Republic of Ghana

Ministry of Water Resources,
Works and Housing

Water and Sanitation Sector Performance Report

2010

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Foreword

The Government of Ghana is determined to work towards a Ghana that is continuously better to live in. Through this commitment, the Government is developing systems and structures that would enable Ghanaians to experience progressively better living conditions in all sectors including the provision of clean and safe water for all by 2025.

Over the years, lack of accurate data and information has hampered effective policy making as well as effective decision-making in the area of water, sanitation and hygiene. It has been a challenge to develop accurate statistics on water and sanitation in the country for several years. This challenge has stemmed from the lack of standard definitions and indicators when dealing with our water and sanitation programmes.

This second edition of the water and sanitation performance report is designed to consolidate the gains made with the maiden edition last year in setting standards for better data collection, analysis and proper implementation of programmes in the sector. Data quality and availability will lay the foundation for creating a common monitoring system that would help resolve the existing problems.

The report makes it clear how the sector has underperformed due to lack of sufficient funding resulting, partly, from the fact that approved budgets have usually not been fully released to the relevant agencies for implementation. Though there was some improvement in budget releases in 2010 over the 2009 performance, government will sill pursue a stronger agenda in the years ahead to ensure that the "Better Ghana" is indeed achieved through increased funding to the water and sanitation sector.

It is my conviction that future editions of this report will deliver more comprehensive information on functionality, gender and vulnerability, hygiene and sanitation as well as NGO participation in the delivery of water and sanitation facilities to the people of Ghana. Though this edition provided some information on these parameters, the Ministry will till work harder to obtain more in subsequent editions.

I extend my sincere appreciation to the Water Directorate and the WSMP, our Development Partners, NGOs, the Media and partners from the Private Sector and individuals who have made this issue a success. I hope that we can continue to count on their support to realize universal access to potable water by the year 2025. I also wish to particularly thank the EU and UNICEF for sponsoring the production of the report.

Hon. Alban S. K. Bagbin (MP)
Minister for Water Resources,
Works and Housing

Acknowledgements

The Ministry of water Resources, Works and Housing, on behalf of the Government of Ghana, wishes to acknowledge the contribution of some institutions and individuals to the production of this second Ghana Water and Sanitation Sector Report.

The government acknowledges the role of the EU Water facility and UNICEF for funding this project. Special mention also goes to the WASH Sector Group for mooting the idea of a sector report in 2008 as a requirement under the march towards a Sectorwide Approach (SWAp).

Again, the government wishes to commend the Community Water and Sanitation Agency, Ghana Water Company Limited, the Water Resources Commission, the Environmental Health and Sanitation Directorate (WHSD), and the Coalition of NGOs in Water and Sanitation (CONIWAS) for volunteering most of the information that form the core of this report, as well as the Water and Sanitation Monitoring Platform (WSMP), for coordinating the compilation and analyses of information and the production of this report.

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AfDB	-	African Development Bank
AVRL	-	Aqua Vitens Rand Limited
CEOs	-	Chief Executive Officers
CIDA	-	Canadian International Development Agency
CLTS	-	Community-led Total Sanitation
CONIWAS		Coalition of NGOs in Water and Sanitation
CSO	-	Civil Society Organization
CWSA	-	Community Water and Sanitation Agency
DA	-	District Assembly
DANIDA	-	Danish International Development Agency
DESSAP	-	District Environmental Sanitation Strategy and Action Plan
DfID	-	(UK) Department for International Development
DPs	-	Development Partners
EHSD	-	Environmental Health and Sanitation Directorate
EPA	-	Environmental Protection Agency
ESA	-	External Support Agency
EU	-	European Union
GDP	-	Gross Domestic Product
GES	-	Ghana Education Service
GH¢	-	Ghana Cedi
GoG	-	Government of Ghana
GSS	-	Ghana Statistical Service
GTZ	-	German Technical Cooperation
GWCL	-	Ghana Water Company Limited
GWF	-	Ghana Water Forum
GWJN	-	Ghana Watsan Journalists Network
GWSC	-	Ghana Water and Sewerage Corporation
HSD	-	Hydrological Services Department
IWSPMF	-	Improvement of Water Sector Performance management Framework (Project)
JMP	-	WHO/UNICEF Joint Monitoring Programme
JTC /IWRM		Joint Technical Committee for Integrated Water Resources Management
LA	-	Learning Alliance
LI	-	legislative Instrument
M&E	-	Monitoring and Evaluation

MDG	-	Millennium Development Goal
MLGRD	-	Ministry of Local Government and Rural Development
MMDA	-	Metropolitan/Municipal/District Assembly
MoE	-	Ministry of Education
MoFEP	-	Ministry of Finance and Economic Planning
MoH	-	Ministry of Health
MWRWH		Ministry of Water Resources, Works and Housing
NCWSP	-	National Community Water and Sanitation Programme
NEPAD	-	New Partnership for Africa's Development
NESSAP	-	National Environmental Sanitation Strategy and Action Plan
NGO	-	Non Governmental Organization
NLLAP	-	National Level Learning Alliance Platform
PURC	-	Public Utility Regulatory Commission
RCN	-	Resource Centre Network
RWSP	-	Rural Water and Sanitation Project
SESIP	-	Strategic Environmental Sanitation Investment Plan
SHEP	-	School Hygiene Education Programme
SIP	-	Strategic Investment Plan
SWAp	-	Sectorwide Approach
TPP	-	Tripartite Partnership
UNICEF	-	United Nations Children's Fund
VBA	-	Volta Basin Authority
VIP	-	Ventilated Improved Pit (latrine)
WASH	-	Water, Sanitation and Hygiene
WATSAN		Water and Sanitation
WHO	-	World Health Organization
WQI	-	Water Quality Index
WRC	-	Water Resources Commission
WSDBs	-	Water and Sanitation Development Boards
WSMP	-	Water and Sanitation Monitoring Platform
WSRP	-	Water Sector Restructuring Programme
WVI	-	World Vision International

Executive Summary

This is the second edition of the Annual WASH Sector Performance Report. Like the first edition, the fundamental issue with non-harmonized M&E systems and indicators is still the main challenge (though anticipated) encountered in producing this report. This means that the Editorial Team once again had to resort to the annual reports from the sub-sector agencies - CWSA, GWCL and WRC - for most of the information. As the annual reports from these agencies are usually published between June and August, the team had to wait all that while before compiling and analyzing the information to produce this report, explaining the late publication.

Institutional and Policy Developments

The preparation of a Strategic Sector Development Plan (SSDP) for the WASH sector was initiated towards the last quarter of 2010. The SSDP is a consolidation of the separate sub sector investment plans and strategies into a single harmonized sector plan. These plans include the Strategic Investment Plans (SIP) of the CWSA and GWCL and a strategic plan is being developed for the WRC. The National Environmental Sanitation Strategy and Action Plan (NESSAP) of the MLGRD will also be incorporated into the SSDP with the exception of the urban sanitation component. The SSDP will effectively address the absence of a common sector-wide coordination framework covering the different components of the sector and serve as the basis for implementing the Sector Wide Approach (SWAp) for the WASH sector. Completion of the SSDP is a trigger under the Multi-Donor Budget Support (MDBS) framework. The SSDP is expected to be completed by December 2011.

Progress was made in the development of key sector policy and strategic instruments including the following:

- The Integrated Water Resources Management (IWRM) Strategic Plan was initiated and ongoing;
- The Buffer Zone Policy was completed;

The sector also made progress in the development of key policy and strategic instruments including the following:

- A Revised National Environmental Sanitation Policy, which was finalized and launched;
- National Environmental Sanitation Strategy and Action Plan (NESSAP), which was completed;
- District Environmental Sanitation Strategy and Action Plans (DESSAP), which were completed by every district and in operation;
- Strategic Environmental Sanitation Investment Plan (SESIP), completed but pending cabinet and parliamentary approval;
- A Rural Sanitation Model and Strategy was also developed.
- CLTS was also endorsed as the rural sanitation model during the year.

A National School Health Education Policy (SHEP) was completed in 2010 to provide a holistic approach to the implementation of School Health interventions and streamline the various policies and activities of all agencies, departments, NGOs, and individuals who offer School Health services.

Water Resources

The total annual runoff is 56.4 billion m^3 with the Volta River accounting for 41.6 billion m^3. The mean annual runoff from Ghana alone is about 40 billion m^3. The Volta, Southwestern and Coastal systems contribute 65%, 29% and 6%, respectively, of this runoff. However, the runoffs are characterized by wide disparities between the wet season and dry season flows. The total amount of groundwater available in the country is yet to be determined.

The main consumptive uses of water in Ghana are drinking water supply, irrigation, livestock watering, and industrial supply. On the basis of surface water resources alone, the consumptive water demand for 2010 was estimated at 3.0 billion m^3, which is equivalent to about 7.4% of the annual run off from Ghana alone.

The quality of water resources, which hitherto was fairly good, has in very recent years been showing signs of gradual deterioration. Water pollution of varying degrees is prevalent in almost all the river basins of Ghana but is more pronounced in urbanized river basins like the Densu and in areas where mining activities take place especially, in the Pra, Ankobra, and Birim basins. The water quality monitoring and assessment program started in 2005 in the Southwestern and Coastal River Systems, with nineteen 19 stations. In 2010 the number of monitoring stations was increased to 40 to include the Volta River System and now covers the whole country.

Urban Water Supply

Urban water supply coverage improved from 59% in 2009 to 64% in 2010. However, even with this positive improvement, a similar trend will only help the sub-sector to achieve only 72% by 2015 instead of the 85% national target. There was a total shortfall of 388,576.39m^3. The Upper West Region continued to be the least served as more than 88% of the urban population in the region still does not have access to improved drinking water sources, while the Western Region moved to the top with almost 77% of the population covered. Non-revenue water as at 2010 was 49.3% as against the 2010 target of 25%. A technical audit of the operations of AVRL was concluded by a team of consultants in 2010 and the findings, generally indicating low performance based on the terms in the contract, were shared with key stakeholders.

Rural Water Supply

The national Rural and Small Town drinking water supply coverage target for 2015 is 76%. Coverage as at 2010 was about 62%, an encouraging increase from about 59% in 2009 (expected coverage for 2010 was 63%). This, however, leaves 38% of the Rural and Small Town Population without access to safe drinking water. The Upper West Region continued to lead in rural and small town water supply, improving slightly from 76.34% in 2009 to 76.94% in 2010, while the Western Region remained at the bottom at 52.45%. Only three regions, Upper West, Ashanti and Volta, performed above the national average of (61.74%); all the rest performed below the national average.

Sanitation

Provider-based data on sanitation was still unavailable in 2010. The only type of data often used during the year was from the 2008 GDHS and JMP reports. Available user based data on sanitation therefore still indicates 13% nationally as the proportion of the population using improved sanitation facilities (18% urban and 7% rural (2008). In terms of supply of toilet facilities in 2010, the CWSA facilitated the construction of 5,384 toilets comprising 3,660 household VIP latrines, 1,430 household KVIP latrines and 294 institutional latrines nationwide.

Hygiene

No statistical data on hygiene for 2010 is available. However, there was evidence on a number of hygiene-related activities carried out by the CWSA, EHSD and SHEP. The MLGRD also endorsed CLTS as the rural sanitation model. As at 31st December 2009, there were 308 CLTS communities out of which 69 had been declared open defecation-free (ODF). The latest user-based data on household water treatment and storage was reported in the GDHS 2008. According to the report, about 8.7% of the population practised appropriate household water treatment methods. In 2010, a Household

Water Treatment and Safe Storage (HWTS) strategy was developed by sector agencies under the leadership of the Ministry of Local Government and Rural Development/ Environmental Health and Sanitation Directorate. The strategy gives direction to how water can be kept safe throughout the water chain of fetching-transportation-storage-usage.

WASH in Schools

Out of a total of 11,140 basic schools throughout the country, 5,360, representing 48%, had toilet facilities and 7,075, representing 63.5%, had water facilities attached to them. This means that as at 2009, there were 5,780 basic schools without toilet facilities and 4,065 basic schools without water facilities. Data for 2010 was not available for this report. While the Western Region had the highest coverage for water facilities, with 79% of basic schools in the region having access, it had the lowest for toilet facilities with only 33% of basic schools having access. The Greater Accra Region was highest for toilet facilities with 74% percent of basic schools in the region having access. The Upper West Region had the lowest coverage figures for water (46%).

WASH Sector Financing

Government allocations to the WASH Sector since 2006 have consistently fallen below 2% of annual Gross Domestic Product (GDP). It has also shown a downward trend, having dropped from 1.52% in 2006 to 0.52% in 2010. As MWRWH and MLGRD received 2.7% and 3.55% respectively of the total national budget in 2010, the Ministry of Health alone received more than 11%, while the Ministry of Education received 26%. Release of GoG allocated budgets to sector agencies, however, improved tremendously as the WRC received 77% (3.2% in 2009), CWSA received about 87% (about 10% in 2009) and the GWCL received about 269% (23% in 2009) of allocated budget. CSO contribution to sector financing is still not yet known as information in 2010 was inadequate.

Conclusions and Recommendations

- The current institutional arrangements for the WASH Sector have been tested for some time now. It might be useful to undertake thorough assessments on these arrangements and make some reviews where necessary.

- The capacity building package in the 2010 SWA Compact for the Water Directorate and the Environmental Health and Sanitation Directorates must be fulfilled as a matter of urgency since the two Directorates are woefully understaffed and ill-equipped to take on the huge task of coordinating all WASH Sector strategic directions for government ownership in a SWAp environment.

- Since ground water sources are so vital and are a preferred choice especially for rural water supply, it would be useful for the country to know how much of it is available.

- Urban water management is also still a major issue since evaluation of AVRL's performance has indicated failures in many areas. It is therefore recommended that the value addition of the AVRL Management Contract be critically evaluated so that a more efficient model may be found.

- For the sake of sustainability of rural and small town water supply facilities, the current Community Ownership and Management model should be evaluated and possibly reviewed.

- Since the Community-led Total Sanitation approach has been adopted, all stakeholders are encouraged to embrace it and support its implementation.

- The WASH sector is still not adequately funded. It is recommended that the commitments in the 2010 Ghana Compact be fulfilled.

- This report has again been produced without a harmonized M&E framework. It has been suggested that the development of a Strategic Sector Development Plan (SSDP) should include a sectorwide M&E plan and framework. It is therefore expected that by the time the SSDP is ready, the sector would have harmonized M&E processes.

- It is commendable that CSOs began to track their contribution to the WASH sector and submitted for publication in this report. It is hoped that more information will be made available for subsequent reports.

Introduction

This WASH sector report aims to assemble all sector progress information in one document and make it available to government, development partners, the media, the public, and all key decision-makers in the sector. The intention is to publish the status of the sector annually to help track achievements against set targets and support effective decision-making and policy formulation.

The Water, Sanitation and Hygiene (WASH) Sector of Ghana has come a long way in terms of institutional arrangement and policy environment especially since the early 1990s.

The development of the National Community Water and Sanitation Programme and the subsequent creation of the Community Water and Sanitation Agency, the establishment of the Water Resources Commission, the Ghana Water Company Limited, the creation of a Water Directorate and an Environmental Health and Sanitation Directorate, as well as the formation of the Coalition of NGOs in Water and Sanitation, have all tremendously promoted and facilitated coordination in the sector.

In addition to all these wonderful institutional arrangements, coupled with the need for better aid as directed by the Paris Declaration and the Accra Agenda for Action, the Government of Ghana has collaborated effectively with her development partners to work towards a sectorwide approach (SWAp), where there will be a move-away from the current project-driven and less coordinated approach to working within a more coherent national plan to minimize the incidence of improper allocation of scarce resources.

Over the years, it has always been difficult or even impossible to obtain a harmonized set of data or information for a national level decision-making. Last year, the Ministry of Water Resources, Works and Housing, in an attempt to harmonize WASH sector information to respond to this challenge, produced the first WASH Sector Performance Report with coordination by the Water and Sanitation Monitoring Platform. The strategy was to compile all agency level annual reports and other relevant reports. This was because there was no sector M&E plan and framework to guide the production of an independent sector report.

This is the second edition; while there is no significant change in the sector M&E environment, we have had to apply the same methodology as that of last year (though the parameters have been widened slightly this time round), as we wait for the completion of the sectorwide M&E plan and framework with an agreed set of sectorwide harmonized indicators.

As expected, some of the core indicators whose status many stakeholders would love to know still have virtually no records on them simply because it has not been the tradition to keep such records. For instance it was still difficult for the team to assemble data on functionality of systems, gender and vulnerability, NGO contribution in terms of facility delivery, advocacy and sector funding. Information on District Assemblies' direct investment in the WASH sector is also still missing.

The production of this report, nonetheless, offers some hope as it brings on board, some information on hygiene, sanitation and school sanitation, all of which were missing in the 2009 edition. We still hope that as subsequent editions are published and information gaps are exposed, all appropriate institutions will be challenged to improve on documentation. At the ministry level, the first major action is to fast track the development of the national level M&E Framework in order to facilitate the production of this report and sector monitoring as a whole.

This report has been grouped under fourteen chapters; chapters one to three provide information on historical overview of Ghana's Water and Sanitation Sector, institutional developments and sector coordination. Chapter four to seven provide performance information on water resources management, urban, rural and small town water supply in 2010 with some comparisons between 2009 and 2010. Chapters eight, nine and ten provide performance information on sector performance on sanitation, hygiene and school WASH in 2010. Chapter eleven to fourteen contain information on WASH sector financing, contributions from non-state actors to the WASH sector, monitoring, evaluation and sector reporting and some recommendations for decision-making.

This second edition may also not provide the harmonized information needs as expected. Nonetheless, it has widened the reporting parameters of the 2009 edition and provides a stronger hope for a faster drive towards data harmonization in the sector.

Chapter 1: Historical Overview

Introduction

The first public water supply system in Ghana, then Gold Coast, was established in Accra just before the First World War. Extensions were made exclusively to other urban areas, among them the colonial capital of Cape Coast, Winneba and Kumasi in the1920s.

During this period, the water supply systems were managed by the Hydraulic Division of the Public Works Department (PWD). With time the responsibilities of the Hydraulic Division were widened to include the planning and development of water supply systems in other parts of the country.

In 1948, the Department of Rural Water Development was established to engage in the development and management of rural water supply through the drilling of bore holes and construction of wells for rural communities.

After Ghana's independence in 1957, a Water Supply Division, with headquarters in Kumasi, was set up under the Ministry of Works and Housing with responsibilities for both urban and rural water supplies.

During the dry season of 1959, there was severe water shortage in the country. Following this crisis, an agreement was signed between the Government of Ghana and the World Health Organization (WHO) for a study to be conducted into the water sector development of the country.

The study focused not only on technical engineering but also on the organization of national water and sewerage authority and the methods of financing. The study recommended the preparation of a 20-year (1960 to 1980) Master Plan for water supply and sewerage services in Accra-Tema.

In line with the recommendations of WHO, the Ghana Water and Sewerage Corporation (GWSC), was established in 1965 under an Act of Parliament (Act 310) as a legal public utility entity. GWSC was responsible for:

- water supply and sanitation in rural as well as urban areas
- the conduct of research on water and sewerage as well as the making of engineering surveys and plans
- the construction and operation of water and sewerage works, and
- the setting of standards and prices and collection of revenues

1.1 Decline in Operational Efficiency of GWSC

In 1957, there were 35 pipe-borne water supply systems in the country. The number of pipe-borne systems rose to 69 in 1961 and then to 194 in 1979. At this time, there were 2,500 hand pumped borehole systems in the country and by 1984, additional 3,000 boreholes had been drilled and fitted with hand pumps. However by the late 1980s and early 1990s, 33% of the water supply systems had deteriorated greatly or completely broken down due to inadequate funding to carry out maintenance and rehabilitation. A World Bank report in 1998 states that: "The water supply systems in Ghana deteriorated rapidly during the economic crises of the 1970s and early 1980s when Government's ability to adequately operate and maintain essential services was severely constrained."

1.2 Interventions to Improve Efficiency

To reverse the decline in water supply services, interventions in the area of sector reforms and project implementation were made in 1970, 1981 and 1988. These included interventions by the World Bank, IDA, donor countries and other external support agencies such as Austrian Government, Italian Government, Nordic Development Fund, the African Development Bank, Canadian International Development Agency, Department for International Development, KfW, GTZ, OECF, ECGD and CFD/ADF.

