operating, maintaining and managing the facility will be relatively low
- d. It is pro-poor

- e. Relatively low and socially acceptable tariffs would be approved
- f. Tariff adjustment will be seldom made
- g. It will create job opportunities for community members;
- h. Payment of community-employed staff contributes to re-investment of capital in the community

The model specifically has the following features in each community:

3.1.1. Abokobi & 2 allied communities (Oyarifa & Teiman)

- a. WATSAN Committee of 5 members with at least 2 female formed for each community
- b. 13-member WSDB is made up of representatives of each WATSAN Committee and other stakeholders; women adequately represented (at least 40%)
- c. System Manager (SM) appointed by WSDB to act on its behalf – SM is given some limited power to manage facility
- d. Each WATSAN Committee operates an account where they keep revenue from stand pipes and forward on monthly basis to the WSDB
- e. WSDB operates 2 bank accounts – Operational Account and Maintenance Account; signatories are Chairperson, Secretary and Treasurer
- f. The Municipal Assembly through the MWST provides supervision and monitoring
- g. Operational staff are responsible to the SM but paid by WSDB – they include:
 - Accounts Officer
 - 2 pump attendants
 - 2 plumbers
 - 21 vendors
 - 3 security personnel

3.1.2. Pantang & 9 allied communities

- a. WATSAN Committee of 5 members with at least 2 female formed for each community
- b. 15-member WSDB is made up of representatives of each WATSAN Committee and other stakeholders; women adequately represented (at least 40%)
- c. System Manager (SM) appointed by WSDB to act on its behalf – SM is given some limited power to manage facility
- d. Each WATSAN Committee operates an account where they keep revenue from stand pipes and forward on monthly basis to the WSDB
- e. WSDB operates 2 bank accounts – Operational Account and Maintenance Account; signatories are Chairperson, Secretary and Treasurer

- f. The Municipal Assembly through the MWST provides supervision and monitoring
- g. Operational staff responsible to the SM but paid by WSDB – they include:
 - Accounts Officer
 - 2 pump attendants
 - 2 plumbers
 - 22 vendors
 - 3 security personnel

3.2. Introduction of the Model in the study area

The identification and introduction of the management model underwent a process. Before the completion of construction works, workshops were organized for all relevant stakeholders at community, district, regional as well as national levels, including the implementing consultants and contractors to identify the most effective model for the management of the facility.

The workshops discussed different management models already in existence in other projects. The merits and demerits of the various models like direct, delegated and partial were analysed, taking into serious consideration the environments under which they operated. After various discussions and workshops, all stakeholders agreed on the WATSAN-based WSDB Management as the most effective management model for each of the Pantang and Abokobi water supply schemes. A number of capacity-building and training workshops, funded by DANIDA (as part of the intervention), were then organized for stakeholders by the software consultant.

3.2.1. Strengths of the Model

The model ensures:

- Periodic knowledge of the management of the system by the community
- Sense of ownership on the part of the community
- Creation of employment in the community
- Quick and prompt attention given to faults, repairs and maintenance
- Close supervision and monitoring of staff
- Community-led hygiene and sanitation promotion
- Regular presentation of operational data to community and MA
- Generally low and socially-acceptable tariffs set – pro-poor focus

3.2.2. Weakness of the Model

The model has these inherent weaknesses:

- Vulnerability of the WSDB, WSDBs don't have the legal mandate; no signed constitution
- Possible inadequate knowledge of WASH issues by WSDB, leading to inaccurate decisions

- Propensity for conflicting role of WSDB – decision-maker and manager
- The position of the WATSAN Committee in relation to the System Manager is not clearly defined
- The position of the Vendor in relation to the System Manager and WATSAN Committee is not defined
- Efficiency of management is strongly tied to cohesion and strength of WSDB
- Possibility of nepotism and favouritism in selecting or recruiting staff
- Difficulty in maintaining discipline among staff because of family or local ties
- Difficulty in enforcing laws because of certain powerful elements in community – traditional leaders, politicians, rich business men, etc.
- Socially acceptable tariffs may not recover increasing costs
- Difficulty in retrieving unpaid water bills
- Threat of disbandment from MA or community leaders.
- Little authority of the System Manager over staff – some level of interference from WSDB

3.3. Institutional arrangements under the Model

To ensure that the model is operated to yield the desired results, the roles and responsibilities of different actors were identified. It was agreed that the role of each player was key to the success of O & M.

The Actors in this management model are:

- a. The WSDB
- b. The System Manager (SM)
- c. The O&M Staff
- d. Standpipe Vendors
- e. WATSAN Committees (the Community is represented by the WATSAN Committee)
- f. The Ga East Municipal Assembly (GEMA)
- g. The Municipal Water and Sanitation Team (MWST)
- h. Residents, Water Users

The diagram in Fig. 17 below explains the relationships among actors.

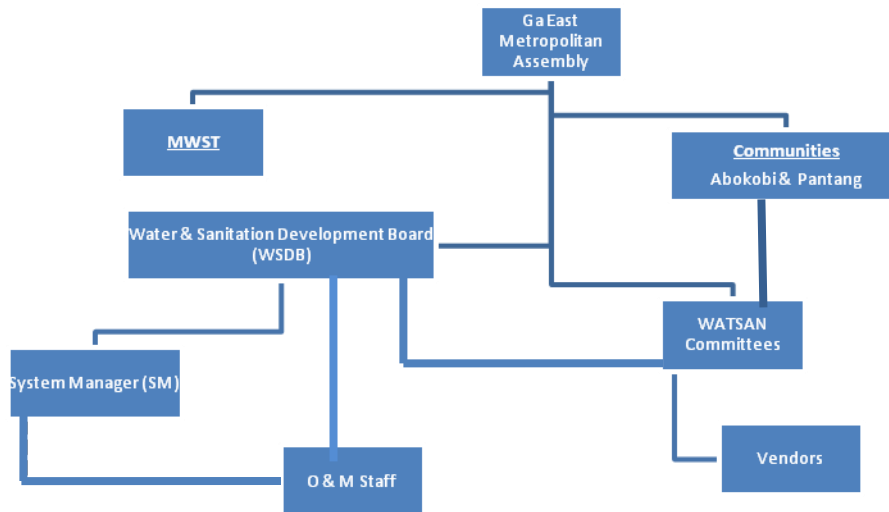


Figure 11 - Organogram of the Present Management Model in the Study Area

3.4. Tariff Setting

A major implementation policy of CWSA-facilitated water systems is the commitment of the community to pay user-fees. In accordance with CWSA O&M guidelines, the project in setting the tariff, ensured that the income to be generated will be able to cover:

- a. payment of operational costs (electricity, chemicals)
- b. Minor maintenance of the facility
- c. The purchase of spare parts for major maintenance/replacement of the facility
- d. Payment of remuneration of operating staff (in piped water systems)
- e. Office running and Administrative costs
- f. Cost of capacity-building and training of WATSAN Committee/WSDB, and staff
- g. Hygiene and sanitation promotion
- h. Investment for future replacement of parts that break down during design life of the water supply system

3.4.1. Considerations in Tariff Setting (Level of User-fee)

The level of user-fee is determined by a combination of considerations or parameters contained in guidelines set by the CWSA. CWSA, through its guidelines, ensures that tariff levels are:

- a. In compliance with its tariff setting guidelines (*and do not include unapproved items*)
- b. Cost-recovery tariffs which will cover the items listed above
- c. Socially-acceptable

Different containers are used to collect water at public fetching points. Commonest among these include gallons of different sizes, basins or pans of different sizes, buckets of different sizes, and barrels. The unit of tariff in most CWSA-facilitated water systems is the 18-litre bucket, commonly called in Ghana, the “34-bucket”. The 34-bucket is used to determine the price to pay for any other water collecting container. All other tariffs, mostly private subscriptions are determined from this. CWSA guidelines allow a maximum of 10% waste or losses at public fetching points. CWSA has two methods of setting and fixing the tariff payable per 34-bucket, namely Annual Cost of Expenditure and Annual Cost of Production

In the first case, the total annual costs incurred in operating and maintaining the water system at the end of the year (mostly, the average of the past 3 years’ operations) are used as a guide to draw a budget for the incoming year and the price per bucket is calculated from that.

The expected cost of production (also based on previous years’ consumption) is used to determine the price at which the water would be sold in the 2nd method. The population, consuming population and possible per capita consumption figures are critical in this calculation. Both methods should still be guided by CWSA guidelines for setting tariffs.

3.4.2. Tariff Procedures & Administration

After the level of tariff is determined, the WSDB is expected to follow the following procedure:

- a. WSDB discusses the level of user-fee proposed with the community and its leaders. Here they give and explain the justification for the normally upward review (increase) in tariff;
- b. The MWST normally should facilitate the meeting that discusses the proposed tariff with the community
- c. The agreement reached at the end of this meeting is documented (usually signed by representatives of both community and WSDB parties) and forwarded to the Municipal Assembly for approval by completing the document
- d. The MA, upon approval, gazettes the tariff to become lawful for implementation in the community
- e. Community leaders are informed of the approval of the tariff by the MA through the MWST.