Though some gains were derived from these interventions, their general impact on service delivery was not very significant. Due to the failure of these interventions to achieve the needed results, several efforts were made to improve efficiency within the water supply sector in Ghana especially during the era of the Economic Recovery Programme from 1983 to 1993. During this period, loans and grants were sought from the World Bank and other donors for the initiation of rehabilitation and expansion programmes, to train personnel and to buy transport and maintenance equipment.

In addition, user fees for water supply were increased and subsidies on water tariffs were gradually removed for GWSC to achieve self-financing. Although subvention for both operational and developmental programmes was withdrawn in 1986, government funding for development programmes continued. The government at that time approved a formula for annual tariff adjustments to enable the corporation generate sufficient funds to cover all annual recurrent costs as well as attain some capacity to undertake development projects.

1.3 Recent Water Sector Reforms

A number of organizational reforms within the Ghanaian water sector were initiated in the early 1990s. As a first step, responsibilities for sanitation and water supply to small towns were decentralized from the Ghana Water and Sewerage Corporation (GWSC) to the District Assemblies in 1993.

The Water Resources Commission (WRC) was founded in 1996 to be in charge of overall regulation and management of water resources utilization. In 1997, the Public Utilities Regulatory Commission (PURC) was established with the purpose of setting tariffs and quality standards for the operation of public utilities (notably water and electricity).

With the passage of Act 564 of 1998, the Community Water and Sanitation Agency (CWSA) was established to be responsible for management of rural and small town water supply systems, hygiene education and provision of sanitary facilities. After the establishment of CWSA, 120 water supply systems serving small towns and rural communities were transferred from the GWSC to the District Assemblies and communities to manage under the community-ownership and management scheme.

Finally, pursuant to the Statutory Corporations (Conversion to Companies) Act 461 of 1993 as amended by LI 1648, on 1st July 1999, GWSC was converted into a 100% state owned limited liability company – the Ghana Water Company Limited - with the responsibility for urban water supply only.

In 2003, NGOs and CBOs in the WASH sector, including some international NGOs, formed the Coalition of NGOs in Water and Sanitation (CONIWAS). The Coalition has so far contributed a lot in coordinating the activities of their members and also in playing a great advocacy role by constantly raising pro-poor issues for national attention. CONIWAS also took over the organization of the Mole Conference Series, an annual platform held since 1989 to contribute towards sector policy reviews.

A Water Directorate was also created within the Ministry of Water Resources, Works and Housing in 2004 to oversee sector policy formulation and review, monitoring and evaluation of the activities of the agencies, and overall co-ordination of the activities in the sector.

The Environmental Health and Sanitation Department of the Ministry of Local Government and Rural Department was also upgraded into a Directorate in 2008.

As the WASH sector has mainly been project-driven with little coordination of these projects, there have been more discussions on effective coordination especially by the Sector Ministries. Since 2009, efforts have been made to move towards a sector-wide approach (SWAp), where there will be a programmatic approach with the Sector Ministries in the driving seat and coordinating all programmes implemented by the various agencies and civil society. In 2009, a SWAp roadmap was developed and in 2010, the Government of Ghana signed a SWAp Code of Conduct, spelling out roles and responsibilities, with her development partners.

In order to promote learning and regular policy review to effective service delivery, the Ministry of Water Resources, Works and Housing (MWRWH) and the Ministry of Local Government and Rural Development (MLGRD) introduced annual conferences with a wide range of local and international participation. While the MWRWH introduced the Ghana Water Forum (GWF) in 2009 to replace the then GoG/Donors Conference, the MLGRD introduced the National Environmental Sanitation Conference (NESCON) in 2010.

In 2007, the MWRWH developed the first National Water Policy and launched it in 2008. This policy has since guided the sector in all its programmes and provides directions in all aspects of water from resources management to supply and services delivery, as well as monitoring and evaluation. Though the MLGRD had a sanitation policy since 1999, there was a major review between 2007 and 2010. The reviewed policy was launched in December 2010. Operational and investment strategies of both, however, are yet to be launched.

Chapter 2: Institutional and Policy Developments

Introduction

This chapter presents recent developments in the WASH Sector concerning institutional arrangements and capacity building as well as policy formulation and reviews. This includes an overview of the national development agenda, strategic plans, among others as pertained in recent years up to 2010.

2.1 The Ghana Shared Growth and Development Framework

The Ghana Shared Growth and Development Agenda (GSGDA) replaced the Growth and Poverty Reduction Strategy II as the Medium Term Development Policy Framework for the period 2010-2013[i]. Water, Environmental Sanitation and Hygiene (WASH) is one of six (6) key focus areas under the Infrastructure and Human Settlement Development thematic area. About 15 priority policy interventions on WASH have been identified for implementation to achieve the following key objectives:

- Ensuring efficient management of water resources; accelerating the provision of safe and affordable water;
- Accelerating the provision of improved environmental sanitation;
- Ensuring the implementation of health education programmes as a component of all water and sanitation programmes;
- Improving sector coordination through a sector-wide approach to water and environmental sanitation delivery;
- Improving sector institutional capacity, and
- Ensuring sustainable, predictable and adequate financing to the sector.

2.2 Strategic Sector Development Plan

The development of a Strategic Sector Development Plan (SSDP) for the WASH sector was initiated towards the last quarter of 2010. The SSDP is a consolidation of the separate sub sector investment plans and strategies into a single harmonized sector plan. These plans include the Strategic Investment Plans (SIP) of the CWSA and GWCL and a strategic plan is being developed for the WRC. The National Environmental Sanitation Strategy and Action Plan (NESSAP) of the MLGRD will also be incorporated into the SSDP with the exception of the urban sanitation component. The SSDP will effectively address the absence of a common sector-wide coordination framework covering the different components of the sector and serve as the basis for implementing the Sector Wide Approach (SWAp) for the WASH sector. Completion of the SSDP is a trigger under the Multi-Donor Budget Support (MDBS) framework. The SSDP is expected to be completed by December 2011.

2.3 Other Water Related Strategies and Plans

In 2010, progress was made in the development of key sector policy and strategic instruments including the following:

- The Integrated Water Resources Management (IWRM) Strategic Plan was initiated and ongoing;
- The Buffer Zone Policy was completed;

These strategic documents complement the already existing National Water Policy and the Strategic Investment Plan for the CWSA.

2.4 Environmental Sanitation Policy, Strategies and Plans

The Environmental Health and Sanitation Unit was upgraded into a Directorate in 2008 and mandated to provide guidance to the MLGRD on environmental sanitation, sector planning, policy, M&E and regulatory issues. In 2010, the sector made progress in the development of key policy and strategic instruments including the following:

- A Revised National Environmental Sanitation Policy, which was finalized and launched;
- National Environmental Sanitation Strategy and Action Plan (NESSAP), which was completed;
- District Environmental Sanitation Strategy and Action Plans (DESSAP), which were completed by every district and in operation;
- Strategic Environmental Sanitation Investment Plan (SESIP), completed but pending cabinet and parliamentary approval;
- A Rural Sanitation Model and Strategy was developed.

A shift in emphasis from direct provision of subsidies to households for latrine construction to the Community-Led Total Sanitation Approach (CLTS) in Ghana received prominence in 2010. This approach emphasizes triggering of communities to initiate their own actions to stop open defecation as a first step, and to improvise local technologies to contain human excreta from contact with food and water. The national strategy builds on nationwide evaluation of all isolated experiences of CLTS promoted in different parts of the country carried out in November 2009. This evaluation distilled useful lessons for effectively scaling up CLTS in Ghana.

The DESSAPs have been developed by all 170 Districts and have already been validated at various workshops. The NESSAP is a reflection of the revised National Environmental Sanitation Policy (ESP Revised 2010) which places emphasis on the strategic sanitation approach that matches facilities with housing segments and affordability of residents. It also targets total access for environmental sanitation through incremental achievements. The basic challenge of the sector regarding excreta management include training staff to manage a vigorous nationwide scaling up of home toilets promotion through emerging techniques such as Community Led Total Sanitation (CLTS) to achieve modest country wide target of 75% by 2015 (Interim NESSAP: 2008). The process of finalizing the strategies remains critical to avoiding overlaps and ensuring incorporation of the key emerging trends.

2.5 National School Health Education Policy

A National School Health Education Policy (SHEP) was completed in 2010 to provide a holistic approach to the implementation of School Health interventions and streamline the various policies and activities of all agencies, departments, NGOs, and individuals who offer School Health services. The National SHEP Policy seeks to[ii]:

- Bring together all policy issues on School Health into a comprehensive policy document to give focus and measurable direction to programme implementation;
- Streamline and enhance programme co-ordination;
- Effectively and efficiently maximize the use of available scarce resources;
- Provide institutional framework within which stakeholders will be assigned roles and responsibilities;
- Provide the channel and mechanism through which the commitment of political leaders and stakeholders can be sought;
- Give legal backing to the programme;

- Define linkages with other national programmes and goals;
- Provide the basis and framework for Strategic Planning for programme scaling up;
- Provide framework for monitoring and evaluation of school health programmes;
- Provide the basis for Sustainable Financing for SHEP.

2.6 Institutional Developments

The direct mandate for WASH is shared between the Ministries of Water Resources Works and Housing and the Ministry of Local Government and Rural Development. The Water Directorate and the Environmental Health and Sanitation Directorate are the two institutional pillars within the respective ministries that coordinate and oversee development of sector policies, strategies and plans.

The Water Directorate coordinates three distinct institutional sub-divisions, namely: Urban Water Supply (Ghana Water Company Limited); Water Resources Management (Water Resources Commission) and Rural Water and related sanitation (Community Water and Sanitation Agency). Environmental Sanitation is coordinated by the EHSD of the Ministry of Local Government and Rural Development (MLGRD). School WASH is coordinated by the School Health Education Program (SHEP) of the Ghana Education Service (GES).

The GSGDA acknowledges that improving sector institutional capacity is of essence to ensuring efficient water resources management, and water and sanitation services delivery in the country. The Water Directorate and the Environmental Sanitation and Hygiene Directorate will be strengthened with adequately trained number of personnel and other resources to enable them take ownership and lead roles of the sector. Sector agencies such as WRC, GWCL, CWSA, MMDAs and community management structures will also be given the needed capacity to enable them better manage water resources, water and environmental sanitation facilities at the various levels. Capacity building will be provided as a continuous process. A Sanitation and Water for ALL (SWA) Compact was also launched in 2010 to further emphasize government's commitment to list WASH among the Essential Services, develop the capacities of the WASH Directorates to ensure WASH sector growth. Despite this explicit intention of the government, not much was achieved for the WASH sector with regard to strengthening the Water Directorate and the EHSD in 2010. Besides the Director for Water, the Water Directorate continued to rely on three seconded and project staff for all its operations, while the EHSD hardly received any staffing and logistical boost during the year.

Chapter 3: Sector Coordination

Introduction

This chapter discusses WASH sector coordination issues in 2010. Discussions cover the move from project-based approaches to a Sector Wide Approach (SWAp), the development of a SWAp roadmap, formation of a SWAp Implementation Task force, signing of a Code of Conduct between the Government and development partners, SWAp-related action-oriented workshops as part of the SWAp process among others. The chapter also discusses a couple of coordination structures including the National Environmental Sanitation Policy Coordinating Council (NESPoCC), the Sector Working Group and the National Sanitation Technical Working Group on Sanitation (NTWGS).

3.1 SWAp

Over the years, the WASH sector in Ghana has seen significant growth and development, with competent technical agencies, a dynamic private sector and sustained service delivery, especially for the rural sub sector. Despite this progress, the sector is hampered by the lack of a common strategy or sector-wide coordination framework that pulls together the different sub sectors and related aspects of sanitation. Most interventions are project driven, with different project teams adopting their own systems and procedures independent of others, sometimes with little or no government influence. This results in poor prioritization and planning of investments, increased transaction costs, lack of government leadership and ownership.

For many years, there was discourse among sector stakeholders towards a better coordinated and more effective WASH sector in line with the Paris Declaration. Discussions about a better coordinated WASH sector took shape in 2010, when stakeholders finally embarked on efforts to adopt a Sector Wide Approach (SWAP). Government, Development Partners, Civil Society and other relevant stakeholders in the sector actively engaged in a stepwise process towards adoption of SWAp. Under SWAp all Development Partners (DPs) are expected to make use of national systems of planning, management, implementation, monitoring and evaluation and to contribute to reinforcement of these systems. Capacity development has been made an explicit cross-cutting focus.

A SWAp Roadmap was developed, and SWAp Implementation Taskforce was constituted under the leadership of the Water Directorate to oversee the SWAp Implementation process. The Roadmap outlined a series of eight (8) action oriented workshops to be held, including the following:

1) SWAp Road Map Introductory workshop: to solicit the buy-in of all sector stakeholder (i.e. Government of Ghana, Development Partners, Sector Agencies, NGOs and other relevant stakeholders;
2) Workshop to deepen understanding of Ghana's Water Sector SWAp and agree on a Code of Conduct (and eventual MoU) of the SWAp;
3) Workshop to Agree on a Comprehensive Sector Wide Development Action Plan (including: assigning leaders and responsible stakeholders for conducting sector assessments, the establishment of an annual sector-wide program of work - with corresponding prioritized budget and results based management framework for the SWAp);
4) Workshop to Discuss Ways to Support Decentralization under the SWAp;

5) Workshop to Discuss the Implementation of a Comprehensive Monitoring and Evaluation System for the SWAp;
6) Workshop to Discuss and Agree on Procurement Principles and Guidelines under the SWAp;
7) Workshop to Agree on Various Financing Options for the SWAp; and
8) Any other Workshops required for successful SWAp Road Map implementation.

The first four in the series were held in 2010, and the remainder is expected to be completed in 2011. The Code of Conduct was also signed. The following results are expected at the end of the roadmap:

- Awareness and common understanding established among stakeholders on the extent and scope of cooperation required with respect to harmonized approaches and the need for government leadership as well as donor, NGO, private sector and other stakeholders' alignment to national development priorities.
- Discussion of short, medium and long term benefits from harmonization, lessons of experience, issues and measures to overcome critical and strategic barriers to harmonization and alignment.
- Formulation of ways and means to operationalize the national sector plan and the SWAp which will lead to increased development effectiveness and ultimately, real outcomes in regard to water and sanitation targets as well as poverty reduction goals, through the implementation of concrete Action Plans.

During the Second Action Oriented SWAp workshop held in Accra in March 2010, stakeholders identified short and long term priority actions to be undertaken for the effective implementation of the SWAp. The Short term priority actions included:

- Operationalization of District Monitoring & Evaluation System, in all regions and Metropolitan/Municipal/District assemblies. The system should cater for different types of data streams within the sector
- Sector-wide capacity assessment to identify gaps in financial absorption capacity and human resources (public, private)
- Develop strategies for capacity enhancement

Some of the long term priority actions included:

- Clarifying roles, mandates and structures at regional and district levels
- Identify sustainable funding mechanisms
- Development of private sector capacity, including private for profit and non-profit organizations

A critical requirement for the successful implementation of the SWAp is the strengthening of the Water Directorate in terms of staffing, office space and logistics and the development of a Sector Strategic Development Plan (SSDP). Programmes and projects are currently coordinated by the GWCL, CWSA and WRC as discrete interventions in their specific areas of mandate. To address this fragmentation, the government now plans to develop a Sector Strategic Development Plan (SSDP) for the WASH sector. The SSDP will be a key instrument for the implementation of the Sector Wide Approach (SWAp) for the WASH sector and all DP support would be driven by the SSDP priorities. More details about the SSDP are provided in Chapter 2.

3.2 National Environmental Sanitation Policy Coordinating Council (NESPoCC)

A National Environmental Sanitation Policy Coordinating Council (NESPoCC) comprising all relevant stakeholders is the highest policy making and coordination body for environmental sanitation in Ghana. NESPoCC met about 3 times, as against 4 meetings expected for the year.

3.3 The Sector Working Group

The Sector Working Group comprises Government, Development Partners and Civil Society in the WASH sector that meets monthly to review critical issues and overall progress of the sector. The group is chaired by the Directors for Water, and Environmental Health and Sanitation. DPs select a Lead annually. The group successfully met on all occasions as planned throughout the year.

3.4 National Sanitation Technical Working Group

The National Technical Working Group on Sanitation (NTWGS) was formed in 2008 comprising key stakeholders and organizations. Following the evaluation of CLTS in 2009, the NTWGS supported the development of a number of documents to guide CLTS implementation including a protocol for the declaration of open defecation-free (ODF) communities. The group has also proposed to solicit a technical support visit to Ghana by Kamal Kar, the initiator of the CLTS approach in 2011.

Chapter 4: Water Resources Management

Introduction

This chapter provides information on water resources management. The chapter presents an overview of Ghana's water resources, including availability, demand, and water quality.

4.1 Overview of Ghana's water resources

Ghana's water resources are divided into surface and groundwater sources. Surface water resources are mainly from three river systems that drain Ghana, namely: the Volta, South Western and Coastal river systems. The Volta system is made up of the Red, Black and White Volta Rivers as well as the Oti River. The southwestern river system is made up of the Bia Tano, Ankobra and Pra rivers. The Tordzie/Aka, Densu, Ayensu, Ochi-Nakwa and Ochi-Amissah comprise the coastal river systems. These river systems make up 70%, 22% and 8% respectively of Ghana's total land area of about 240,000 km^2. In addition to these, the only significant natural freshwater lake in Ghana is Lake Bosomtwi with a surface area of 50km^2, and a maximum depth of 78m.

In terms of groundwater resources, Ghana is underlain by three main geological formations, namely the basement complex comprising crystalline igneous and metamorphic rocks; the consolidated sedimentary formations underlying the Volta basin (including the limestone horizon) and the mesozoic and cenozoic sedimentary rocks. These formations represent 54%, 45% and 1 % of the land area of the country respectively.

4.1.1 Water availability

The total annual runoff is 56.4 billion m^3 with the Volta River accounting for 41.6 billion m^3. The mean annual runoff from Ghana alone is about 40 billion m^3. The Volta, Southwestern and Coastal systems contribute 65%, 29% and 6%, respectively, of this runoff. However, the runoffs are characterized by wide disparities between the wet season and dry season flows.

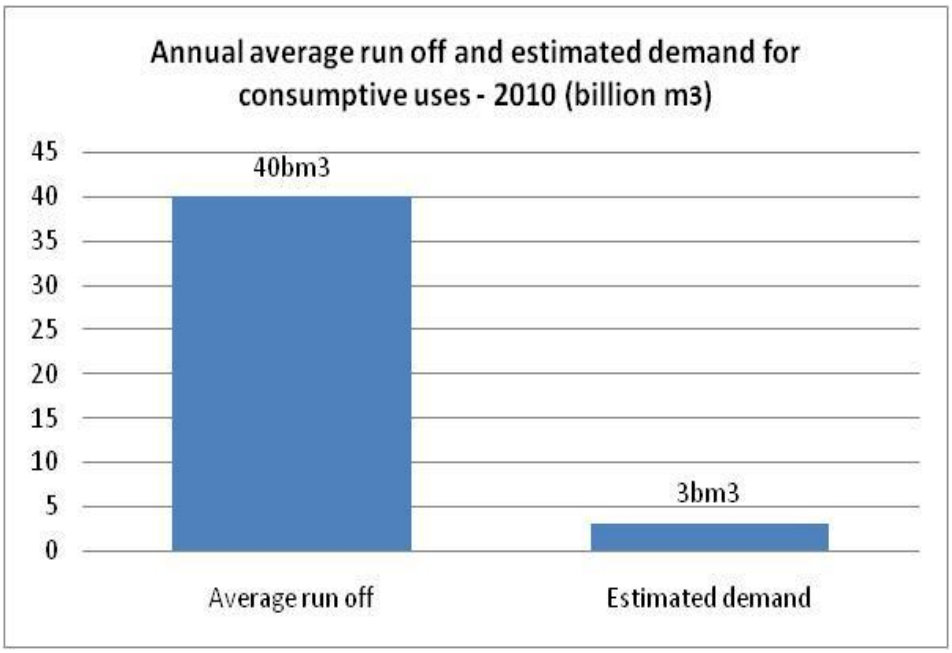
The total amount of groundwater available in the country is yet to be determined. The depth of aquifers in the basement complex and the Volta Basin is normally between 10m to 60m with yields rarely exceeding 6m^3/h. The aquifer depths in the mesozoic and cenozoic formations are usually between six and 120m with average yields of about 184m^3/h particularly in the limestone aquifer. Groundwater occurrences in limestone formations, which also exist, are located much deeper, typically in the range of 120m to 300m. The average yield in the limestone formation is 180m^3/h.

Experience has shown that groundwater has a number of advantages over surface water for the provision of water supply and is used as the first choice among other options for community water supplies whenever it is available.