The present tariff of 3Gp (*per 18-litre bucket*) being operated in the study area is the result of a review which took place in 2008. The WSDB followed the guidelines and procedures described above.

3.4.3. Strengths of the Tariff Administration (Regime)

The present tariff administration in the case study area has the following advantages. It

- a. is pro-poor, at the cost of management is cheaper and this reflects in the tariff
- b. allows for community participation, community in-put, and social acceptability
- c. eliminates imposition of tariff

- d. adequately prepares the community's mind before implementation
- e. allows for smooth implementation
- f. serves as a form of accountability on the part of WSDB as community members may ask questions about the previous accounts during meeting to discuss the tariff.

3.4.4. Weakness of the Tariff Administration

- a. High resistance from some or majority of community members
- b. Socially accepted user-fee may not recover costs of operations
- c. WSDB may be vulnerable; as they do not have any legal mandate; however, the new Ministry of Local Government and Rural Development Bye Laws has corrected this weakness
- d. The activity may be politicized by persons who have strong opposition to WSDB membership
- e. The MA may, for political reasons, not accept an upward adjustment, even when justified
- f. The upward adjustments led to initial social disaffection and poor patronage

3.4.5. Tariff Collection Methods

There are two (a & b) major methods of collecting user-fees in CWSA-facilitated communities. These are:

- a. The pay-as-you fetch (PAYF) method at public fetching points
- b. Monthly billing and payment by private subscribers
- c. Monthly or annual levying of household heads or individuals at public standpipes

Of the three above, the most effective method operated at public fetching points is the PAYF. This method ensures that users give the money to the Vendor before their containers are filled. This means that any time a resident wants to fetch water, he/she should have money on him/her. Credit buying is not allowed. The Vendor is paid a commission of 20% of sales. If for some reason a vendor incurs deficits, they are deducted from his or her commission at the end of the month.

3.4.6. Pro-poor considerations in tariff administration

Tariffing is one challenging issue that confront the delivery of WASH service to the poor. Even though the PAYF is the most effective method of collecting tariffs, many people have argued that it is not pro-poor since many poor residents find it difficult getting money every time to make payments. Again, pro-poor advocates argue that in many rural communities and small towns incomes are made only seasonally or annually and that daily transactions are seldom made. They therefore postulate that the strict enforcement of the PAYF method would force the poor to resort to unwholesome sources of water supply which defeats the objective of the WASH intervention.

This school of thought suggests the alternative method, which is the monthly or annual levying of users. They consider this as pro-poor since residents or users pay the levy after harvest time,

usually at the end of the year. However, this method too is fraught with problems. It is difficult to collect the levy. Its accountability is poor, and many residents do not pay. Additionally, the monthly levy is normally less than should be paid. Again, people have argued that since the volume of water collected by individual persons or households may not be the same, it is unfair to make everybody pay the same levy. Some even bag the water for sale to the same poor residents who, it is claimed, find it difficult to adopt the PAYF method. The implementation of this method has led to the breakdown and abandonment of many schemes.

The method of collecting tariffs at public fetching points in the study area is the Pay-As-You-Fetch. This has proved efficient and effective, and has led to the appreciable collection efficiency at standpipes as shown in the figure below. It has however, not encouraged high patronage of the system by the poor. The study shows that, the poor does not solely depend on the system but supplement their water needs from traditional sources. This is because the payment arrangement and levels do not favour them. This has contributed to the average consumption levels (14.6l/c/d and 11.2l/c/d for Abokobi and Pantang, respectively) below CWSA estimated minimum of 20l/c/p.

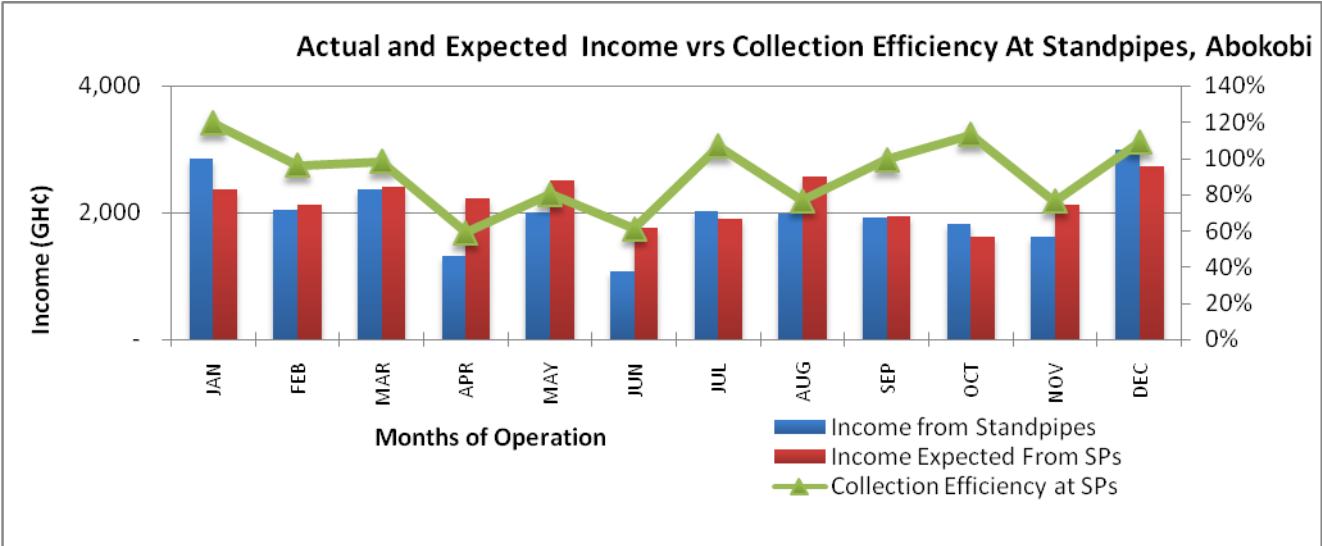


Figure 12: Actual and Expected Income and Collection Efficiency at Standpipes at Abokobi-2008

4. ASSESSMENT OF THE MODEL

CWSA-facilitated WASH activities in the study area are pro-poor oriented. In furtherance of this objective, a management model considered to protect the poor has been instituted. The Direct management model is expected to reduce the cost of management and to ensure closer interaction between the WSDB and the community. A major objective of the model is to ensure:

- a. Transparency and accountability of operations
- b. Cost-Recovery (of approved expenditure)
- c. Protection of the poor for whom the facility was installed
- d. Community-led promotion of hygiene and sanitation spearheaded by the WATSAN Committees

4.1. Transparency & Accountability

A critical issue in ensuring transparency and accountability is the effective role played by the monitor, that is, DA/DWST, with technical by CWSA as and when necessary. To ensure that systems are managed in transparent manner and WSDBs are accountable, books are made available for the recording of operations. In the Abokobi and Pantang water systems under study:

- a. Vendors submit, on a daily basis, revenue to the WATSAN Treasurer of the community in which the standpipe is located.
- b. Exercise books are used to record daily meter readings and sales at standpipes
- c. Vendors are paid a commission of 20% of sales made each month. Deficits are deducted from commission
- d. WATSAN Treasurer deposits income into WATSAN Account
- e. WATSAN Committee transfers monthly account to WSDB account
- f. WSDB releases 5% of WATSAN Committee transfer back to the WATSAN Committee for hygiene and sanitation activities
- g. WATSAN Committee is responsible for logistics and maintenance of standpipes within their jurisdiction
- h. Pumping records (time of pumping, water pumped and electricity energy used) are recorded and kept by the pump attendant
- i. Water Bills are prepared and submitted to private subscribers on a monthly basis.
- j. Monthly financial reports are prepared and submitted to WSDB and copied to MA/MWST
- k. MA carries out auditing of WSDB accounts annually.

It is expected that this sequence of activities would ensure transparent and accountable management of the facility. Unfortunately, a close auditing of the operations of the system (undertaken by TREND Group in 2008) revealed that flaws have occurred in the use of the

WATSAN Treasurer to collect revenue from Vendors and their role has resulted in poor accountability and general lack of transparency. It was therefore recommended that a Revenue Collector rather than the WATSAN Committee Treasurer should collect the revenue from the Vendor. Another challenge with accountability is the neglect by the DA/MWST of its role of monitoring and auditing of the operations, which has contributed to the problem mentioned above.

4.2. Cost Recovery – Operation and Maintenance

The system has so far been operated with cost recovery in mind. However, the concept of cost depends on its magnitude. The initial concept of using the WSDBs was that they were doing a community service which did not entail payment of salary, but that they would be given some light allowances at the end of each quarter. This, it was believed, would not impact heavily on the cost of operations. O&M staff were also sensitized to accept low salaries because the systems were not going to generate enough revenue to pay them normal salaries.