4.1.2 Water demand

The main consumptive uses of water in Ghana are drinking water supply, irrigation, livestock watering, and industrial supply. On the basis of surface water resources alone, the consumptive water demand for 2010 was estimated at 3.0 billion m^3, which is equivalent to about 7.4% of the annual run off from Ghana alone.

Figure 1: Annual Average run off and estimated demand for consumptive uses



The main non-consumptive uses are inland fisheries, water transport, and hydropower generation. The projected demand for hydropower generation in 2010 was 37.8 billion m^3, which could also be met from the total surface water resources available.

4.1.3 State of water quality

The quality of water resources, which hitherto was fairly good, has in very recent years been showing signs of gradual deterioration. Water pollution of varying degrees is prevalent in almost all the river basins of Ghana but is more pronounced in urbanized river basins like the Densu and in areas where mining activities take place especially, in the Pra, Ankobra, and Birim basins.

In the rainy season, because of high river flows, the colour of waters, the total dissolved or suspended solids and conductivity change or increase considerably. For instance, a Total Dissolved Solids (TDS) value of over 2000mg/l has been found in the Subin River whilst a suspended solid load of 5,067 kg/day has been recorded for the Birim River. Dumping of domestic, industrial and agricultural wastes into rivers and streams, particular the South–Western and Coastal river systems have resulted in high levels of pollution in the surface water that requires attention.

Problems associated with the quality of groundwater are generally localized. For instance, the problem of high fluoride concentrations in groundwater caused by natural geologic conditions and the decomposition of plant material near industrial sources occurs mostly in the White Volta Basin especially in the Bongo District of the Upper East Region. Concentrations of 1.5 to 5.0mg/l have been found in boreholes in the Bongo granitic formation and a concentration of 6.0mg/l found at Lungo as against the WHO guideline value of 1.5mg/l.

The problem of high iron concentrations in groundwater is more widespread and prevalent in the Ankobra, Pra, Tano, Ayensu, Main Volta and Lower Volta River basins. Table 1 below provides examples of areas with high iron concentrations in Ghana:

Table 1: Areas of High Iron Concentration in Groundwater

Area	Iron Concentration (mg/l)	WHO Acceptable level for iron Concentration
Winneba	0.84 – 14.7	0.3mg/l
Wassa Simpa	10.0	
Sureso	0.54	
Prestea	9.0	
Omanpe	2.0	
Subri	0.5	
Ewiebo/Basake	5.0	
Kikam	1.0	
Ave Dakpa and Peki	32.0 – 54.0	
Manso Amenfi	1.0	

Ground water in these areas has unacceptable iron concentrations by WHO standards. Areas around Ave Dakpa, Peki, Winneba, Wassa Simpa and Prestea have exceptionally too much iron concentration in their groundwater resources and care must be taken in resorting to groundwater for drinking purposes in such areas.

Seawater intrusion and high salinity of groundwater has been found to be prevalent in the coastal areas particularly in the Pra, Ankobra, Ayensu Ochi-Nakwa and Lower Volta River basins. High salinity of groundwater has also been found to occur in the Densu, Ayensu, Ochi-Nakwa, Kakum/Bruku, White Volta and Lower Volta River basins.

4.2 Water Resources Monitoring and Assessment

4.2.1 Surface water management

Planning for allocation of water for various uses, involves a substantial amount of information collection, collation and storage as well as assessments of climate, hydrological and socio-economic variables to be able to model future scenarios. Hence, the Water Research Institute (WRI), Hydrological Services Division (HSD), and Ghana Meteorological Services Agency are engaged in undertaking various aspects of water resources assessment with the support of some development partners and the Government of Ghana. In 2010, surface water assessment activities implemented include:

- Improving the surface water hydrometric network in the Pra and Tano Basins;
- Standardizing documentation on hydro geological data towards proper documentation of all available hydro geological data and information in digital form;
- Assessing biological indicators of pollution: biological and physico-chemical assessments are expected to give a more accurate picture of the stresses on the quality of natural waters; and
- Strengthening the Geographical Information System (GIS) skills and applications to enhance data management and database operations

4.2.2 Groundwater management

Groundwater assessment was basically anchored under the CIDA supported Hydro geological Assessment Project (HAP), which seeks to improve the knowledge base and comprehension of the hydro-geological make-up of the three (3) regions in Northern Ghana. Latest activities have been geared towards the monitoring of groundwater resources and creation of a database with information and data from groundwater levels and quality. The essence of monitoring and data collection was to determine trends in water level fluctuations as well as anthropogenic impacts on the resource for effective planning and forecasting purposes. Performance in 2010 included:

- Chloride Mass Balance recharge assessment focusing on the analyses of precipitation samples collected from meteorological stations in the area.
- Harmonization of the hydro geological database to provide easy access to reliable information/data.
- Basic training was also given to some technical staff in the use of some software programs for the management of the database.
- Monitoring of the 37 monitoring boreholes (22 existing and 15 newly constructed) continued. Analysis revealed that more than half of the 15 new boreholes have yields exceeding 300 litres per minute (more than the statistical average expected). Examination of the impact of deeper drilling depths as a possible sector approach to improving the success rates of drilling as well as increasing yields is currently being applied in sections of the Brong Ahafo Region.

4.2.3 Water quality management

The water quality monitoring and assessment program started in 2005 in the Southwestern and Coastal River Systems, with nineteen 19 stations. In 2010 the number of monitoring stations was increased to 40 to include the Volta River System and hence cover the whole country. In all, 31 river stations and nine reservoir/lakes stations were monitored during the year. The break-down of monitoring stations is as follows:

- South-Western System - 19 stations;
- Coastal System - 8 stations;
- Volta System - 13 stations.

The Water Quality Index (WQI), which is the general water quality indices type in which various physical, chemical and microbiological variables are aggregated to produce an overall index of water quality, describes the state of water quality of the water bodies. The WQI classification is shown in Table 1

Table 2: Water Quality Classification System

Class	Range	Description
I	>80	Good – Unpolluted
II	50 – 80	Fairly Good
III	25 – 50	Poor Quality
IV	< 25	Grossly Polluted

There were a few exceptions, which were classified as Class I and III during the monitoring period as shown in the Table 2.

Table 3: WQI of some Rivers in 2010

River system	Month (in 2010)			2008
	March	July	October	
Potroase - R. Densu	64	86.5	77.4	63.9
Nsawam - R. Densu	51.8	49.0	60.8	42.3
Mankrong J-R.Ayensu	67.2	65.8	43.6	51.0
Lake Barekese - R. Offin	65.6	47.6	65.6	67.4
Ewusijo-R. Butre	62.4	81.0	70.6	63.9
Sefwi-Wiawso - R. Tano	62.4	44.7	70.6	57.3
Hohoe - R. Dayi	88.4	74.4	59.3	-
Pwalugu -White Volta	70.6	44.9	51.8	-
Nabogo - White Volta	75.7	47.6	62.4	-
Bamboi - Black Volta	88.4	57.8	59.3	-
Ajena - Main Volta	75.7	81.0	62.4	-
Source: Water resources Commission (2010)				

Among the number of water systems that were monitored in 2010, the Densu River at Potroase improved in quality from 63.9 in 2008 to 77.4 in October 2010. At Nsawam the Densu River improved from 42.3 in 2008 to 60.8 in 2010. Both River Tano at Sefwi Wiawso and Butre at Ewusijo improved in quality between 2008 and 2010 from 57.3 and 63.9 respectively to 70.6 each. The Ayensu River at Mankrong recorded slight slip from class II to class III, while the Offin River at Barekese sliped slightly from 67.4 to 65.6. New data on a couple of water systems were also collected on White Volta at Pwalugu and Nabogo, Black Volta at Bamboi, Main Volta at Ajena and Dayi at Hohoe. All of them were in class II.

4.3 Water Resources Planning and Regulation

4.3.1 Water Use Regulations

The implementation of a Water Use Regulations (L.I. 1692) and procedures for the issuance of rights to major water users by means of permits progressed satisfactorily. Nine (9) new Water Use Permits were granted during the year under review: five (5) for abstraction, one (1) each for diversion, construction, dewatering and fish culturing activities. Five (5) permits were also renewed, one each for dredging, construction, fish culturing and two (2) for abstraction activities.

The WRC, in fulfillment of the provisions of section 11(5) of the Water Use Regulations 1692 of 2001, published the third Water Use Register at the end of 2010. There was a total of 171 registered water users in 2010 as against one hundred and fifty-four (154) as at 2009. 63% of the total registered users are engaged in domestic and/or municipal water supply, mining takes about 15%, while industry takes about 6%. See Table 3.

Table 4: Licensed Water Users (2010)

Water Users	2009	2010
Power generation	2	2
Recreation/Navigation	1	1
Domestic	103	107
Mining	24	31
Industrial	10	11
Irrigation	9	10
Aquaculture	5	9
Total	154	171

4.3.2 Drilling License and Groundwater Development Regulations

The administration of the Drilling License and Groundwater Development Regulations, 2006 (LI 1827) also progressed with the view to ensuring that water wells drilling activities are appropriately coordinated, data on groundwater is properly generated, and the development of groundwater resources is sustained.

Table 5: Drilling Licenses Issued as at 2010

Year	Number of Companies
2009	28
2010	29
Total	57

Twenty-nine (29) well drilling licenses were issued during the reporting year to twenty-nine contractors including four (4) foreign contractors bringing the total number of companies issued with licenses to fifty seven (57), an increase of 29 over the 28 licenses issued as at 2009.

The WRC classifies drilling companies under three categories: A Category 'A' company must possess more than four drilling rigs; a category 'B' company must possess between two and five drilling rigs; a Category 'C' company either hires rigs or possesses only one drilling rig.

Out of the total of 57 licensed companies, 39, representing about 68% were in Category 'C', while 18, representing 32% were in Category 'B'. None of them were in Category 'A'.

4.3.3 Compliance Monitoring

Field monitoring of water users focused on hotspot areas in the Volta, Eastern and Western Regions. Routine monitoring was carried out through the review of environmental reports from Water Use Permit holders in compliance with their permit conditions. Water users such as gold mines, rubber and palm plantations, and fruit processing factories continued to submit monthly records of raw water volumes abstracted, results of water quality monitoring of surface and groundwater sources, and well water levels. Targeted field monitoring exercises were also undertaken to verify accuracy of records submitted by some permit holders.

Reports submitted generally indicated that the effluent concentrations of most parameters discharged into water bodies were within prescribed guidelines of the Environmental Protection Agency (EPA).

4.3.4 Development of Dam Safety Regulations

The Commission in 2009 initiated the process of developing a third set of Regulations and set up of a National Dam Safety Unit to regulate and coordinate all relevant activities related to dam design, construction, operations, maintenance, and decommissioning. The ultimate goal was to ensure uniform and adequate level of safety for all dams throughout Ghana. Accordingly, an agreement was completed and signed with the Norwegian Agency for Development Cooperation (NORAD) for a 3-year support program for the establishment of a Dam Safety Unit and the development of dam safety regulations. At the end of 2010 technical committees (Dam Safety Working Group, Legal Committee and Finance Committee) were set up to provide technical inputs and facilitate the process.

4.4 River Basin Management and Planning

4.4.1 Functionality of River Basin Institutions

One of the key principles for ensuring proper management of water resources is to promote decision-making and action at the lowest appropriate level. Hence, the strategy has been to decentralize water resources management and planning to the river basin level and encourage the active involvement of local level institutions through the setting up of functional river basin management structures.

In line with this objective of decentralizing IWRM in Ghana, the process of setting up two new functional and priority river Basin Secretariats and Boards for the Pra and Tano Basins continued. The Pra Basin Secretariat was successfully set up in Kumasi, while the membership for its Basin Board was however still being garnered. Establishment of the Tano Basin Secretariat began with the employment of a Basin Officer and the acquisition of office space in collaboration with the Brong Ahafo Regional Coordinating Council. Identification of key stakeholders and a physical survey of the Tano Basin were also carried out. When completed, the total number of basin offices will increase to five.

4.4.2 River Basin and National IWRM Plans

IWRM plans seek to address and incorporate actions towards the more local (community based) initiatives, which can be taken to reverse prevalent catchment degradation trends, viz. encroachment, deforestation and unabated pollution. Regarding the development of river basin IWRM plans, baseline studies were successfully conducted and the initial stakeholder strategic environment assessment undertaken to serve as inputs towards the development of IWRM plans for the Pra and Tano Basins.

In the case of the Dayi Basin, both the baseline studies and development of a Water Evaluation and Planning System (WEAP) model were completed. The baseline studies focused on information on the physical and socio-economic features of the basin, water resources assessment, and demand projections.

On the other hand, the development of the National IWRM plan was initiated with the completion of inception workshops and commencement of requisite baseline studies.

4.4.3 Policy Initiatives: Riparian Buffer Zone policy

A Riparian Buffer Zone Policy is being designed as a harmonized document of all the dormant and fragmented regulations in the country concerning buffers bordering water

bodies or river systems. It is also being designed to provide comprehensive measures and actions that would guide the creation of vegetative buffers along open water bodies (rivers, streams, lakes) for their preservation and functioning.

The draft Buffer Zone Policy document was subjected to the Strategic Environment Assessment (SEA) principles through consultative workshops. Subsequently, the document is being finalized for approval by the Commission before submission to the MWRWH for adoption.

4.4.4 IWRM promotion and public awareness

The WRC Communication Strategy continued to be executed with water resources management education and awareness raising elements countrywide. Specifically, three documentaries (for Pra, Tano and national) were produced for screening. Other communication materials such as T-shirts and brochures were also produced, while the production of two information billboards for the Pra and Tano basins was initiated. Finally, eight of the nine targeted regional fora were organized. The workshops were designed to promote and facilitate IWRM awareness at the district level and were organized for women's groups including queen mothers, women, NGOs, and the media, amongst others.

4.5 Transboundary Water Resources Management

4.5.1 The Volta Basin Authority (VBA)

The Volta Basin Authority (VBA), which was formally established on 14th August, 2009, seeks to ensure international cooperation for the rational and sustainable management of the water resources of the Volta basin, shared by the six riparian countries Burkina Faso, Benin, Cote d'Ivoire, Ghana, Mali and Togo. By the end of 2010, the interim VBA secretariat focusing on its immediate objective of achieving an effective establishment and operation of the VBA, had accomplished, among others, the following:

i. Production of a meta-database on the hydro-meteorological networks and an atlas of thematic maps on the Volta Basin. This was achieved from a study on the division of the basin into homogeneous areas and assessment of hydro-meteorological networks for data collection in the Volta basin;
ii. Completion of Pre-investment studies for the establishment of a Pre-investment Fund to facilitate pre-feasibility and feasibility studies of identified areas of priority development;
iii. Implementing a 3-year program towards the establishment and functioning of an Observatory for Water Resources in the basin;
iv. Initiated the drafting of a Water Charter; and
v. Organized three key thematic fora on cartography, agricultural water, and sustainable management of groundwater.

4.5.2 The Project on Improving Water Governance in the Volta Basin (PAGEV)

The Project on Improving Water Governance in the Volta Basin (PAGEV), which is in its 2nd phase, was initiated by IUCN in 2004 in response to the need for transboundary coordination and cooperation regarding the management of the water resources of the Volta basin and is focusing on the White Volta basin. The areas benefitting in Ghana are the districts of Bawku West, Bawku Municipality, and Garu Tempane. The project had recorded, as at end of 2010, significant results that set benchmarks for enhanced transboundary water resources management of the Volta. These include:

- Compilation of knowledge on status and dynamics of water resources in the Volta;
- Production of base and thematic maps;
- Establishment of committees for the protection of the riverbanks in eight pilot communities. About 139 community members were trained and sensitized in group dynamics, management and decision making towards effective management of riverbank protection interventions in the Bawku East Municipal, Bawku West and Garu Tempane Districts;
- Reforestation of riverbanks of the pilot zone with fruit trees and woodlots as alternatives for income generation and fuel wood. 80 nursery attendants were trained and about 4,000 seedlings were raised and planted out of which 3,742 trees have so far survived in 7 seven communities in the Bawku Municipal and Bawku West District along the White Volta River; and
- Establishment of local trans-border stakeholders' forum in both Ghana and Burkina Faso to promote transboundary dialogue and cooperation.

4.5.3 Ghana-Burkina Faso Joint Technical Committee on IWRM (JTC-IWRM)

The Ghana-Burkina Faso Joint Technical Committee on IWRM (JTC-IWRM) was set up in 2005 and functioning since 2006, with the WRC as the focal institution for Ghana. The JTC-IWRM advises the Ministers in charge of water of the two countries.

In 2010, Ghana hosted the Burkina Faso counterpart in a reciprocal visit at the national level with the view to sharing experiences in the management of water resources at the national and local levels and also initiated discussions on collaboration on risk management, particularly relating to annul floods that affect the northern regions of Ghana.

4.5.4 The UNEP/GEF Project

The WRC is on behalf of Ghana hosting a 4-year UNEP/GEF Volta project, which started in January 2008. The Project is a regional imitative of the six riparian countries of the basin (Benin, Burkina Faso, Cote d'Ivoire, Ghana, Mali and Togo) and is intended to address the perceived major transboundary problems and issues of the Volta basin leading to the degradation of the environment as a result of human activities, by reducing those activities that lead to water scarcity and to integrate environmental concerns into development plans of the basin. It is also designed to promote a more sectorwide–coordinated management approach, based on the principles of Integrated Water Resources Management, both at the national and regional levels with strong emphasis on an expanded role for all stakeholders. Key activities performed in 2010 include:

- Completion of national studies on stakeholders/institutional framework, and data and information management for the Volta basin;
- Completion of national Transboundary Diagnostics Study (TDA) on the Volta Basin; and
- Initiated a demonstration project in the Bole and Sawla/Tuna/Kalba Districts for addressing land degradation in selected areas of the Black Volta sub-basin.

4.6 Climate Change Adaptation

A two-year DANIDA supported project, Climate Change Adaptation through IWRM, is being piloted in the White Volta basin from 2009-2011. It is to address floods and drought disasters on the biophysical environment, and to collate indigenous knowledge on adaptation. The project is focused on promoting adaptive and coping strategies for water resources use and management to reduce livelihood vulnerability in the three northern regions. Interventions accomplished include the development of:

- Climate safe and minimum evaporative community own dug-outs and wells. Three (3) communities in the Bongo District benefited from such wells;
- Community nurseries towards tree planting around water storage facilities;
- Designed appropriate non-traditional water harvesting climate safe subsurface water storage facility/reservoir and to minimize the impact of floodwaters. Three (3) communities in Savelugu Nanton, West Mamprusi, and Central Gonja Districts benefitted from such storage facilities/reservoirs. The construction of similar facilities was ongoing in seven other communities;
- A draft water conservation and irrigation strategy was been developed.

Chapter 5: Sector Performance against MDG Targets

Introduction

This chapter presents a summary of Ghana's WASH Sector performance against the UN Millennium Development Goals (MDGs). Though this report focuses on local targets as against the Un MDG targets whose methodologies are different (relying on user-based data rather than provider-based data), this chapter has been introduced to report solely on MDG progress to help data users make the right choice at the right time. After this chapter, the rest of the report will be based on national targets only.

Users of WASH data are reminded that once MDG is the subject, only user-based survey data from the Ghana Statistical Service or the WHO/UNICEF Joint Monitoring Programme (JMP) data is used. It is therefore misleading to use provider data from any WASH Sector agency when reporting on the MDGs since different methodologies are applied to derive such data. The 85% coverage set by the GWCL for urban water supply by 2015 is a national target and should not be reported as Ghana's MDG target for urban water. In the same vein, the CWSA's 76% target by 2015 is a national target and not MDG target. The aggregated national target, as reported in the 2009 Sector Performance Report, is 80% by 2015.

MDG targets are not set deliberately by any institution but are derived from a simple calculation based on reported coverage data in 1990 by national statistical offices worldwide. This is because the MDG for water and sanitation is to "halve by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation." The base year for monitoring MDG progress is 1990.

5.1 Ghana's MDG Progress on WASH as at 2010[iii]

Since there were no surveys in 2010 apart from the Population and Housing Census (PHC) whose report was not ready as at the end of the year, the latest available data is the Demographic and Health Survey Report (DHS 2008) and the JMP report 2010 (which also reports on 2008 surveys). The indicators used to measure MDG progress on water and sanitation are:

- *The proportion of the population that uses an improved drinking water source, urban and rural;*
- *The proportion of the population that uses an improved sanitation facility, urban and rural.*

The table below presents Ghana's status as at 1990 and her recent position (as at 2008).