Cost recovery was therefore based on these concepts and assumptions. Even though O&M costs have been recovered adequately (check the table below), this has been so partly because remunerations of staff and allowances paid to WSDB members have been grossly inadequate (*verbal communication staff*).

Table 3: Performance figures of the Systems - 2008

S/N	OPERATIONAL AREA	ABOKOBI	PANTANG
1	Quantity of Water Produced (m ³)	116,788	94,337
2	Quantity of Water Distributed (m ³)	-	-
3	Quantity of Water Consumed, SP (m ³)	26,308	19,838
4	Quantity of Water Consumed PC (m ³)	41,958	36,429
5	Quantity of Water Consumed Total (m ³)	68,266	56,267
6	Total Hours pumped	3,276.26	3,036
7	Total Income from Standpipes (GH¢)	24,036.36	19,448.68
8	Total Income from Private connections (GH¢)	34,541.05	29,564.27
9	Income from other sources (GH¢)	46,513.49	28,008.85
10	Total Income (GH¢)	105,090.90	77,021.80
11	Total Expenditure (GH¢)	60,142.89	46,892.44
12	Per capita consumption	14.59litres/day	11.21litres/day
13	Collection Efficiency at SPs (%)	85%	87%
14	Income per cubic metre pumped (GH¢/m ³)	0.70	0.52
15	Income per cubic metre consumed (GH¢/m ³)	1.18	0.87

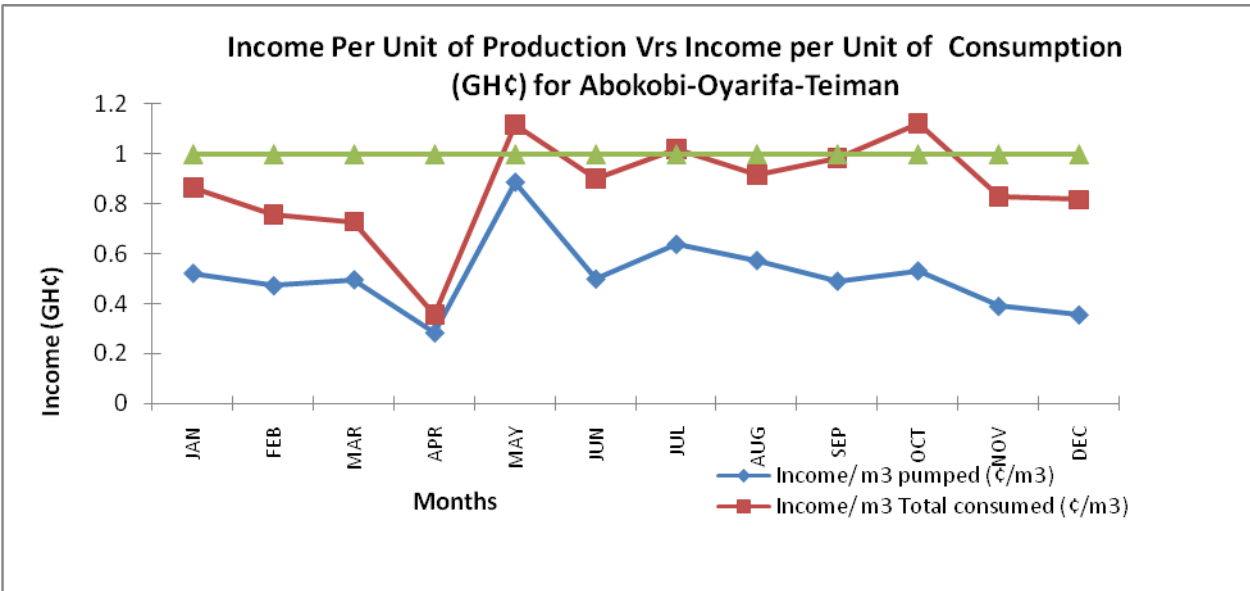


Figure 13: Income per unit of Production vrs Income per Unit of Consumption in Abokobi

The concept of pro-poor considerations and full O&M cost recovery seems to be in serious conflict with each other. Presently, there are serious agitations on the part of O&M staff for substantial upward adjustment of salaries which have remained static for the past 2 years. Even though the framework of salary adjustment is not clear, the expectation of the staff is that, given the inflationary trends in the country, their salary would be adjusted every year or whenever tariffs are reviewed. However, the last tariffs adjustment in 2008 did not lead to salary adjustment. The repercussions of negative response to their request could be disastrous to the efficient operation of the system and can also create accountability challenge, given that the monitoring system (DA/MWST) is not active. The request is presently not being addressed because it would also lead to an upward adjustment in tariff which will not be accepted by the community. Unfortunately, the staff are continually negatively affected by peri-urban lifestyles.

4.3. Special Measure to Ensure Pro-poor Focus

The entire CWSA-facilitated WASH programme is based on the principle of making service delivery affordable to the majority of rural and small town dwellers, majority of whom are considered poor and vulnerable. Emphasis, in the implementation of programmes is therefore, placed on women participation. Even in the design of facilities, technologies that would not cause the communities to have problems with operation and maintenance of the facility are taken into consideration. The pro-poor concept is enshrined with the view to:

- a. Reducing the economic time women spend on collecting water. It is the view of gender and pro-poor advocates that when time spent on collecting water is reduced, the time saved can be used profitably to generate income, thus reducing the poverty level of the women. This is a positive pro-poor concept. Given the WASH problem that existed in the case study area, the project is pro-poor focused.
- b. The reduction in water-related diseases (through the provision of potable water and promotion of improved hygiene practices) would lead to less money spent on treatment of ailments. Again the healthier the person, the better his/her potential for making incomes. Guinea worm endemic areas is a classical example.

- c. The management model which uses the WSDB as the centre of management is also pro-poor since the reduced cost of management ensures lower cost-recovery tariffs
- d. Finally, the involvement of the community and municipal assembly in accepting and approving tariffs is in itself a check on the propensity to place further burden on the poor.

The above considerations are general and intrinsic in the community ownership and management approach to WASH. However, at the system level, specific strategies that target the poor (e.g. lifeline tariffs that target the poor) are non-existent. Arguments in favour of the need to recover O&M cost have been raised but there is need to draw a clear line between efforts to recover costs and those meant to protect the poor without compromising the other.

4.4. Health and Hygiene Promotion, Health & Environmental Considerations

The model makes adequate provision for the promotion of hygiene and sanitation. This component of the WASH is delegated to the WATSAN Committee which has the responsibility of promoting proper hygiene and sanitation practices in their various communities.

Whilst this is a good idea, its implementation has not been without challenges. Some of the challenges are outlined below:

- a. The personnel lack indepth hygiene and sanitation knowledge
- b. The WATSAN Committee is not a legalised institution and lacks political recognition
- c. WATSAN Committees lack the necessary logistics
- d. The WATSAN Committee's work is voluntary and prone to insults and loss of time; no incentives are given in the form of allowances to motivate them
- e. Community members have little respect for WATSAN Committee members
- f. The enormity of hygiene and sanitation activities required is beyond the capacity of WATSAN Committees.

With this prevailing scenario, the promotion of hygiene, sanitation and other environmental issues have been largely voluntary and uncoordinated in the case study area. However, the MWST and Zonal EHAs have intensified their support to WATSAN Committees to regularly organize communities for mostly clean-up activities. Residents themselves however, do not make themselves available for continuous hygiene education and sensitization that would yield the needed behavioural change.

Another effort at improving the hygiene and sanitation situation in the communities was the implementation of community-led total sanitation concept facilitated by the CWSA-GAR with funding from DANIDA in the case study areas in 2008.

4.5. Sustainability

The entire CWSA-facilitated rural and small town water and sanitation delivery has the single collective objective of ensuring the sustainability of both facilities and behaviours that ensure longevity of use and promotion of good health. Tied to Sustainability is the concept of viability. Viable water systems are inputs to sustainable management of the systems.

Presently, the water systems in the case study area seem to be viable and could still be more viable. Some of the parameters below have ensured satisfactory viable operation include:

- a. Institution of effective cost-recovery tariff
- b. Appreciable patronage through some hygiene education, good customer care, etc
- c. Elimination of illegal connections
- d. Close monitoring operations, especially in the early years of the operations.

However, it is believed the systems could still be managed in a more viable manner if most of the parameters are improved upon. The sustainability will also be ensured through:

- a. Intensified collaboration among other stakeholders
- b. Proper and efficient recording of operations
- c. Setting adequate funds aside every month for future repairs and replacement – this does not exist
- d. Stocking of appropriate spare parts – there is no spare parts stored to reduce down-time
- e. Periodic capacity-building of WSDB members and O & M staff
- f. Regular and effective meetings held by WSDB
- g. Undertake prudent financial management – this has been lacking in the project area
- h. Implementation of measure to reduce losses to the minimum (see figure below)

The inadequacy of these in the case study areas has no doubt impacted negatively on the present level of the sustainability of the system.