Table 6: Ghana's MDG status 1990 and 2008

Year	% Water Coverage			% Sanitation coverage		
	Rural	Urban	National	Rural	Urban	National
1990	37	84	54	4	11	7
2000	58	88	71	5	15	9
2008	74	90	82	7	18	13

Source: WHO/UNCEF Joint Monitoring Programme; Progress on Sanitation and Drinking Water 2010 update

As 46% of Ghanaians did not use an improved drinking water source in 1990, and the MDG was to reduce that figure by half by 2015, one could then conclude that Ghana's MDG target for drinking water is 77%. Therefore if as at 2008, when 82% of the population was drinking from an improved source, Ghana could be said to be clearly on track to meet its MDG target by 2015. The same could however not be said about sanitation. Ghana should reach a target of 54% in 2015, but only 13% of the population was using an improved sanitation facility as at 2008. This indicates that the country is off track to meet its sanitation target by 2015.

5.2 The 'Time Factor' in MDG Reporting

It has been observed that MDG related data are hardly used by any of the agencies in planning and decision-making as none of the Strategic Investment Plans and agency reports apply MDG data in their analyses. This is as a result of perceptions that the MDG data are not very realistic. There is general perception that MDG coverage figures for water are too high while those for sanitation are too low. This perhaps explains why the agencies prefer to use their own data instead of the MDG data. To research into the reasons for the wide disparities between MDG data and provider data on water, the WSMP conducted a desk study in June 2010[iv]. The study revealed that the coverage data reported by the GSS and subsequently the JMP do not consider the time that people spend in search of water.

The report concluded that if only those obtaining safe drinking water within a 30 minute round trip were considered as having access to water, only about 71% Ghanaians would be counted as having access to safe drinking water instead of the 82% reported by the JMP. The report called for a national consensus on this issue and advise the GSS to compute access data using the time factor as an acceptable proxy since merely relying on the type of water facility as the only proxy would always portray Ghana with high access figures whereas in reality, about 20% of those reported as having access spend more than 30 minutes in a round trip. The study was part of local efforts to find a way of adapting JMP coverage figures to suit local decision-making and planning.

Chapter 6: Urban Water Supply

Introduction

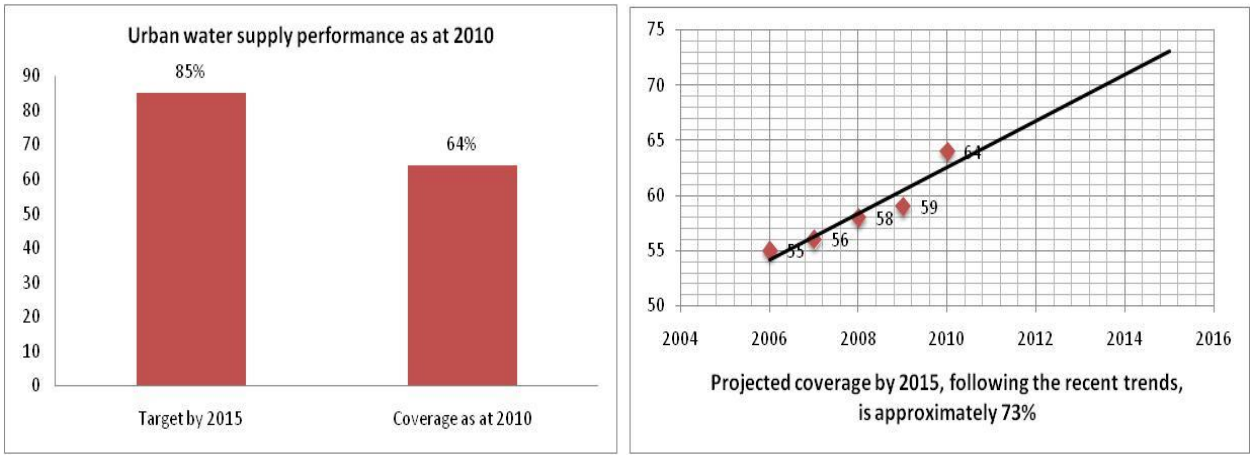
This chapter provides general information on the performance in urban water supply in 2010. There is information on urban water supply coverage trends, comparative regional coverage trends between 2009 and 2010, and coverage projection for 2015. This year, the urban water supply chapter has been expanded to cover several other indicators including water quality, water production and demand, water supply infrastructure, quality of service, tariffs and efficiency, as well as an update on the Management Contract between the GWCL and AVRL.

6.1 Urban Water Coverage

The Ghana Water Company Limited (GWCL) has responsibility for the production, distribution and conservation of water for public, domestic, commercial and industrial use in urban areas of Ghana. Ghana's urban population currently stands at 12,111,716, representing 50% of the total population of 24,223,421[v], according to provisional results of the 2010 Population and Housing Census. This represents an increase of 46% from the 2000 urban population of 8,278,636[vi].

This rapid pace of urbanization has outstripped the capabilities of GWCL to cope with the increasing demand for water for domestic use, industry and commerce. The total daily demand for water in urban areas is about **1,076,526.00** m^3 whilst daily production is about **687,949.61**m^3, at 75% capacity utilization. This represents coverage of 63.9%, an increase of 4% points over the 2009 coverage figure of 59%. Figure 2 below depicts Ghana's current urban water supply coverage, targeted and projected coverage by 2015 using a trend line to estimate.

Figure 2: Urban water supply performance and projected coverage



Whereas the GWCL has set a 2015 target of 85% coverage, the utility managed approximately 64% coverage as at 2010 and if recent trends since 2006 should continue,

coverage will be 73% by 2015, leaving a gap of 12%. However if Current projects being carried out are completed as scheduled the 2015 target of 85% could be exceeded.

These current projects include the Kasoa Inter-connection, which will bring excess water from the Kwanyaku plant to Kasoa which will release about 7mgd to the distressed eastern part of the city. ATMA rural project, when completed, will supply water to Somanya, Akuapim Ridge, Atimpoku, Frankadua, Dawhenya, Dawa, Kpone, Michel camp, and Dodowa. It is expected to be completed in 2011. Contract negotiations and funding arrangements are expected to be completed for the following projects: Mampong water project, Kumawu, Konongo, Kwahu ridge water project, Damongo water project, Wa water project, Kpong II water project and the Yendi water project.

Urban Water Supply and Demand Gap

Table 7: Supply and Demand Gap

Regions	Supply 2010 m^3/day	Demand m^3/day	Gap	Coverage (%)
Upper West	1,257.00	10,800.00	9,543.00	11.60
Brong Ahafo	14,088.00	49,257.00	35,169.00	28.60
Upper East	5,851.00	17,983.00	12,132.00	32.50
Eastern	21,124.53	62,245.00	41,120.47	33.90
Volta	17,101.00	45,064.00	27,963.00	37.90
Central	45,562.33	78,288.00	32,725.67	58.20
Northern	33,643.98	49,665.00	16,021.02	67.70
Ashanti	110,345.00	162,829.00	52,484.00	67.80
Greater Accra	406,044.78	557,549.00	151,504.22	72.80
Western	32,932.00	42,846.00	9,914.00	76.90
Total	**687,949.61**	**1,076,526.00**	**388,576.39**	**63.90**

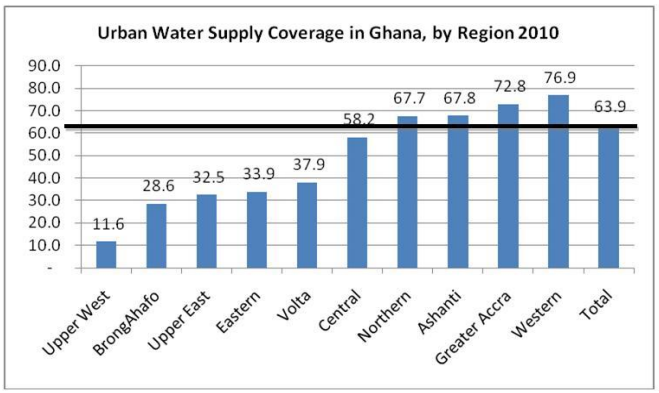
The sector could not meet all the daily water demand as there was a total shortfall of 388,576.39m^3 as depicted in the table above. The Upper West Region continued to be the most affected in terms of the proportion of the population as more than 88% of the population are still not covered.

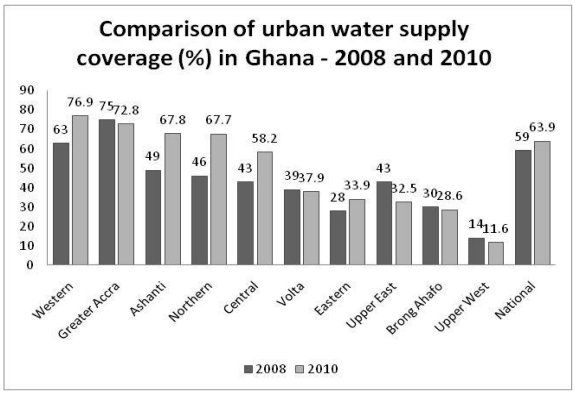
6.2 Regional Trends in Water Coverage

In terms of urban water coverage, the Western Region tops with 76.9%, followed by Greater Accra (72.8%), Ashanti (67.8%), Northern (67.7%) and Central Region (58.2%). The Volta, Eastern, Upper East, Brong Ahafo and Upper West regions all have coverage levels far below the national coverage of 63.9%. The situation of the Upper West Region is rather precarious, with only 11.6% of the urban population covered. Comparatively, as some regions improved in percentage coverage, others registered negative growth between 2008 and 2010. The Western Region grew from 63% in 2008 to about 77% in 2010. The Ashanti Region also grew from 49% to 68%, the Noethern Region grew from 46% to 68 %, the Central Region grew from 43% to 58%, and the Eastern Region grew slightly from 28% to 34% within the same period. The Upper East region, however, registered a negative growth from 43% to

33%, while the Upper West Region also had a negative record from 14% to 12% within the same period.

Figure 3: Urban water supply by region





The Upper West, Brong Ahafo, Upper East, Eastern, Volta and Central Regions all fell below the national average of approximately 64%. Nationally, however, there was a positive and significant growth from 59% to about 64%.

6.3 Coverage and Pro-Poor Issues

The poor (defined by Living Standards Measurement criteria) make up 47% of the total population in urban piped system areas. A PURC research in 2003[vii] found that within urban piped system areas only 15% of the poor had access to piped water either directly or via yard taps. According to a Ghana Integrity Initiative study (2010), 15% had access to water from wells (Boreholes, protected and unprotected wells), 2.5% had access to natural sources (river/stream, rain water/spring, and dug-out/pond/lake) and 8.4% had access to other sources (water truck/tanker service (0.9%), water vendor (3.4%) and sachet/bottled water (4%). 71.1% of medium wealth and 94.8% of high wealth households had indoor pipe connection.

The current tariff structure, in which unit cost of water increases with quantity consumed means that poor people who live in compound houses and use shared connections pay more for unit of water consumed than richer households who stay in small family sizes.

6.4 Water Supply Infrastructure and Sources

6.4.1 GWCL pipe connection

Urban water supply systems in Ghana include household connections, yard taps, and public standpipes (pay and fetch system). Many of these connections are not metered by the GWCL. About 60%[viii] of the urban population have no direct access to piped water, but rely on vendors. The poor are mostly served under this model through pubic standpipes, tanker services and local water vendors with surface or ground tanks[ix].

6.4.2 Water tanker operators

Water tanker operators serve as secondary providers, buying piped water from GWCL and selling either to tertiary vendors or directly to consumers. The PURC regulates the price at

which the tankers purchase the water from GWCL but not how much they resell to consumers. According to a survey by the Ghana Statistical Service, 2% of urban dwellers rely on tanker/truck/cart services as their primary source of drinking water.[x]

6.4.3 Water vendors

Water Vendors are a crucial component of the water supply system, serving the poorer sections of the community. Most water vendors are individuals who store water in tanks and sell it to people within their neighborhood. They may get the water from the piped system (legally or illegally), tanker trucks or through self-supplied wells. There are a growing number of water carriers who make a living by buying water from water vendors for onward retailing to others on request.

6.4.4 Rainwater Harvesting

This is mainly used in the rainy season as supplementary water source but the quality may have problems because of pollution on the roofs and poor storage conditions. Rainwater harvesting systems channel rainwater that falls on to a roof into household storage reservoirs via simple roof gutters and pipes. . The GDHS 2008 indicates that as at 2008, less than one percent (0.1%) of urban dwellers relied on rainwater for drinking[xi].

6.4.5 Packaged Water

Just a little over a decade ago (1998), virtually nobody in Ghana relied on packaged water as a first choice of drinking water. Currently, more than a million people in urban areas, according to the GDHS 2008, representing 12% have shifted from drinking tap water and other more affordable and safe sources to packaged. The bulk of the packaged water consumed is sachet water, which is well patronized by people within the middle and lower classes due to perceptions of poor quality water from public supplies. Unfortunately, no data is available on the quality improvements of this water over water obtained from the taps.

6.5 Peri Urban and Low Income Urban Communities[xii]

Most parts of the peri-urban areas fall outside the formal planning framework of the relevant state authorities. Because land is privately owned, development proceeds without regard to formal Town and Country plans, or the service extension plans of utility companies. People often build without the proper land title documentation, and therefore lack legal standing in terms of utility services.

About 70% of the urban population in Ghana lives in congested and sub-standard structures[xiii]. Tenancy is insecure despite past and current efforts to educate the public on the importance of obtaining formal tenancy agreements. A study by PURC concluded that the majority of the poor are unserved directly by GWCL except through informal services or

secondary and tertiary sources[1]. PURC and GWCL are in the process of developing a strategy for improving water service in these communities.

Due to intermittent water supply, some customers install storage facilities, and these tend to divert water flowing in the network away from poor families who cannot afford the cost of storage reservoirs. A more recent practice has been the tendency for some households or individuals to install suction pumps to draw water into reservoirs, thereby depriving people downstream who depend on the same line of any water. GWCL has been making efforts to clamp down on the use of suction pumps. In addition, GWCL and other partners have put in place a number of pro-poor measures, including provision of storage tanks, water kiosks, stand-pipes, public baths and toilets to various communities. Some of the areas that benefited include: Osu, La, Teshie in Greater Accra, Zaare in the Upper East Region, Dwomo in the Brong Ahafo Region among others.

6.6 Water Quality

According to GWCL water quality at treatment points is good, but may get contaminated during transmission due to broken pipes that allow intrusion. The use of same tanker trucks to supply drinking water and raw water for construction presents additional quality challenges to those who rely on such services for drinking water. Although the Public Utilities Regulatory Commission (PURC) has issued some guidelines for tankers, enforcement is yet to take effect.

The objectives of GWCL's Water Quality Monitoring are to improve water quality, evaluate risks to the population, determine long-term trends and prioritize interventions. Major achievements in the area of water quality are the preparation of Water Safety Plans (WSP) and implementation of Water Quality Monitoring Procedures.

Table 8: Some Achievements in Water Quality Issues as at 2010 by GWCL

Water Safety Plans	Water Quality Monitoring Procedures
• Existence of water safety plans • Investment in laboratory equipment • Systematic quality monitoring • Availability of nWater Quality Reports	• Source water quality monitoring • Treatment process control • Distribution system monitoring • Water quality surveillance

Critical parameters of GWCL's water quality monitoring include E.Coli or thermo tolerant (faecal) coliforms, turbidity, free chlorine residuals and pH.

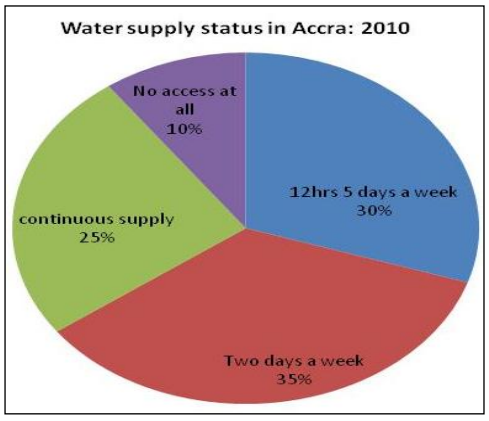
6.7 Quality of Service

In majority of urban areas, water is rationed due to high demand and inadequate supply. It is significant to note that there is lack of proper metering of urban water production and consumption by GWCL and therefore data available are estimates by GWCL. GWCL estimates that although demand stood at 1,076,527m^3 of water per day as at 2010, only about 687,949.61m^3 was produced per day. GWCL still records significantly high non revenue water averaging about 49.3% and has a bill collection ratio of about 90%. The situation in

1 PURC (2005) Public Utilities Regulatory Commission (2005a) Urban Water Tariff Policy. PURC, Accra. February 2005.

the national capital, Accra, typifies the level of quality of service that consumers receive. See Figure 4:

Figure 4: Water supply status in Accra



In 2010, only a quarter of residents in Accra received continuous water supply throughout the week, while about a third receive water about 12 hour a day. One third of residents also receive supplies only two days in a week, while one tenth receive no supplies at all.

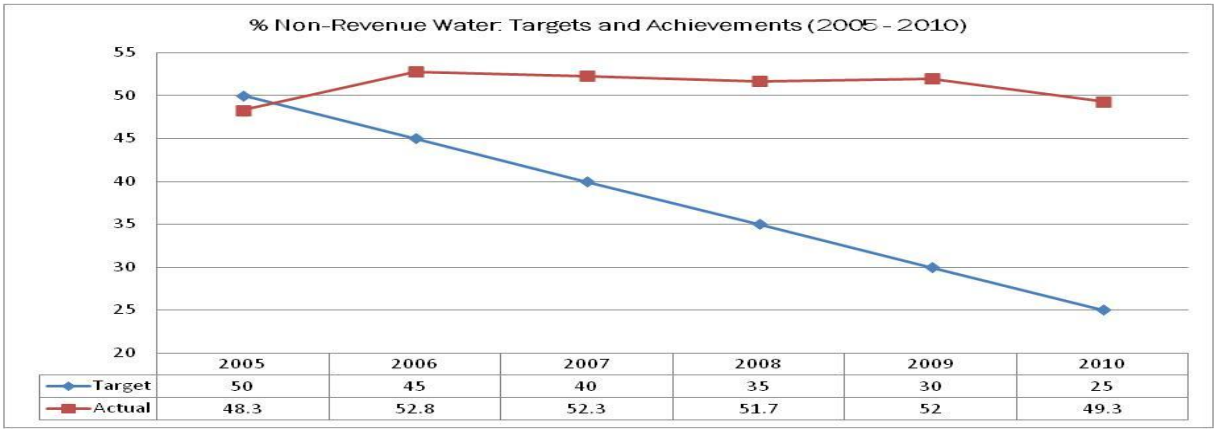
6.8 Efficiency

GWCL's efficiency indicators include water production rates, water sales, percentage of non revenue water, bill collection ratio, production cost and total revenue among a few others. See Annex 2 for details between 2005 and 2010.

6.8.1 Non Revenue Water

The level of non-revenue water (NRW) associated with a utility company is a proxy measure of its efficiency. In the Management Contract between the Ghana Water Company and Aqua Vitens Rand Limited, a target was set to reduce non-revenue water from 48% in 2005 to 25% by 2010. By the end of 2010, non-revenue water was still about 49.3%. Figure 5 below provides a trend in non-revenue water, showing targets and achievements from 2005 to 2010.