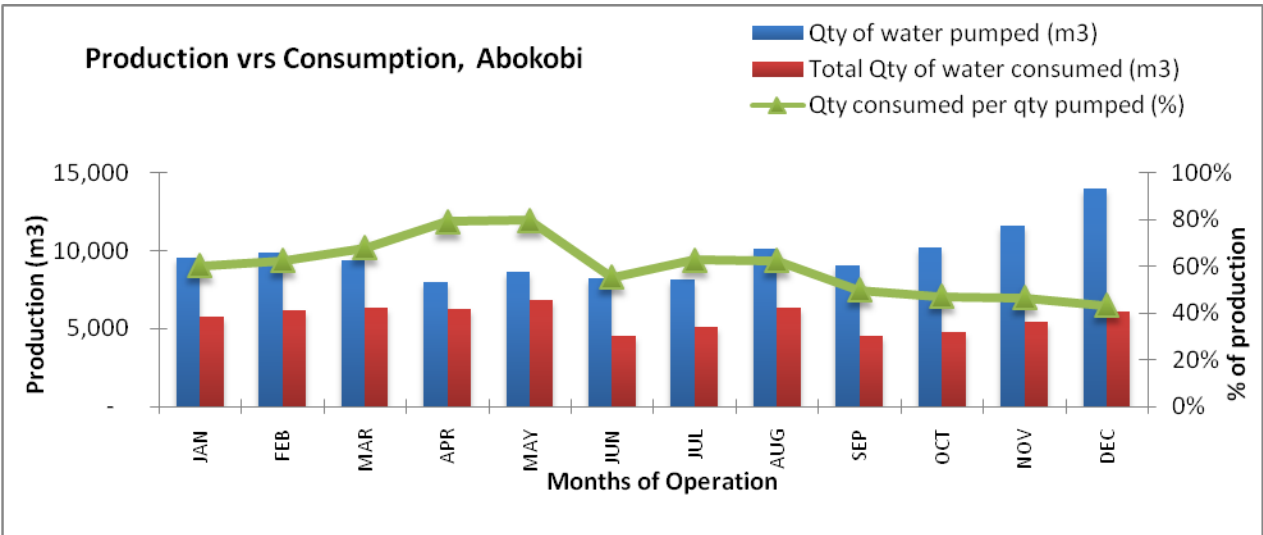


Figure 14: Production vrs Consumption for Abokobi, 2008

5. CONCLUSION

5.1. Achievements of the Model

It can be stated that the implementation of this model in the Abokobi and Pantang has made satisfactory achievements. These include the fact that:

- Each community has effectively re-organized its WATSAN Committee after their initial term of office expired; generally all former members were retained
- WSDB/WATSAN Committees discussed the tariff increase with their respective community leaders and members before it was approved by the MA;
- WSDBs pay regular visits to WSDB office to acquaint themselves with the day-to-day operation and management of WASH activities. This ensures close collaboration and checks on staff
- Faults and problems are quickly addressed with the involvement of WSDBs
- WATSAN Committees undertake some hygiene and sanitation promotion (clean ups) using the transfers made to them by the WSDB
- System Managers have managed the systems satisfactorily on behalf of the WSDBs

5.2. Weaknesses (What Needs Improvement?)

The increasing population surge in the case study area has made the management of the system more complex than expected. The weakness of the model is the lack of mechanisms to ensure that all stakeholders, especially the DA/MWST, honour their obligations as far as the efficient and effective operation and maintenance of the system is concern. This has resulted in the problems outlined below:

- Community seldom knows the financial situation of the WSDB;
- WSDB has weak interaction with community leaders;
- Monthly reports are not regularly prepared and presented to the MA
- Recorded data are not reliable as a result of ineffective and irregular supervision of staff
- System Manager is not independent or has very limited autonomy and control over other staff
- The use of WATSAN Committee in revenue collection has been cumbersome and has led to revenue losses
- There is delay on the part of the WATSAN Treasurer in releasing money to the WSDB
- There are cases of connivance between Vendor and WATSAN Treasurer
- The situation were the WATSAN Treasurer is not under the control of SM is questionable

- WSDBs withdraw monies from bank without knowledge and documentation of operational staff
- There is lack of management support from the MA. Interaction between MA/MWST and WSDB/O&M staff is poor
- The model may not be suitable for a fast growing peri-urban WASH environment