Figure 5: Non-revenue water: Targets and achievements



	2005	2006	2007	2008	2009	2010
Target	50	45	40	35	30	25
Actual	48.3	52.8	52.3	51.7	52	49.3

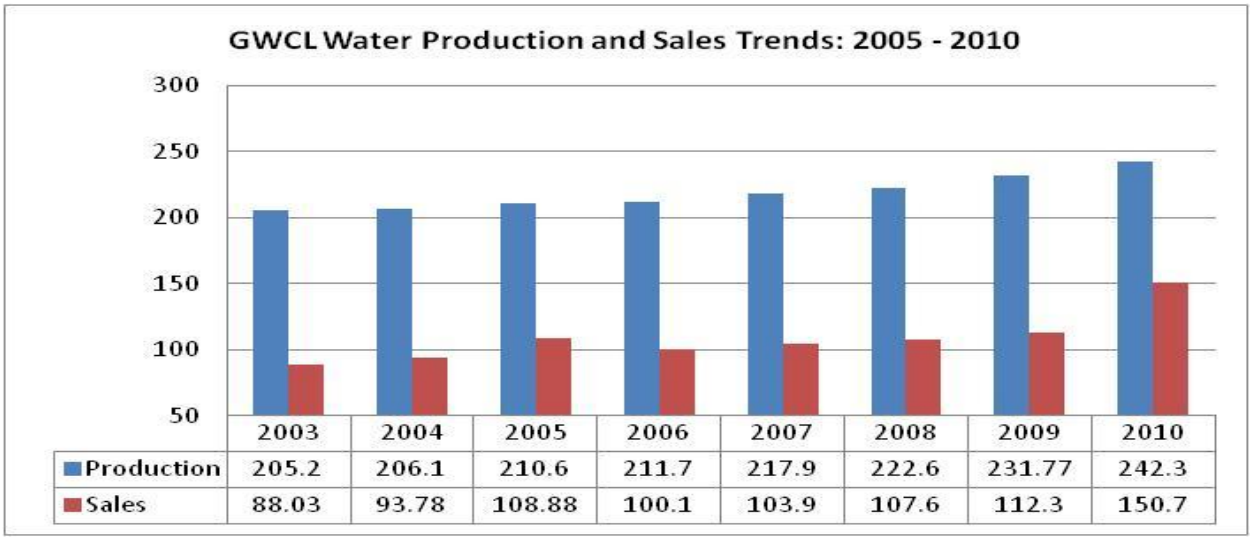
Source: Calculations based on NRW targets set in the 2006 Management Contract, using a baseline NRW figure of 50%. Figures for actual NRW obtained from GWCL.

The 49.3% NRW is more than twice the international best practice levels of 20%, and also more than the 33% benchmark for the low income country peer group[2] . Two main factors account for the high NRW rate. One is the ageing distribution infrastructure that is full of leaks. The other is high non-technical losses due to illegal connections from the distribution network.

6.8.2 Production and Sales

GWCL operates 84 pipe-borne systems nationwide. There are 94 water treatment plants in operation, four of them being new plants, with a total installed capacity of about 949,000m^3/day. Total daily water production is about 687,949.61 m^3 against a daily demand of about 1,076,526.00 m^3. This represents a 10% increase in water production between 2005 and 2010[xiv]. GWCL's total water production rates have improved consistently from 205.2mm^3 in 2005 to 242.3mm^3 in 2010.

Figure 6: Urban Water Production and Sales, 2003-2008



	2003	2004	2005	2006	2007	2008	2009	2010
Production	205.2	206.1	210.6	211.7	217.9	222.6	231.77	242.3
Sales	88.03	93.78	108.88	100.1	103.9	107.6	112.3	150.7

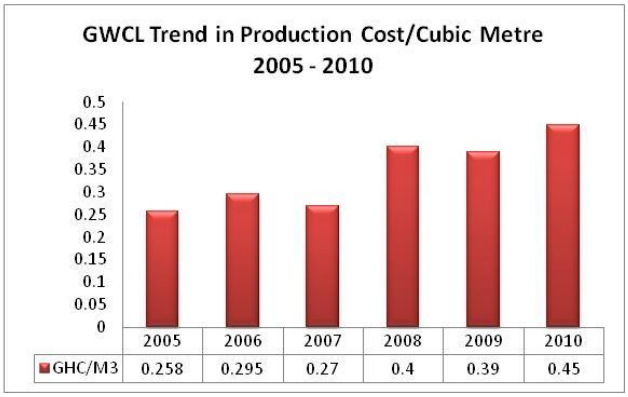
The sales trend is also similar, having increased from 88.03mm^3 to 150.7mm^3 within the same period.

6.8.3 Revenue and Cost Trends

GWCL's revenues have improved from GH¢55.9m in 2005 to about GH¢150m in 2010. Unfortunately, however, average cost of producing a cubic metre of water also increased from about 20 pesewas to about 45pesewas within the same period.

2 World Bank (2010) Ghana Infrastructure; A Continental Perspective. Africa Infrastructure Country Diagnostic: Country Report

Figure 7: GWCL Revenue and Cost Trends: 2005 - 2010



6.9 Status of the GWCL/AVRL Management Contract

The management contract is in its fourth year of implementation. There are challenges including extra high customer expectation, interpretations, GWCL-AVRL relations, baseline setting and procurement, among others. The removal of challenges within the contract was the main focus of a Mid Term Review by Government last year (2009). A technical audit of the operations of AVRL has been concluded by a team of consultants. The findings of the audit have been shared by key stakeholders.

Chapter 7: Rural and Small Town Water Supply

Introduction

The Community Water and Sanitation Agency (CWSA), a state agency under the Ministry of Water Resources, Works and Housing, has the mandate to facilitate rural and small town drinking water supply in Ghana. The National Water Policy (NWP) defines a rural community as a community with a population of less than 5,000 people and a small town as a community that is not rural but is a small urban community, with population between 2,000 and 30,000 that has been mandated by the relevant authority(ies) to manage its own water and sanitation systems. This chapter presents data supplied by CWSA on the rural and small town sub-sector for 2010 and contains further analyses including comparisons with previous years and projections into the future as far as progress towards the 2015 target of 76% is concerned.

7.1 Access to improved drinking water sources (Regional/National)

7.1.1 Rural water supply overall performance

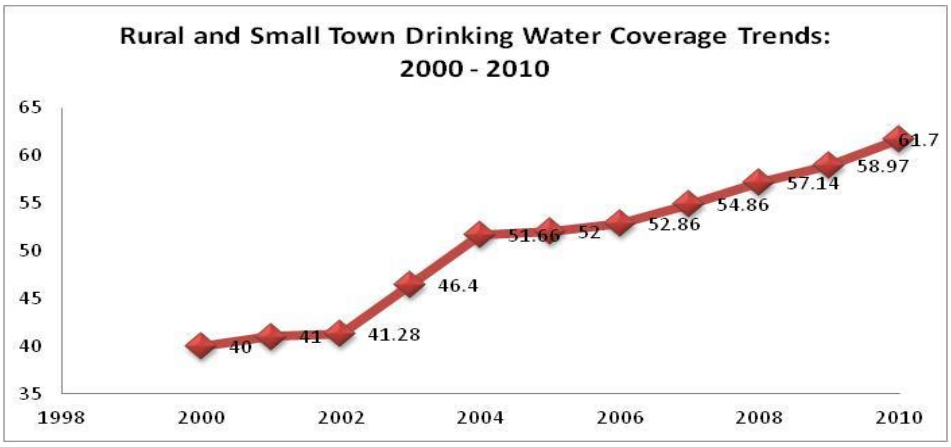
The national Rural and Small Town drinking water supply coverage target for 2015 is 76%. Coverage as at 2010 was about 61.74%, an encouraging increase from about 59% in 2009. This, however, leaves 38% of the Rural and Small Town Population without access to safe drinking water.

Figure 8: Rural water supply performance in 2010 against 2015 targets

7.1.2 Rural & small town water supply performance trends: 2000 to 2010

The Rural and Small Town drinking water supply sub-sector has seen consistent increase in coverage levels since 2000. From 40% in 2000, it rose to about 57% in 2008, 59% in 2009 and 61.74% in 2010. This represents about 55% increase in coverage during the decade. This is, however, slightly below the expected coverage of 63% by 2010.

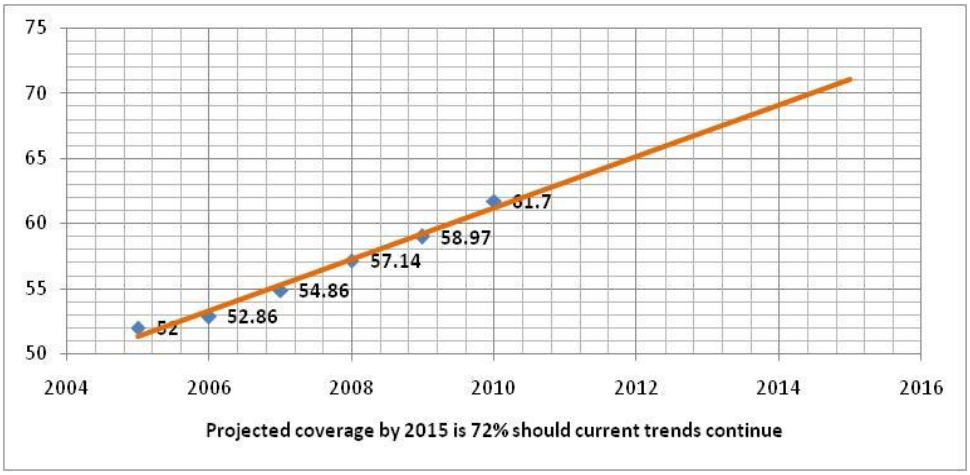
Figure 9: Rural and small town drinking water trends



7.1.3 Projected rural water supply coverage by 2015

If the Rural and Small Town sub sector coverage trend should be maintained, coverage by 2015 would still be approximately 72% against the expected 76% coverage. The subsector is therefore slightly off-track in achieving its 2015 target and needs to increase investments to accelerate coverage in order to achieve the set target (see figure 10 below).

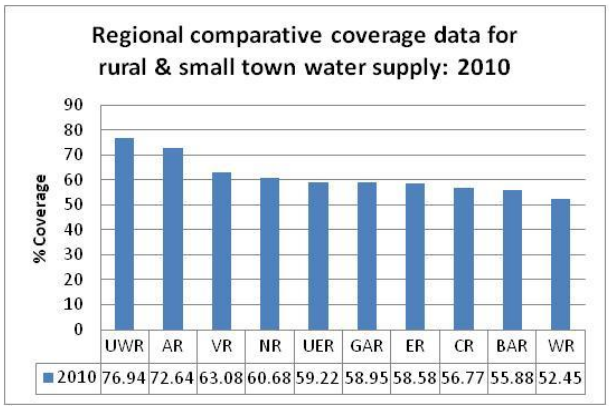
Figure 10: Projected rural and small town water coverage by 2017

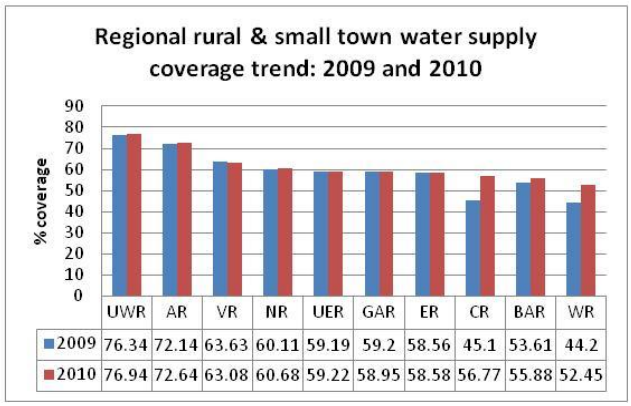


7.1.4 Regional Disaggregated and Comparative Rural & Small Town Water Supply Coverage Trends: 2009 and 2010

With the exception of the Greater Accra and Volta Regions which recorded slight decreases in coverage, all the regions recorded some improvement. Central Region and Western Region recorded very significant growth from 45% and 44% to 57% and 52% respectively from 2009 to 2010. Positions of regions on the coverage league table, however, did not change.

Figure 11: Regional comparative coverage/trends: Rural and small towns





The Upper West Region continued to lead in rural and small town water supply, improving slightly from 76.34% in 2009 to 76.94% in 2010, while the Western Region remained at the bottom at 52.45%. Only three regions, Upper West, Ashanti and Volta, performed above the national average of (61.74%); all the rest performed below the national average.

7.2 Facility Delivery Status

Total installed number of boreholes nationwide by the CWSA rose from 12,954 in 2009 to 13,219, 2010, meaning that 265 new boreholes were installed in 2010. Two more small community piped schemes were also installed, increasing the total tally to 281 nationwide; while the number of small town piped schemes also rose from 339 to 412 between 2009 and 2010. 36 new rain harvesting systems were also provided in 2010.

Table 9: Rural water supply facility delivery status: 2009 to 2010

Indicator	Total as at 2009	2010		Total installed facilities as at 2010
		Target[3]	Achieved	
Boreholes	12,954	740	265	13,219
Hand-dug wells	1,484	15	3	1,489
Small community piped schemes	279	49	2	281
Small town piped schemes	339	41	72	412
Rainwater catchment systems	Not available	12	36	36

Source: CWSA (2010)

7.3 Functionality of Rural Water Supply Systems

Sectorwide data on functionality is not available. Definition for functionality is still not clear as it is expected that the sectorwide M&E plan will provide a clear definition for the term. However, a study by the IRC/Triple-S project in 2010 in 31 communities from three districts (one in the south, one in the middle, and the other in the north), indicated a functionality rate of 71%, implying that 29% of facilities were non-reliable. See Table 9 below.

[3] These targets are the expected deliverables contained in CWSA's 2010 Performance Contract with the State Enterprises Commission

Table 10: Functionality of Boreholes with Pumps

Region (District)	No of Communities	Total Point Systems	Non-functional Systems	Non-Reliable Systems	% Functionality
Ashanti (Bosomtwe)	10	26	4	5	85%
Northern (East Gonja)	15	30	11	11	63%
Volta (Ketu South)	6	19	7	13	63%
Total	31	75	22	29	71%

Source: Triple-S (Ghana) Project (2010)

7.4 Information on self supply in rural & small town water supply

It has been observed that a number of rural households provide their own water supply facilities. This practice is more widespread in areas where communal water supply systems are unavailable. Even in some communities where there are facilities, some households still prefer to provide for themselves. Self supplied facilities come in diverse forms – they include rain harvesting facilities, hand-dug wells (lined and unlined with or without hand pumps), boreholes and mechanized point sources. It has also been observed that none of the agencies or CSOs captures monitoring data on self supply apart from the Ghana Statistical Service, whose surveys inherently have data on all facilities irrespective of their providers. It has been suggested that sectorwide M&E systems should capture data on self supply, while the practice should also be mainstreamed in water supply in Ghana, both rural and urban.

Chapter 8: Sanitation

Introduction

The scope of sanitation for the purpose of this report is limited to the provision of, access to and use of household toilet facilities. This chapter provides some available information on sanitation as at 2010.

8.1 Access to Improved Household Toilet Facilities – provider-based data

No provider agency in Ghana had a nationwide coverage data on access to basic sanitation as at 2010. The only provider-based nationwide data on access to household toilet facilities was a baseline survey compiled in 2007/2008 by the District Environmental Health Units (DEHU) and Waste Management Departments countrywide to facilitate the development of their District Environmental Sanitation Strategy and Action Plans (DESSAPs). It must be noted that this data is skewed towards urban human settlements and captured 'improved but shared' household facilities as improved. According to the surveys, the proportion of households relying on an improved household sanitation facility was estimated at 76%, while 7% of the population relied on pan latrines[xv].

It must be emphasized here that Ghana is yet to find a clear definition for an improved toilet facility as the country is still debating whether some household toilet facilities that are shared by two or more households should be considered improved or not. The United Nations does not currently classify shared toilet facilities as improved even though there are perceptions that some shared facilities might possess all the indicators of an improved toilet facility.

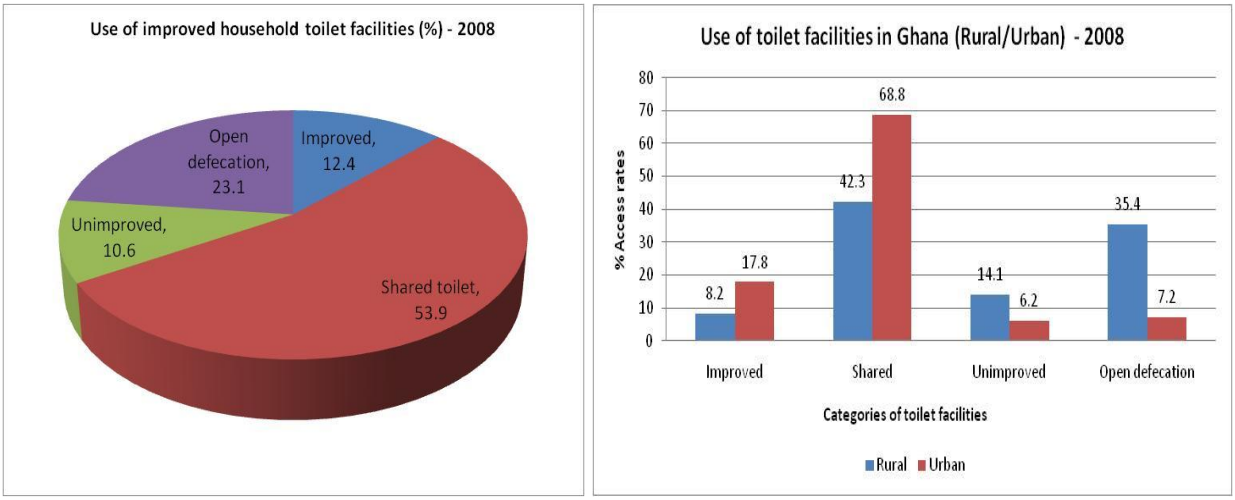
The Ministry of Local Government and Rural Development (MLGRD), through the Environmental Health and Sanitation Directorate (EHSD) is planning a nationwide research, in collaboration with the Water and Sanitation Monitoring Platform (WSMP) of the Ministry of Water Resources Works and Housing (MWRWH), to determine the extent to which shared toilet facilities could be classified as improved or unimproved and it is hoped that an answer will be found by the end of 2011.

8.2 Access to Improved Household Toilet Facilities – user-based data

In the absence of adequate provider-based[4] data, WASH stakeholders have mostly used the Ghana Statistical Service generated Demographic and Health Survey (2008) data in various presentations in recent years.

[4] This is partly because the baseline data by the DEHUs have not yet been updated since 2008, neither has there been sectorwide adoption of how the indicators were defined.

Figure 12: Use of improved household toilet facilities: Rural and urban



Sources: Ghana Statistical Service GDHS (2008)

As at 2008, only 13% of the population of Ghana (about three million people) was using improved toilet facilities. Improved facilities, according to the WHO/UNICEF JMP, flush or pour flush to piped sewer systems, septic tank or pit latrine, VIP and composting toilet. All others are considered unimproved. Almost 54% of the population shared their household toilet facilities with other households, while 23%, more than five million people practised open defecation.

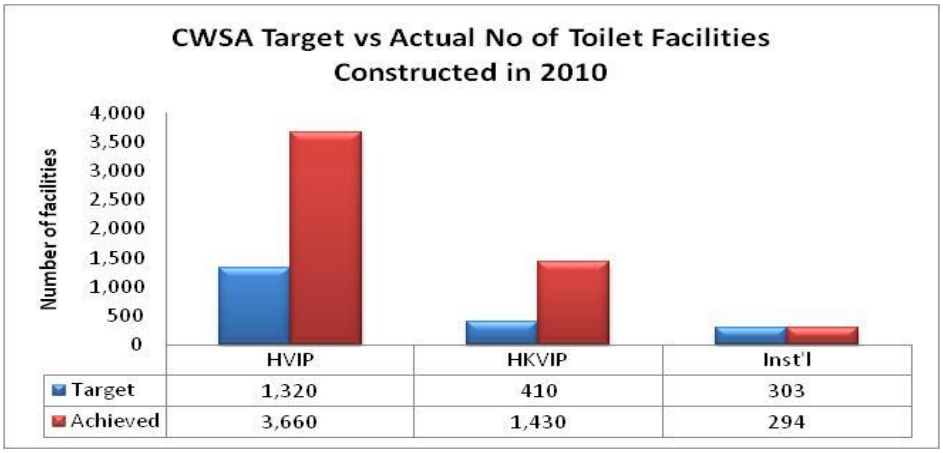
According to the Joint Monitoring Program (WHO/UNICEF, 2008), about 18% of the urban population uses improved toilet facilities, whilst 7% practice open defecation. This translates into 210 cesspit tanker loads of feces being dumped in the urban space every day. About 4% of urban households still use pan latrines.

Averagely each person, according to the EHSD, produces about 0.25kg of faeces and 1.2litres of urine every day. With the total estimated population of 12,500,000 people living in urban areas currently, the total amount of faeces produced in a day adds up to 3,125 tonnes and that for urine is 15,000M^3. This is the equivalent of about 3,000 cesspit tanker loads every day. The persistent lack of home latrines in many low income communities and the resort to more communal and public toilets is also contributing increased volumes of septage that is currently discharged untreated into many water courses and streams. Less than 15% of the septage generated in Accra and Kumasi, the two largest cities, is effectively treated.

8.3 Sanitation Facility Delivery in 2010

In terms of supply of toilet facilities in 2010, the CWSA facilitated the construction of 5,384 toilets comprising 3,660 household VIP latrines, 1,430 household KVIP latrines and 294 institutional latrines nationwide.

Figure 13: CWSA target vs actual number of toilet facilities constructed



It is not clear how many toilets were constructed by households themselves and also by CSOs as information on CSO contribution to facility delivery and self supply of sanitation facilities is inadequate.

Chapter 9: Hygiene

Introduction

Information in this chapter includes access to household handwashing facilities, household water treatment and storage and hygiene-related events including world toilet day. There is also information on the Community-led Total Sanitation (CLTS) as the new rural sanitation model adopted by the Ministry of Local Government and Rural Development, as well as hygiene-related capacity development efforts.

9.1 Access to Household Handwashing Facilities

The Community Water and Sanitation Agency, (CWSA) in collaboration with other public, development agencies and private partners has developed a Public Private Partnership for Handwashing with Soap Programme with the overall objective of improving the health of ordinary Ghanaians through the tripling of rates of handwashing with soap via the public-private partnership. Community Water and Sanitation Agency (CWSA) provided the anchor and catalyst for this partnership under its mandate for water and sanitation delivery and hygiene promotion. A communications campaign 'Truly CLEAN Hands' to motivate handwashing with soap, particularly among mothers and care-givers of children under 5 years, and school children, has been in place since December 2003.

There was no data on the number of households with access to handwashing facilities as at 2010. Stakeholders are currently working on sectorwide indicators, including indicators for measuring hygiene. It is hoped that by the end of 2011, a set of harmonized WASH sector indicators will be available and included in the Sector M&E Plan.

9.2 Handwashing Promotion Activities

With active facilitation by the CWSA, a number of handwashing promotion activities were undertaken throughout 2010:

Publicity: Use of Mass media namely Internet websites, FM Stations, Newspaper Articles and features.

Orientation: A number of sector stakeholders in sanitation, hygiene and food industry have been trained and oriented on the importance of Handwashing with soap

Media/Children Encounter: Over 200 school children and teachers had encounter with close to 22 press men from 18 media houses on the Role of the media in promoting handwashing, Children as change agents, importance of Global Handwashing Day and critical times for handwashing

Procession: 300 children from basic schools in volta Region went through the principal streets of Ho to support the awareness creation efforts of Global Handwashing Day which was launched in the Volta Region

Market Splash: Market women were educated on the need to wash hands with soap at Ashiaman and Agbogbloshie Markets.

Schools Activities

The schools activities were carried out in Kabore cluster of schools in Ho, Corpus Christi School in Tema and Mobole Distrct Assembly Basic School in Afienya, and Humjibere in Western Region. There were about 10,000 pupils involved. One hundred teachers from the schools were also given orientation. The Glo Germ kit was used to make contamination and ways hands transmit germs visible. The school children were also engaged in discussions on importance of handwashing with soap, critical times and ways of promoting handwashing at schools, homes, communities.

Lorry Station Activity

This activity was done in collaboration Global Neighbourhood, where drivers and their mates, regional and local executives of La Ghana Private Road Transport Union were given orientation and also engaged 50 vehicles in a road show. The passengers at the Lorry stations were sensitized about handwashing with soap. Posters and stickers were distributed and pasted on vehicles to create awareness. Handwashing stations were mounted for mass handwashing with soap.

9.3 Household Water Treatment and Storage (HWTS)

According to the 2008 Demographic and Health Survey (GDHS) conducted by the Ghana Statistical Service report, about 8.7% of the population practised appropriate household water treatment methods. Appropriate treatment methods, according to the GDHS, include boiling, straining, filtering and solar disinfection.

In 2010, a Household Water Treatment and Safe Storage (HWTS) strategy was developed by sector agencies under the leadership of the Ministry of Local Government and Rural Development/ Environmental Health and Sanitation Directorate. The strategy gives direction to how water can be kept safe throughout the water chain of fetching-transportation-storage-usage. The strategy will be piloted in selected districts in central region after which the final strategy will be implemented across the country. It is expected that the implementation of the HWTS strategy will be done in tangent with the two other sector behaviour change focus areas namely Handwashing with soap and safe disposal of human faeces including CLTS.

9.4 Capacity Development for Hygiene Promotion

The focus of the hygiene and sanitation promotion is to create awareness for sustained behavioral change to ensure:

- Safe confinement and disposal of excreta and other wastes
- Safe handling and use of water
- Personal, domestic and environmental hygiene
- Regular handwashing with soap particularly at critical times.

The CWSA, as part of capacity development for hygiene promotion and sanitation in communities, trained a number of committees to support the agenda. Table 10 below provides information on 2010 capacity development activities nationwide for hygiene and sanitation:

Table 11: CWSA Capacity Development Training for Hygiene Promotion - 2010

Committee	Number trained in 2010
Watsan Committees	918
Water and Sanitation Development Boards	87
Environmental Health Assistants	211
District Water and Sanitation Teams	107

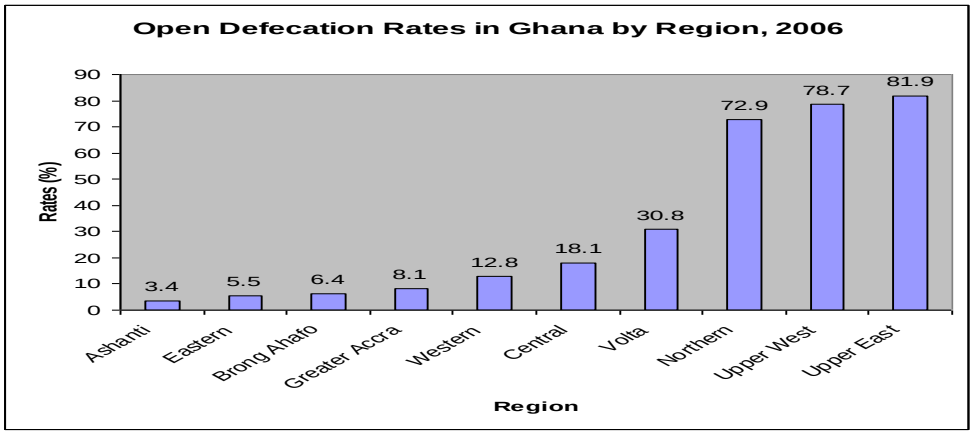
Source: CWSA (2010)

In addition, the Ministry of Local Government and Rural Development in collaboration with Ministry of Health and the Ghana Health Service has three basic level training institutions (Schools of Hygiene) at Ho, Tamale and Korle-Bu, where frontline Environmental Health Assistants and Officers (EHAs/EHOs) are trained to promote basic hygiene, enforcement of sanitation regulations and provide sanitation service to the entire populace. About 250 students graduated from the three institutions in 2010. In all we have close to 3,000 EHOs and EHAs dotted in all human settlements in Ghana. Early appointment of the schools of hygiene graduates is still a challenge.

9.5 Scaling up CLTS in communities

The most recent survey indicated that 23% of Ghanaians still do open defaecation (GDHS 2008). In 2006, the MICS Report by the Ghana Statistical Service had indicated 20% nationwide with the following regional breakdown:

Figure 14: Open defecation rates in Ghana by region



Source: MICS (2006)

The two reports provided evidence of increasing rates of open defecation in Ghana. The Community-Led Total Sanitation (CLTS) approach to stopping open defecation was therefore formally adopted in 2010 with the ratification of the Environmental Sanitation Policy (Revised 2010). Prior to the adoption, CWSA, UNICEF, Plan Ghana and WaterAid had partnered with the private sector, local NGOs and District Assemblies/EHSUs to pilot the

approach in five regions, while Relief International and WASH Ghana had also began preparations for similar interventions.

Table 12: Summary of CLTS Communities, ODF Status and HH Latrines

Organisation	Region	CLTS Project Communities	No of ODF Communities	No of HHL prior to CLTS	Current No of HHL	Increase in HHL
CWSA	Central & Eastern	28	19	78	111	33
Plan Ghana	Central & Eastern	15	8	64	112	58
WaterAid/ProNet Wa	Upper West	7	2	0	64	64
UNICEF	Northern	258	40	1715	2950	1235
Country Total		**308**	**69**	**1857**	**3247**	**1390**

Source: EHSD 2010

As at 31st December 2009, there were 308 CLTS communities out of which 69 had been declared open defecation-free (ODF)[xvi].

In response to the adoption of CLTS, the Ministry of Local Government and Rural Development (MLGRD) and Environmental Health and Sanitation Directorate (EHSD) trained 200 Environmental Health Assistants (EHAs) in three regions (Eastern Region 100, Central Region 50, Brong Ahafo Region 50) to support the scaling up process. The training was done by APDO in the Afram Plains.

The MLGRD had also developed a Rural Sanitation Model and Strategy focusing on four main pillars namely Enabling Environment, Capacity development, Demand for Sanitation Services and Supply of the needed service to support scaling up of sanitation. The strategy has further made the following recommendations for effective nationwide scaling up:

- Generate national consensus on CLTS.
- Strengthen national co-ordination of CLTS.
- Develop National CLTS strategy, action plan and guidelines.
- Roll out training of resource persons (critical mass) at national, regional, and district levels.
- Advocate and communicate the CLTS approach at national, regional and district levels.
- Incorporate CLTS into the DESSAPs with plans and budgets.
- Incorporate CLTS into the curriculum for Schools of Hygiene.
- Develop key CLTS monitoring indicators (training, facilitation, behavioural changes, and ODF status).

- Research into suitable low-cost technology options for the various unique conditions.
- Identify and strengthen centres for CLTS knowledge processing, management and dissemination.

9.6 ODF Community Awards

As part of the world toilet day celebration, 20 cleanest Open Defaecation Free (ODF) communities from Northern, Central, Upper West and Eastern Regions were given awards for their efforts in ensuring open defaecation free communities.

Chapter 10: WASH in Schools

Introduction

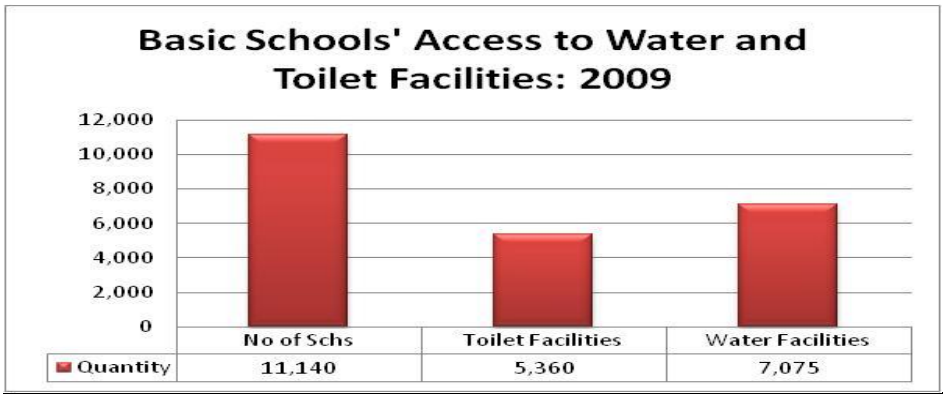
The School Health Education Programme (SHEP), of the Ghana Education Service (GES) was incepted after the government of Ghana had become a signatory to the Convention on the Rights of the Child. In 1992, the Ministries of Education and Health were mandated by the Ghana government's directives to institute a School Health System in schools to introduce an integrated health education and health delivery service to complement and supplement academic components of formal education and child survival. It is a joint programme initiated by the Ministry of Education (MoE) and the Ministry of Health (MoH) in 1992. The Ministry of Education (MoE) was assigned the lead role, while the Ministry of Health (MoH) provides technical support.

SHEP implements its programmes within the Focusing Resources on Effective School Health (FRESH) framework of UNESCO, which encompasses the fundamental principles and best practice of approaches such as "Child Friendly Schools" of UNICEF, "Health Promoting Schools" of the WHO, the "International School Health Initiative" of the World Bank and other organisations.

10.1 State of WASH in Schools – National

Out of a total of 11,140 basic schools throughout the country, 5,360, representing 48%, had toilet facilities and 7,075, representing 63.5%, had water facilities attached to them. This means that as at 2009, there were 5,780 basic schools without toilet facilities and 4,065 basic schools without water facilities. Data for 2010 was not available for this report.

Figure 15: Basic' Schools Access to Water and Sanitation Facilities

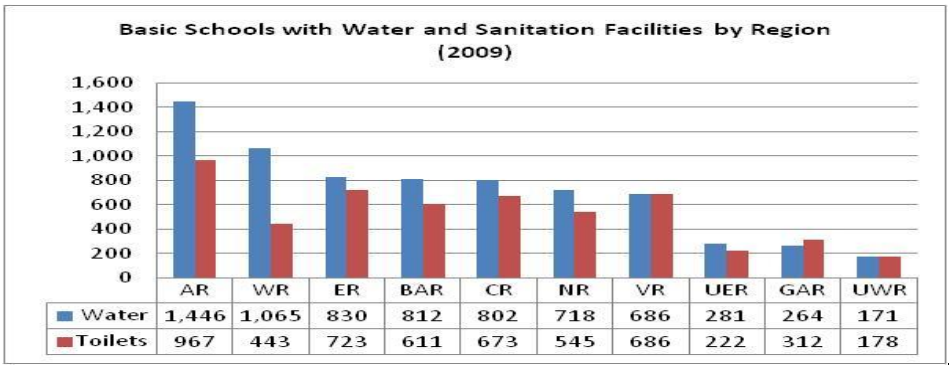


Source: Ministry of Education: 2009

10.2 State of WASH in Schools – Regional Breakdown

Figure 16 below presents the regional breakdown of water and sanitation facilities in schools.

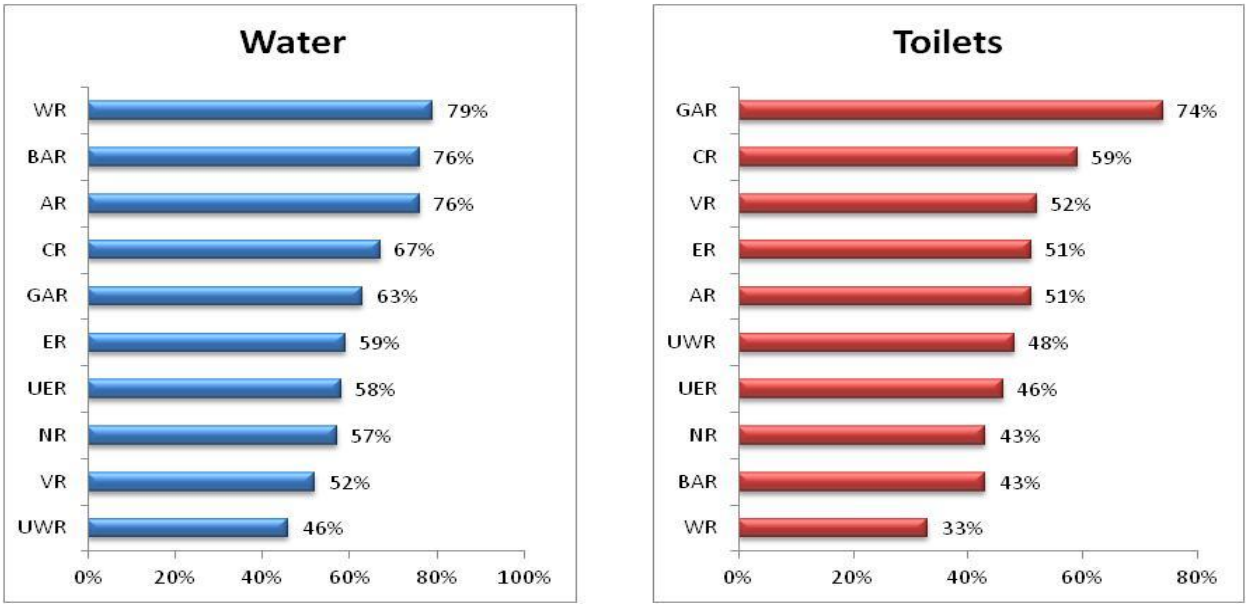
Figure 16: Regional distribution of Basic Schools with Water and Toilet Facilities



Source: Ministry of Education (2009)

In absolute terms, Ashanti Region had the highest number of basic schools with both water (1,446) and toilet (967) facilities. The Upper West Region had the lowest number of schools with water and toilet facilities; 171 and 178 schools in the region had water and toilet facilities respectively. Basic schools from seven out of the ten Regions had more water facilities than toilet facilities. Only schools from the Volta Region had equal number of both water and toilet facilities, while Schools from Greater Accra and Upper West had slightly more toilet facilities than water. See Annex 3.

Figure 17: Proportion of Basic Schools with Water and Toilet Facilities by Region



Source: Ministry of Education (2009)

In terms of regional coverage in proportionate terms, while the Western Region had the highest coverage for water facilities, with 79% of basic schools in the region having access, it had the lowest for toilet facilities with only 33% of basic schools having access. The Greater Accra Region was highest for toilet facilities with 74% percent of basic schools in the region having access. The Upper West Region had the lowest coverage figures for water (46%).

10.3 School WASH Activities Implemented in 2010

In 2010, the Ministry of Education revised the Education Strategic Plan (ESP) 2010-2020 which clearly emphasized the importance of water and sanitation in schools. The ESP sets targets of ensuring that all basic education schools are rehabilitated in terms of safety, sanitation and health by 2015 and 75% of schools would have access to water by 2020.

Other major activities undertaken by SHEP in 2010 include the following:

- SHEP conducted routine monitoring of schools to assess the level of WASH in Schools (WinS) implementation. Activities centred around inspection of School WASH facilities, sensitization of teachers and food vendors in selected schools across the country.

- For policy direction, well coordinated and harmonized Health Education delivery in schools in Ghana, the SHEP with technical and financial support from UNICEF has developed a National SHEP Policy and Strategic Framework awaiting approval from the Ministry of Education.

- With support from Zoomlion and other collaborators, the SHEP conducted an award ceremony for schools which exhibited high standards of sanitation and hygiene at the Healthy Schools Environment Competition in 2009.

- Orientation on handwashing with soap was conducted for School Food Vendors and Caterers of Ghana School Feeding Programme to create awareness on the need for handwashing at critical times. This activity was conducted in collaboration with the

Chapter 11: WASH Sector Financing

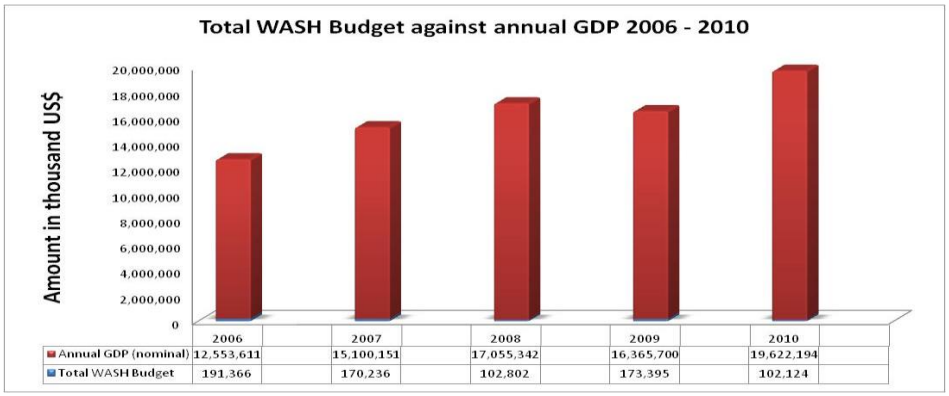
Introduction

This chapter presents updates on how the WASH sector fared in 2010 in terms of funding especially from the government of Ghana. The Chapter also provides information on the proportion of WASH sector allocations to annual GDP from 2006 to 2010. There is also information on allocations and releases to the key WASH sector agencies and how much were spent. This year's report also attempts to ascertain CSO contribution to sector funding even though information currently available is very scanty.

11.1 WASH Sector Share of GDP

Government allocations to the WASH Sector[5] since 2006 have consistently fallen below 2% of annual Gross Domestic Product (GDP). It has also shown a downward trend, having dropped from 1.52% in 2006 to 0.52% in 2010.

Figure 18: Total WASH budget against GDP (2006 – 2010)



Sources: Annual Budget Statements 2006 to 2010

11.2 WASH Sector Allocations against the National Budget

Compared with the Ministries of Education and Health, allocations to the WASH Sector Ministries were also quite low, while donor funding continued to dominate.