5.3. Proposals for modifications in Present Management Model in the Case Study Area

In view of the weaknesses identified in the implementation of the management model in the case study area, the following are proposed modifications that would enhance the effectiveness of the model:

- a. Strong management support to be provided by the MWST/MA
- b. Sustained and effective monitoring of operations by MWST/MA
- c. Regular and prompt preparation and submission of monthly operational reports to MA
- d. Explicit role spelt out for and more authority given to the System Manager
- e. Collection of revenue by a staff – a Revenue Collector – instead of the WATSAN Treasurer

5.4. Alternative Management Model Envisaged

A more efficient and effective management model that would suit the WASH environment of the case study area is the **Delegated Management** or the use of the Private Operator. This management model is often used in communities where, among other things:

- a. WASH facilities serve more than one community
- b. Populations 15,000 people and above (CWSA recommended)
- c. Community is highly heterogenous – mostly of different ethnic groupings
- d. Peri-urban communities
- e. Complex lifestyles with complex social strata or social mix exist
- f. The WSDB is seen to be very vulnerable
- g. Technically complex water systems

5.4.1. Features

In this model, the management of the water system is contracted to a Private Operator (of legal standing) who operates, maintains, and to some extent manages the system (except taking decisions). An agreed management fee is charged and paid to the Private Operator. The responsibilities of the Private Operator, among others, include:

- a. Operating and maintaining the system efficiently
- b. Undertaking minor and major repairs

- c. Collecting revenue efficiently and promptly depositing all accrued revenue into an escrow account
- d. Undertaking proper and correct recording of all operations – technical and financial
- e. Producing and submitting periodic reports of performance to the Client (WSDB)
- f. Assisting the Client (WSDB) in hygiene and sanitation promotion

5.5. Lessons Learnt

Lessons learnt in the implementation of the Management Model in the study are:

- a. The full involvement of the community/beneficiary right from the start of project implementation helps to ensure sustainable management
- b. The institution of management of system at the beneficiary community level makes O&M of the facility easier
- c. When adequate capacity-building and support is given to the management personnel, some level of efficiency and effectiveness is assured
- d. Irregular and ineffective monitoring mechanism (in this case by the Municipal Assembly) can lead to poor performance in operations.
- e. The operation of a bank account where funds for future replacements are deposited is an innovation that has saved WASH systems from pre-mature collapse.
- f. Generally, pro-poor issues are expected to be addressed when management of WASH facilities are handled at community/district level, rather than by Central government, however, there is still the lack of adequate mechanism to effectively target the poor. Real pro-poor strategies are lacking at the system level.
- g. Management models should be selected with strong consideration of the socio-economic and socio-cultural characteristics of the project area
- h. Pro-poor considerations should not over-shadow the need to set full cost-recovery tariffs

In conclusion, the management model based on WSDB and WATSAN with professional staff is quite adequate for systems serving multiple communities with populations below 15,000 as recommended in the CWSA O&M Guidelines. However, its long term sustainability will require a transparent and consistent monitoring and accountability mechanisms. It will also be depended on on-going performance review and a capacity building for stakeholders in the operation and maintenance of the system. Pro-poor responsive mechanisms such targeting of the poor, pro-poor payment arrangements and lifeline tariff, needs to factored into the model. These were found to be inadequate in the study areas.

Annex 1: CWSA's WASH Implementation Strategy

The enacting of the legislative instrument (LI) for the establishment of the Community Water and Sanitation Agency (CWSA) no doubt has enhanced the improvement of rural and small town WASH situation in many communities in Ghana.

The broad outline of CWSA's strategy to improve WASH coverage is:

- CWSA to play a facilitative and regulatory role
- Rural WASH activities decentralized to the district, municipal or metropolitan level
- Demand-response approach from both community and district assembly
- Full beneficiary community participation and involvement
- Full women participation – gender-based implementation; at least 40% women in management bodies;
- Cost-sharing between funder (GoG and donor) and beneficiary (district assembly and community) in the ratio 90% to 10% (5%+ 5%)
- Intensive promotion of hygiene and sanitation
- 10-year projected population design
- Use of the private sector in service delivery
- Construction of public fetching points
- Discontinuation of public latrines, but promotion of household and institutional latrines
- Establishment of district/community-level management, operation and maintenance (DWST, WATSAN, WSDB, O&M staff & Area Mechanics)
- Participatory monitoring at community, district and regional levels
- Institution of cost-recovery tariffs to ensure sustainable use of facilities