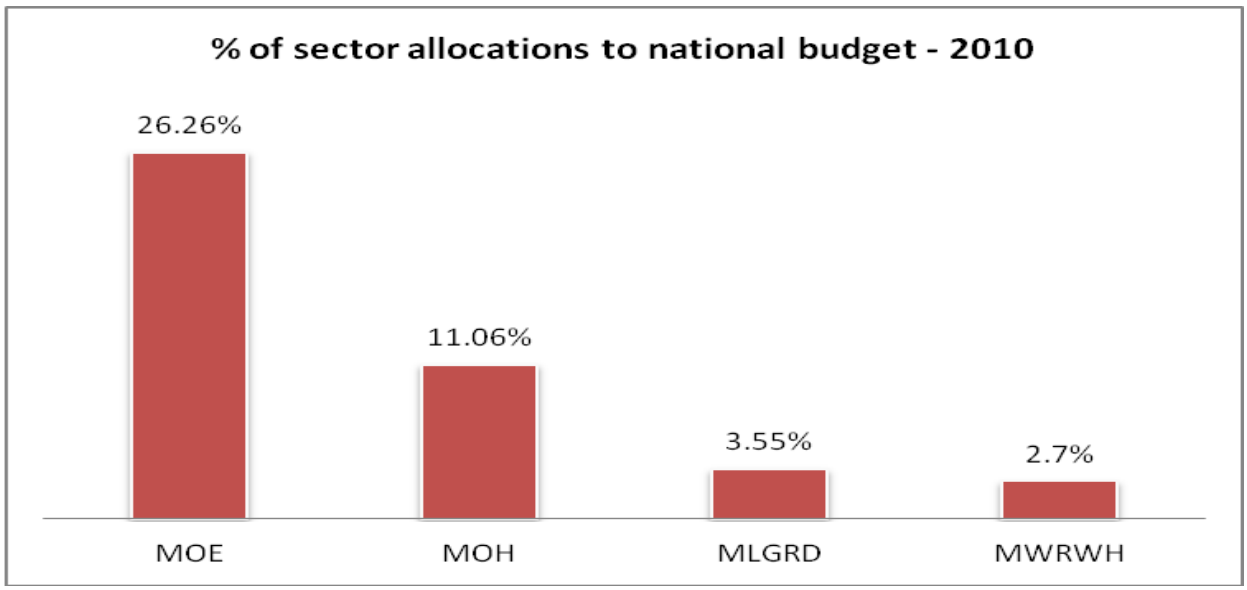
Table 13: Grand Total Allocations to the Four Sectors as a Percentage of the Total National Budget

Ministry	Grand Total Allocation to Sector (Million GH¢)	Total National Budget (Million GH¢)	% of Total National Budget
MWRWH	178	6,500	2.70%
MLGRD	233	6,500	3.55%
MOE	1,700	6,500	26.26%
MOH	726	6,500	11.06%

Source: 2010 budget tracking by CONIWAS/GrassRootsAfrica

[5] This excludes allocations to the Water Resources Commission and the Hydrological Services Department

Figure 19: Percentage of sector allocations to national budget



Source: 2010 budget tracking by CONIWAS/GrassRootsAfrica

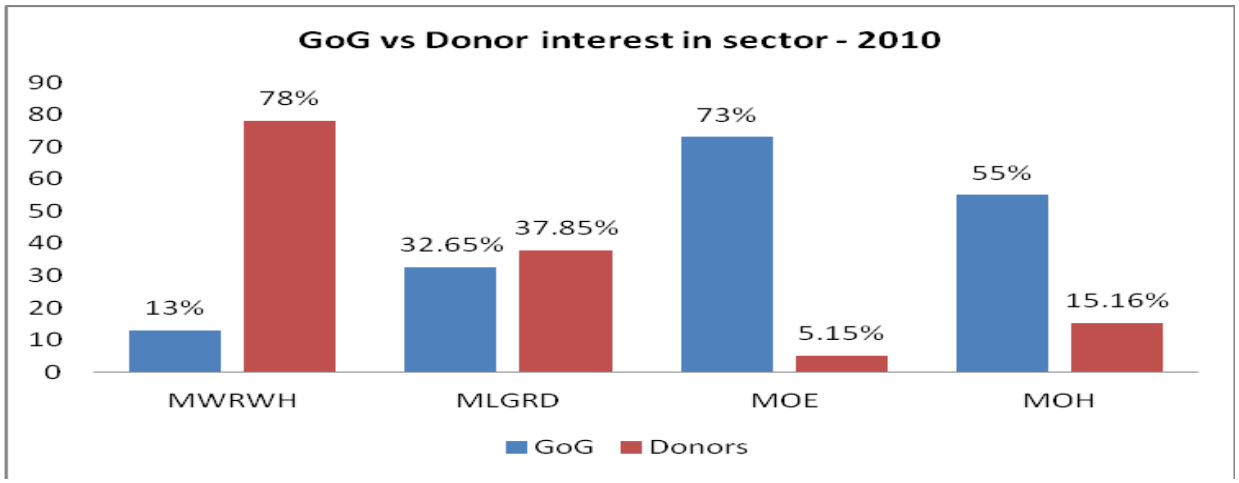
Whereas the MWRWH received 2.7% and the MLGRD received 3.55% of total national budget, the MOE and the MOH received 20.26 and 11.06% percent respectively. It could be concluded that the WASH sector ministries received less prioritization compared with the Health and Education sectors. WASH sector practitioners have however argued that if water, sanitation and hygiene were to be prioritized, it would lead to improvement in health and education and not the reverse.

11.3 GoG versus Donor Contributions to WASH Sector

Table 14: Percentage of GOG and Donor Contributions to WASH Sector

Ministry	Grand Total to Sector (Million GH¢)	Total GoG (Million GH¢)	% of Grand Total	Total Donor (Million GH¢)	% of Grand Total
MWRWH	178	23	13%	138	78%
MLGRD	233	76	32.65%	88	37.85%
MOE	1,700	1,200	73%	89	5.15%
MOH	726	400	55%	110	15.16%

Figure 20: GoG vs Donor interest – Education, Health and WASH



Source: CONIWAS/GrassRootsAfrica Budget Tracking - 2010

Whereas GoG contribution to financing the Education and Health Ministries was overwhelming (73% and 55% respectively), it contributed 32.6% and 13% to the Sanitation and Water Ministries respectively. This is an indication that government attention to the education and health sectors still appears much higher than the WASH sector.

11.4 WASH Sector Agency Budget Performance 2010

This section analyses total expected funding from government, donors and internally generated funding sources, actual releases from sources to agencies and actual agency spending.

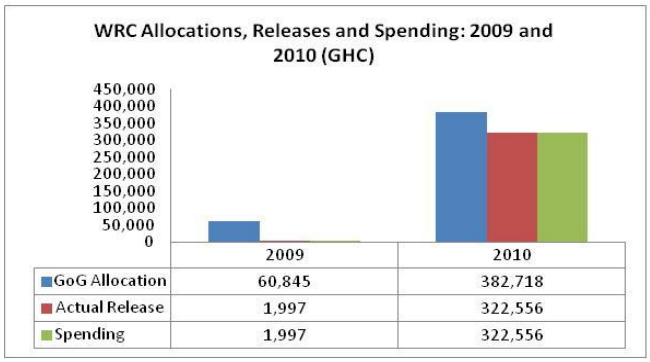
Table 15: WRC Budget Performance in 2010

Source of Funds	Approved MGH¢	Released MGH¢	% Release	Spent MGH¢	% Spent
GoG	382,718.00	322,556.43	84.2%	322,556.43	100%
Donors	1,957,442.00	1,472,113.00	75.2%	1,191,545.00	90%
IGF	519,275.00	409,677.86	79.0%	408,827.17	80.2%
TOTAL	2,859,435.00	2,204,347.29	77%	1,922,928.60	87.2%

Source: WRC Annual Report (2010)

GoG allocation and release to the WRC was an encouraging improvement over the Commission's 2009 performance. Whereas GoG allocation to WRC in 2009 was GH¢60,645 out of which only GH¢1,996.86 was released, the 2010 allocation was GH¢382,718 out of which GH¢322,556.43 was released. The Commission's internally generated funds also increased from GH¢256,052 in 2009 to GH¢519, 275 in 2010, 79% of which was released. WRC also demonstrated the ability to spend all amounts released as the trend of 100% spending continued in 2010 irrespective of the massive increase in allocations and releases.

Figure 21: WRC budget performance in 2010



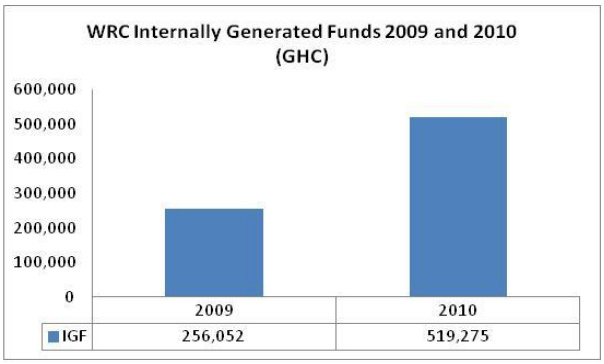


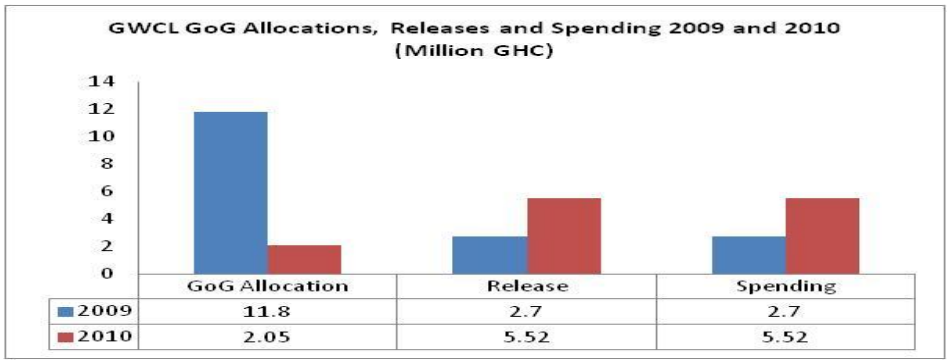
Table 16: GWCL Budget Performance in 2010[6]

Source of Funds	Expected Million GH¢	Released Million GH¢	% Release	Spent Million GH¢	% Spent
GoG	2.05	5.52	269%	5.52	269%
Donors	-	48.12	-	48.12	100%
IGF	153.00	150.70	-	134.90	85.5%
TOTAL	-	**204.34**		**188.54**	**92.3%**

Sources: MWRWH (Finance Dept); GWCL Finance dept

Information from the MWRWH indicates that out of the total budgetary allocation of GH¢2.05 million to the GWCL in 2010, GH¢5.52 million was actually released, exceeding the target by 269%. Total amount released from donor sources was GH¢48 million, while the company generated a total of GH¢ 153 million from sales. It was not clear the allocations by donors, however, all the donor funds released were spent. The Company spent about 92.3% of all funds released.

Figure 22: GWCL Budget allocations and releases – 2009 and 2010



[6] Figures obtained from the MWRWH Finance Dept (in the GoG row) had not yet been audited. Information in this table also excludes the budget performance of the urban Water Project

As almost GH¢12million was allocated in 2009, only GH¢2.05 million was allocated in 2010. However, the GH¢5.5 million released, representing 269% of the allocated budget in 2010, was almost double the GH¢2.7 million (representing about 23% of the 2009 allocation) released in 2009. A good sign is that in both scenarios, the GWCL was able to spend all funds released.

Table 17: CWSA Budget Performance in 2010

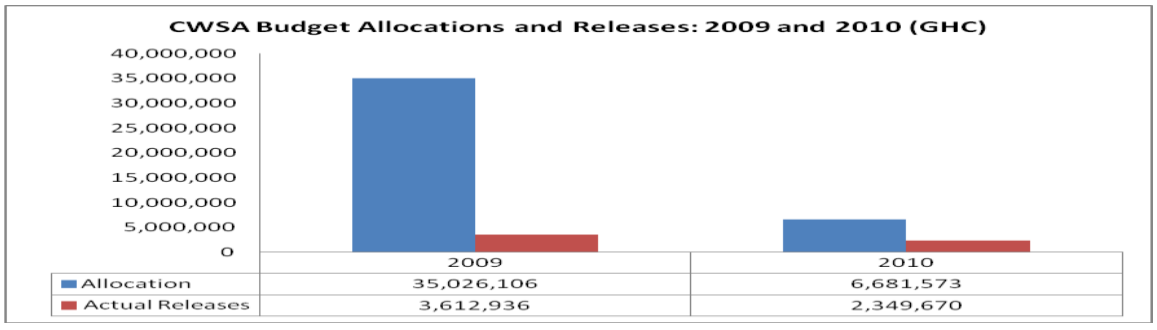
Source of funds	Expected GH¢	Released GH¢	% Released
Internally Generated Funds	213,687	806,538	377%
2% Rural Water Levy	1,200,000	1,560,000	130%
GoG approved	6,681,573	2,349,670	35%
Donor Support	25,529,917	24,473,146	96%
TOTAL	**33625177**	**29,189,354**	**86.8%**

Source: CWSA Annual report 2010

The performance of the finance and economic indicators is shown in table 16 above. With the exception of GoG ceiling which fell far below the target, the achievement for the other three targets was impressive, with internally generated funds (IGF) and GWCL contribution exceeding 100% of the set targets.

As shown in table 17 above, a total of GH¢29,189,354 was received by the Agency in 2010. This represents 86.8% of a total of GH¢33,625,177 expected from all sources - the Government of Ghana, Donors, IGF and the 2% Rural Water Levy. Donor share of these receipts, spent mostly on investments and services was 83.8%. The Donor sources for the year were DANIDA, DFID, IDA, KFW, CIDA, AfDB, and AFD. The other sources came from the Government of Ghana representing a total of 8.1% and the IGF and the 2% Rural Water Levy paid by the GWCL to the CWSA both representing about 8.1% of total releases. Information on CWSA spending of the released funds was not available for this report.

Figure 23: CWSA budget allocations and releases – 2009 and 2010



Source: CWSA 2010 Annual Report

There was a massive reduction in GoG allocation to the CWSA in 2010 (GH¢6,681) as compared with the 2009 allocation of GH¢35,026,106. Though there is an increase from about 10% to 35% in funds released in percentage terms, there was actually a reduction from GH¢3,612,937 to GH¢2,349,670 in absolute terms.

11.4.4 CSO Contribution to WASH Sector Financing

Over the years, CSOs are believed to have been contributing substantially to sector financing mainly through off-budget spending on projects. Unfortunately, these CSO contributions have not been tracked and it has been difficult to quantify the exact financial contribution that they have been making. Following a recommendation from the 2009 Sector Performance Report, the Coalition of NGOs in Water and Sanitation (CONIWAS) attempted to track the contribution of its members to sector financing for the 2010 report. This was not very successful; however, the Coalition managed to obtain information from only seven of its more than 60 members. See table 18.

Table 18: CSO Contribution to WASH Sector Financing: 2010

	Sanitation	Water	Hygiene Promotion	WATSANS FORMED		TRAINING/ORG DEV	Com. Dev't	TOTAL
ACDEP	22,559.81	96,012.48	8810.48			32514.06	5225.30	165,122.13
APDPO				145188.95				145,188.95
BACH	15861.00	31657.00	1896.00				1422.00	50836.00
RURAL AID	21,196.40	107,677.05	4,373.86			36,697.39	6,592.20	176,536.90
PRONET NORTH	48,499.43	92963.00	10,790.00			40,492.00	4730.00	197,474.43
PRONET ACCRA	39076.00	38,693.00	9,153.00			16,110.00	4,809.00	107841.00
NEWENERGY	37,626.63	115,545.16	6,683.00			77,604.33	7,203.70	244,662.82
TOTAL	**184,819.27**	**482,547.69**	**41706.34**	**145188.95**		**203417.78**	**29982.20**	**1,087,662.23**

Source: CONIWAS 2010

In sum, these seven local NGOs alone spent GH¢1,087,662.23 mostly in investments in the WASH Sector. Investments were made in sanitation, water, hygiene promotion and Watsan Committee formation and training. Other areas of expenditure included organizational development and community development. With a couple of international NGOs like WaterAid, World Vision, Plan Ghana, IRC, Relief International, and several other local NGOs and CBOs very active in the sector, it is very likely that their contribution to sector financing will be very significant.

11.5 The Sanitation and Water for ALL Compact and GoG's Renewed Commitment to the WASH Sector

The Government of Ghana signed unto the Sanitation and Water for ALL Global Partnership as demonstration of its commitment to finding a lasting solution to the funding challenges of the WASH sector. Subsequent to this, the Government prepared and launched a compact outlining its renewed commitment to the sector. These commitments included designation of the WASH sector as part of essential services category and indicate this commitment in the 2011 budget, and capacity development of the two main WASH sector Directorates: the Water Directorate of the MWRWH and

the Environmental Health and Sanitation Directorate of the MLGRD with increased allocations in the 2011 budget. In terms of funding, the government specifically promised the following:

- Increase allocations in budget statements for sanitation and water, and work with development partners and the private sector to ensure that allocations reach US$200 million annually towards sanitation and water improvements to meet MDG targets and sustain improvements beyond 2015.

- Make additional allocations of US$150 million annually towards hygienic treatment and disposal of septage and faecal sludge as well as sullage and storm water management;

- Make further allocations up to the minimum threshold of 0.5% of GDP to cover capacity building for hygiene education including proper hand-washing methods, countrywide outreach of Community-led Total Sanitation (CLTS) and general enhancement of enabling elements.

Chapter 12: Contribution from Non-State Actors

Introduction

The first WASH Sector Performance Report (SPR 2009) recommended that CSOs/CBOs should make their contributions known through documenting and sharing, and especially make information on their contribution available for inclusion in subsequent SPRs. This is because in spite of their perceived tremendous contribution to sector growth, there was hardly any documented evidence to help sectorwide M&E. For this report, CONIWAS, the umbrella body of NGOs/CBOs in Ghana, has made efforts to present some information to address the issue. Data made available in 2010 however is still not adequate but it is hoped that more information will be available in future. For 2010, CONIWAS was able to gather information from nine of its members.

12.1 Water and Sanitation Facility Delivery

12.1.1 Provision of Water Facilities

Table 19 provides information of the number of water supply facilities provided by some members of CONIWAS in 2010.

Table 19: Provision of Water Supply facilities by CONIWAS members (2010)

Water Supply Technology	Total Provided
Rain Harvesting Facilities	30
Boreholes	130
High Yielding Mechanized Boreholes	11
Hand-dug Wells	142
BioSand filters	118

Source: CONIWAS Annual Report (2010)

The organizations also installed four iron removal plants to enhance water quality on some of water systems, while rehabilitating about 63 wells. These facilities together are estimated to provide potable water to about 84,000 people.

12.1.2 Provision of Sanitation and Hygiene Services

The table below provides details on the number of sanitation facilities and capacity building activities provided by some CONIWAS members in 2010.

Table 20: Sanitation and Hygiene Services by CONIWAS members (2010)

Sanitation/Hygiene Delivery	Total Provided
Household latrines	295
Institutional latrines	28
CLTS communities	45
School Hygiene Clubs	52
WATSAN Committees Formed	245

Source: CONIWAS Annual report (2010)

On sanitation (latrines), the organizations provided 295 household latrines, 28 institutional latrines and worked in 45 Communities on Community Led Total Sanitation (CLTS). In all 29,204 people have benefitted from the provision of improved latrine facilities. Hygiene related issues 52 School Hygiene Clubs were established with 245 WATSANs and pump caretakers trained in the various project communities. Several hygiene sessions were conducted in schools and at community level. It is provided that hygiene promotion messages have reached a little over 29500 people in the project communities.

12.2 Other Activities by CONIWAS

Activities of CONIWAS members generally covered four broad areas – water and climate change, advocacy, governance and accountability in the WASH Sector, provision of WASH facilities and services, and capacity building for members.

Water and Climate Change (Mole XXI)

CONIWAS, through the Mole Series, created a platform to discuss, identify, design and implement workable solutions to minimize the impact of climate change on water resources in the Country. Mole XXI, held in July 2010, therefore had as its theme "The Global Climate Change: a Challenge to the WASH Sector in Ghana". The Conference was followed with Policy Dialogue on the National Climate Change Adaptation Strategy.

Water and Sanitation as a Human Right in the Constitution of Ghana

Water as a fundamental human right was given credence when the Convention on the Rights of the Child was adopted in 1986. In Ghana, however, the constitution is silent on water and sanitation issues. CONIWAS organized series of forums on Right to Water in 2010. This culminated in the development and submission of a memorandum on Water as a Human Right to the Constitutional Review Committee for inclusion into the Constitution as part of the consultations for the constitutional amendment.

Engaging the Media

CONIWAS continued to engage the media to enhance its advocacy and public awareness programmes. Some of the major issues raised at some of the press conferences were to commend

government for developing the Sanitation and Water for ALL Compact and especially the commitments made in the compact. The event was also to sensitize the media and invite them to support in monitoring the implementation of the commitments.

Another engagement with the media was in relation with the "Stand up and take Action Campaign. CONIWAS, in conjunction with the Ghana National Campaign Coalition on MDGs, joined the Global Celebration to mark the 10th year anniversary of the declaration of MDGs. The campaign was meant to remind government and development partners of their commitment to the achievement of the MDGs target and raise awareness among citizens on the need to demand accountability from the government with respect to meeting the commitment to the MDGs.

Citizen Engagement

Under its Governance and Accountability Project, CONIWAS, together with selected members, implemented a project with the aim of ensuring transparency and efficiency in the delivery of WASH Services to the poor, underserved and unserved communities in the urban sector. The project involved strengthening the capacity of community members to demand accountability from service providers. In this project, the Ghana Water Company Limited (GWCL) and Aqua Vitens Rand Limited (AVRL) were the target service providers. Communities assessed the performance of the service providers against agreed set of criteria using the social accountability tool of Community Score Card. In some of the communities, the end result was the establishment of a joint committee to monitor the flow of water and also to report 'illegal connections." In some instances, action plans were developed by the service provider towards solving identified problems with the services in the community.

12.3 Private Contribution

In addition to NGO/CSOs, several corporate institutions, churches and voluntary associations (including citizen associations) and individuals sometimes donate water supply facilities to communities. It is believed that information on these facilities is inherent in nationwide survey data generated by the Ghana Statistical Service. However, sources of water supply systems are not reported. This makes it difficult to ascertain how much contribution comes from these private sources.

Chapter 13: Sector M&E and Reporting

Introduction

This chapter discusses current M&E practices in the WASH Sector, the issue with harmonization of M&E processes for national decision-making, data storage and retrieval, making effective use of existing survey data and efforts under way towards coordinated M&E practices at the national level.

13.1 Current M&E practices

M&E practices in the WASH Sector of Ghana are currently not harmonized. According to a study conducted by TREND, a Ghanaian NGO, in 2006, the Water Directorate at the Ministry of Water Resources, Works and Housing recognized the need to collaborate with data gathering institutions such as the Ghana Statistical Service, CWSA, GWCL, databases of the various projects in the sector to harmonize various M&E systems into a comprehensive national system to be managed by the Water Directorate of the Ministry to serve as one stop centre for information on water and sanitation[7]. A similar study conducted by the Water Directorate in 2010[8] still discovered lack of harmonized definitions and systems as a major M&E issue in the sector.

According to these reports, M&E in the sector have been handled mainly at the agency level with different focuses, definitions, standards, and methodologies. The Ghana Water Company Limited (GWCL) has handled monitoring and reporting for urban water supply; the Community Water and Sanitation Agency (CWSA) has handled monitoring and reporting for rural and small town water supply and basic sanitation; the National Development Planning Commission (NDPC) has handled monitoring on Ghana's MDGs and has been relying mainly on data from the CWSA, while the Ghana Statistical Service has been undertaking user-based surveys, which provide some data on WASH, and which the WHO/UNICEF JMP has mostly used as Ghana's MDG progress data.

Another publication by the Water and Sanitation Monitoring Platform (WSMP) also identified two major types of data circulating in the sector, which, according to the publication, are sometimes used interchangeably and wrongly by some stakeholders[9]. These are User-based data, which are generated through household surveys and mostly generated by the Ghana Statistical Service (GSS), and the Provider-based data, which are generated by service providers. Provider-based data are usually based on the number of installed facilities and their projected water supply capacities according to standards set by the agencies themselves. According to the publication, the methodologies that are applied to generate these types of data are very different and cannot be compared or even harmonized.

The 2009 Sector Performance Report (SPR) also highlighted lack of agreed set of sectorwide indicators for sector reporting, while it cited a wish by a section of stakeholders for the Ghana Statistical Service to conduct a WASH-specific survey with indicators and methodologies agreeable to the sector.

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[7] Akanbang, B and Larbi, E, (2006): *Monitoring of Water Supply Coverage*

[8] Water Directorate - MWRWH (2010):*Towards Harmonized Water Sector Definitions, Common terminology and Monitoring Systems*

[9] WSMP (2009): *The Data Puzzle in Ghana's Water and Sanitation Sector.*

13.2 Data storage and Retrieval

Since each agency/institution creates and manages its own data, there is no centralized data storage and retrieval system for easier access. The NDPC developed the GhanaInfo a couple of years ago for as a national database but it has not been successful enough to the WASH sector as there is virtually no WASH data in the system. The CWSA has developed the District Monitoring and Evaluation System (DiMES), which is currently in use and believed to be capable of serving the whole WASH sector if indicators are clearly defined for that purpose. It is yet to be scaled up nationwide as there is currently no consensus or decision on scaling up.

13.3 Towards a Coordinated M&E Approach

The WASH Sector is working feverishly towards a sectorwide service delivery approach (SWAp). Since in a SWAp environment all processes are done in a centrally coordinated manner, M&E will also have to be centrally coordinated to give real meaning to the SWAp. The Ministry of Water Resources, Works and Housing, through the Water Directorate, has planned to develop a Sector Strategic Development Plan (SSDP), which will serve as the master plan which will guide all interventions in the WASH Sector. Included in this SSDP will be a Sector M&E Plan and Framework.

The M&E Plan, which will be based on the objectives outlined in the SSDP, will profile all the necessary M&E processes, definitions, identification of indicators and their definitions. It will define how M&E shall be done at the central level with inputs from the district or lower levels and who will be involved in the process from data generation, analyses, processing, storage to dissemination. The M&E plan will also identify a sectorwide M&E data storage and retrieval system and possibly make available on-line to facilitate easy access to data and decision-making. The framework will present a matrix containing all agreed set of harmonized sectorwide indicators, their definitions, sources of data, and frequency of updating data. These activities have all been planned for 2011, and it is hoped that by the end of 2011, M&E systems in Ghana's WASH sector will be harmonized.

13.4 Use of WASH Sector Survey Reports

Household user-based survey data continues to be the type used by the UN to monitor progress towards achieving the Millennium Development Goals (MDGs) on water and sanitation and this is likely to continue even after 2015.

A number of survey reports on WASH exist in Ghana, courtesy the Ghana Statistical Service. It was recommended in the 2009 SPR, that survey data could be improved upon with WASH stakeholder inputs. This is because none of the current surveys by the GSS is deliberately intended for the WASH sector. The Demographic and Health Survey (DHS) for example, is intended for the health sector; the Ghana Living Standard Survey (GLSS) is also intended to measure poverty levels and living standards of Ghanaians, while the Population and Housing Censuses cover the entire population and their demographic characteristics etc. This explains why the methodologies do not generally satisfy WASH Sector practitioners especially for planning and effective decision-making purposes. The few questionnaires related to water and sanitation is usually reported under household characteristics and is not necessarily focused on monitoring WASH Sector performance.

The second Multiple Indicator Cluster Survey (MICS) will be conducted in 2011 and it has been suggested to the GSS to take inputs from the WASH Sector in order to improve its usefulness to WASH stakeholders.

It has also been suggested that harmonized survey data should be used to report on access to water and sanitation in the sectorwide M&E plan yet to be developed. This is because it is based on user perceptions and satisfaction, captures data on all existing facilities (including self-supplied facilities) irrespective of who the provider is. It is believed that once the definition of 'access' is harmonized, the GSS could serve as the best source of data on access for the M&E framework.

In the meantime, the sector continues to resort to existing data and updates from the agencies as efforts are made towards a harmonized M&E plan in the near future.

Chapter 14: Conclusions and Recommendations

Introduction

This chapter highlights major conclusions of the report and gaps identified in the performance of the WASH Sector in 2010; it also and makes some recommendations for strategic attention.

14.1 Institutional and policy developments

The current institutional arrangements for the WASH Sector have been tested for some time now. It might be useful to undertake thorough assessments on these arrangements and make some reviews where necessary. For instance it was suggested at the 2010 National Environmental Sanitation Conference (NESCON) that an Environmental Sanitation Agency should be created to oversee the implementation of environmental sanitation programmes in the country. This may help accelerate sanitation delivery in the country especially as the MMDAs have not been very successful in solving the country's sanitation problems.

Institutional capacity development for effective sector coordination was envisaged in the Ghana (SWA) Compact. In this direction GoG undertook to "strengthen and enhance the capacity of the Water Directorate and the Environmental Health and Sanitation Directorate with increased budget allocations..."[10] This commitment must be fulfilled as a matter of urgency since the Directorates are woefully understaffed and ill-equipped to take on the huge task of coordinating all WASH Sector strategic directions for government ownership in a SWAp environment.

Progress made towards a Sector Wide Approach is commendable. All WASH Sector stakeholders, including the government and development partners, should demonstrate full support to this process. It is also recommended that, as the Ministry of Local Government and Rural Development has revised and launched the Environmental Sanitation Policy and the Strategic Plan (NESSAP), the Sector Environmental Sanitation Investment Plan (SESIP) should be approved to ensure early implementation of the plan.

14.2 Water Resources Management

Since ground water sources are so vital and are a preferred choice especially for rural water supply, it would be useful for the country to know how much of it is available. Knowledge of the amount of groundwater will also help in monitoring and planning for its use. National efforts at promoting IWRM and creating a buffer zone are commendable. It is therefore recommended that these efforts are sustained, accelerated and even intensified.

14.3 Access to Urban Water Supply

Though it is refreshing that access to urban water supply increased from 59% in 2009 to about 64%, more than four million urban dwellers still lack access. If current trends in progress are not improved, the GWCL will not meet its 85% target by 2015. It is therefore recommended that government demonstrates more commitment by increasing investment in the water sector.

Urban water management is also still a major issue since evaluation of AVRL's performance has indicated failures in many areas. It is therefore recommended that the value addition of the AVRL

[10] The Ghana Compact: Sanitation and Water for ALL (2010); commitment No 7.1

Management Contract be critically evaluated so that a more efficient model may be found. The issue of non-revenue water in particular has shown no sign of improvement since 2005 and this needs more serious attention and radical action to reverse the situation.

Since the rural water supply sector reports only on domestic water supply, it is recommended that the GWCL should publish separate data on domestic from industrial water supply so that real access to domestic water supply could be measured.

14.4 Access to Rural and Small Town Water Supply

The 62% access to rural and small town water supply leaves more than four million people without access. There is therefore the need for increased investment in this sub-sector. It has been observed that many communities are unable to manage and sustain their facilities and to benefit from its full lifespan. It is therefore suggested that for the sake of sustainability of rural and small town water supply facilities, the current Community Ownership and Management model should be reviewed. The CWSA Water Quality Framework is also a very laudable project that must attract the needed funding.

14.5 Sanitation and Hygiene

The Ministry of Local Government and Rural Development should strengthen coordination among sector players especially at the regional and district levels. It is believed that it will be possible to scale up the Community-led Total Sanitation, which is now the rural sanitation model only when all the sub-national sanitation institutions are appropriately coordinated. All stakeholders are therefore encouraged to embrace the concept and support its implementation.

14.6 Sector Financing

The percentage of allocated funds released to the WASH Sector agencies improved in 2010 over the 2009 performance. However, total allocations were still not adequate to meet the financial requirements of the SIPs. In comparison with the Health and Education ministries, financing of the WASH sector receives less priority from government. Since improvement in water and sanitation impact positively on the health of the economy, it is recommended that government should accord the needed priorities for the sector. A critical step is for the government to fulfill the commitments in the Ghana Compact in 2011 and beyond.

14.7 Harmonization of M&E processes

This report has again been produced without a harmonized M&E framework. It has been suggested that the development of a Strategic Sector Development Plan (SSDP) should include a sectorwide M&E plan and framework. It is therefore expected that by the time the SSDP is ready, the sector would have harmonized M&E processes.

As much as possible, the M&E framework should fill the following identified gaps:

Indicators and data on sanitation

Sanitation has mostly been associated with safe excreta disposal. The use of improved toilet facilities has been a global proxy to measure progress in sanitation for the MDGs. Within the broader context, sanitation also covers other aspects such as solid wastes, storm drainage, industrial waste etc. This has often created difficulties in getting a consensus on a common definition for sanitation. Apart from periodic surveys by the Ghana Statistical Service, there is currently no clear source of nationwide data on sanitation. The M&E Plan should therefore clearly define monitoring indicators, and identify sources of data on these indicators.

Indicators and data on hygiene

Hygiene is one of the three main components of WASH. However, it was not possible to obtain enough data on it with the exception of 2008 survey data on disposal of child faeces and household water treatment and storage. There is currently no data on handwashing practice and access to handwashing facilities. This shall not be overlooked during the development of the sectorwide M&E framework. It is recommended that the MLGRD should lead in selecting monitoring indicators on hygiene for the sectorwide M&E framework.

Disaggregation of domestic and industrial/commercial water supply figures

Coverage data on rural and small town water supply have always been limited to domestic water supply. However, data provided for urban water supply includes domestic, commercial and other uses. Comparing urban water supply coverage with rural water supply coverage is therefore inappropriate. It will be best if the GWCL could provide disaggregated data on domestic and other purposes.

Definition of urban and rural

The 2009 Sector Performance Report (SPR) recommended that data disaggregation should be based on common definitions for the terms 'urban' and 'rural' due to overlaps in operational areas of the GWCL and the CWSA. To avoid the imminent complexities it is recommended that reporting should be based on CWSA and GWCL Operational Areas instead of rural and urban. This is because none of the two agencies base their operations strictly within the national definition of rural and urban, where a rural community is defined as a community with population less than 5,000 inhabitants and urban is any community with population 5,000 or more. CWSA for instance operates in some communities with populations more than 30,000, whereas the GWCL also provides water to some communities with populations less than 5,000. These recommendations should be further analyzed when developing the sector M&E framework.

Self-supply

It is evident that many Ghanaians in both urban and rural communities provide their own water supply facilities for various reasons. These include hand-dug wells, boreholes, mechanized wells and rain harvesting systems. It is recommended that since self-supply can help accelerate coverage and promote sustainability, it should be an indicator for sectorwide monitoring, while the practice is also mainstreamed in order for the country to provide self-suppliers with the needed support for the benefits expected from the practice to be fully harnessed. To start the process, it is recommended that the MWRWH should, as a matter of urgency, conduct an assessment on self-supply in Ghana.

Contribution by non state actors

It is good that CONIWAS responded to the call on its members to document and disseminate their contribution (financial, advocacy and facilities) to the WASH sector by submitting some information for this report. They are however encouraged to expand and sustain the information by getting all their members on board. Data collection should also extend to other non-state actors including private and corporate contributions so that national monitoring may not leave out any contribution no matter where it is coming from. In this respect, the call for a WASH Specific Periodic Survey is being re-echoed since that appears the only data collection strategy that can capture data on all sources of water supply.

Annexes

Annex 1: Challenges of urban water supply

Challenges of Urban Water Supply in Ghana
• Measurement of some important performance indicators, eg, consumption and losses • Connecting unplanned settlements and slum areas • Negative perceptions and attitudes of people • Interrupted Supply increases risk of pipe bursts • Unsanitary conditions of homes and surroundings • Environmental Risks • Production and Transmission Capacity, Urban Boundaries • Non Revenue Water still high • Politics and the evolution of water sector reforms • Inadequate financing, late financing for development and upgrading infrastructure – increasing coverage – weak investments • Aging network, increasing NRW • Land acquisition, payment of compensation and protection of water resources. • Poor planning especially with respect to Lack of adequate consideration by stakeholders including Town & Country Planning, Metropolitan and District Assemblies, Landowners, Lands Commission etc for the provision of water to areas marked for development. • Attitude of both workers and consumers that undermine the economic viability of investment in water projects – we all need to change mind sets. • Lack of an optimal information system management • No total metering of customers RECOMMENDATIONS • PURC will ensure that economic tariffs are charged. • Government will provide the investment • Donor support for investments in the Sector is key, and hopefully would continue. • GWCL will be re-structured and operate more efficiently • Consumers are prepared to pay economic tariff. • Development partners to provide funds. • GWCL is restructured to improve service delivery and generate revenues for investment. (internally generated funds) • Government provides direct funds under Medium Term Expenditure Framework (MTEF) or Annual Development • Political decision makers must search for local solutions to our water supply problems • Private sector involvement in operations of GWCL must be enhanced. • Aggressive sourcing of funds for investment in the sector. • Tariff regime must be economic for GWCL to manage operation successfully • Customers (we all) must change attitudes and be part of the solution.

Annex 2: GWCL Performance on Efficiency Indicators 2003 - 2010

No.	ITEM	UNIT	2005	2006	2007	2008	2009	2010
1.	Water Production	MM^3	210.6	211.7	217.9	222.6	231.77	242.3
2.	Water Sales	MM^3	108.88	100.1	103.9	107.6	112.3	150.7
3.	Non Revenue Water	%	48.3	52.8	52.3	51.7	51.5	49.3
4.	Billing (Total)	MGH¢	53.9	55.9	69.7	101.1	104.6	153.9
5.	Collection (Total)	MGH¢	38.5	53.4	62.5	91.7	101.1	130.6
6.	Collection Ratio Total	%	71.4	95.5	89.7	90.7	96.7	85
7.	Total Revenue	MGH¢	55.90	57.65	69.40	102.26	106.6	145.9
8.	Total Cost	MGH¢	54.32	62.41	57.81	87.99	90.5	109.6
9.	Total Cost/M^3	GH¢/M^3	0.258	0.295	0.270	0.40	0.39	0.45
10.	Electrical Cost/M^3	GH¢/M^3	0.086	0.07	0.08	0.15	0.1	0.12
11.	Chemical Cost/M^3	GH¢/M^3	0.023	0.03	0.03	0.03	0.04	0.04

Source: GWCL Corporate Planning Dept 2010[11]

[11] The 2010 figures were obtained from GWCL's unaudited reports

Annex 3: Access to WASH facilities in basic Schools, by Region

Number of Schools with WASH Facilities				
Region	**Total Population**	**No. of Schools**	**Toilets**	**Drinking Water**
Ashanti	183,488	1,905	967	1,446
Brong Ahafo	142,767	1,411	611	812
Central	109,268	1,205	673	802
Eastern	116,051	1,412	723	830
Greater Accra	38,962	420	312	264
Northern	105,530	1,263	545	718
Upper East	46,864	487	222	281
Upper West	33,992	370	178	171
Volta	101,368	1,318	686	686
Western	138,316	1,349	443	1,065
Total	**1,016,606**	**11,140**	**5,360**	**7,075**

Source: MoE, 2009

Annex 4: Comparative Analysis of GOG Allocations in million GH¢

Year	Ministry/ Agency	Investments	Services	Total Investment & Service	Total National Budget	% of Total national Budget
2009	MWRWH	57,175,184	302,033	57,477,217	**6,462,770,000**	0.88%
	MLGRD	35,000,000	No Data	35,000,000	**6,462,770,000**	0.00005%
	GWCL	1,342,277	6,319	1,348,596	**6,462,770,000**	0.02%
	CWSA	30,231,134	30,533	30,261,667	**6,462,770,000**	0.46%
	GWCL+CWSA(TI+TS[12])			31,610,263	**6,462,770,000**	0.48%
2010	MWRWH	13,336,000	342,807	13,678,807	**6,584,781,600**	0.20%
	MLGRD	2,389,040	561,308	2,950,348	**6,584,781,600**	0.04%
	GWCL	2,041,359	7,172	2,048,531	**6,584,781,600**	0.03%
	CWSA	3,803,265	34,655	3,837,920	**6,584,781,600**	0.05%
	GWCL+CWSA(TI+TS)			5,886,451	**6,584,781,600**	0.08%

Source: CONIWAS/GrassRootsAfrica Budget tracking 2010

[12] TI & TS means Total Investments and Total Services

Annex 5: Approved Budget Allocations/Estimates from GOG to MWRH, MLGRD, MOE, MOH (GH¢)

MINISTRY	P.E	ADMIN	SERVICES	INVESTMENT	TOTAL
MWRWH	8,478,339	984,524	342,807	GH¢13,336,000	**23,141,670**
MLGRD	72,748,751	660,918	561,308	GH¢2,389,040	**76,360,018**
MOE	1,203,398,827	33,465,257	24,846,000	GH¢4,346,589	**1,266,054,673**
MOH	377,600,000	7,033,629	7,356,788	GH¢8,460,295	**400,450,711**

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