



Republic of Ghana

MINISTRY OF WATER RESOURCES, WORKS AND HOUSING

# WATER SECTOR STRATEGIC DEVELOPMENT PLAN (2012-2025)

*Sustainable Water and Basic Sanitation for All by 2025*



MARCH 2014

## Water Sector Strategic Development Plan

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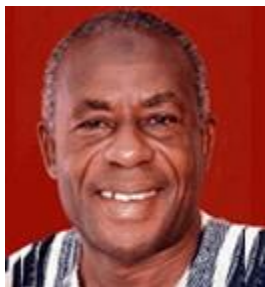
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## FOREWORD



This Water Sector Strategic Development Plan (WSSDP) sets out Ghana's commitment to and provides the framework for achieving the vision in respect of water, which is "**sustainable water and basic sanitation for all by 2025.**" The WSSDP identifies and addresses existing and emerging challenges in delivering water and basic sanitation services in the country and proposes strategies towards ensuring that all people in Ghana have access to basic levels of water and sanitation services by 2025. It illustrates the Government of Ghana's commitment to operationalising the policy objectives and implementation strategies in the National Water Policy and the Ghana Shared Growth and Development Agenda (GSGDA) (2010-2013).

The WSSDP complements the historic signing of the Sanitation and Water for All (SWA) Ghana Compact on 23rd April 2010 in which the Government of Ghana explicitly acknowledged sanitation and water as "essential services" and made a commitment to work with her Development Partners and the private sector to ensure that financing for sanitation and water improvements reaches \$350 million by 2011 and to invest up to 0.5% of GDP in capacity building for hygiene education. Such education will include proper hand-washing methods and fostering countrywide buy-in to the Community Led Total Sanitation (CLTS) agenda. The WSSDP is also a crucial milestone for Government of Ghana and her Development Partners in the progress towards institutionalising a Sector Wide Approach (SWAp) in the water sector.

The WSSDP has been prepared through a consultative and participatory process involving key sector stakeholders at the national, regional and district levels. The plan builds extensively on existing documents developed across the three main sub-sectors – notably the Community Water and Sanitation Agency Strategic Investment Plan (2008-2013, 2015), Ghana Water Company Limited Strategic Investment Plan (2007-2015, 2025), and the Draft Integrated Water Resource Management Plan (2011-2015) developed by the Water Resources Commission. The plan also builds on the National Environmental Sanitation Strategy and Action Plan (2011-2015). The WSSDP will undoubtedly serve as a reference document for mobilising financial and other required resources to guide future investments in the water sector.

I wish to express my sincere appreciation to members of the Technical Committee, Development Partners, Water Directorate, Ghana Water Company Limited, Community Water and Sanitation Agency, Water Resources Commission and all those who worked tirelessly and supported the process which has culminated in the preparation of this very important plan for our sub-sector.

**Hon. Alhaji Collins Dauda, MP**  
**Minister for Water Resources, Works and Housing**

## EXECUTIVE SUMMARY

This Water Sector Strategic Development Plan (WSSDP) has been prepared by the Government of Ghana (GoG) to provide a framework for implementing its vision, policy objectives and targets for the water and sanitation sector. It will guide the water sector as a whole (both state and non-state actors) in the planning, development and management of the nation's water resources and in the delivery of sustainable water and water-related sanitation services.

Government's vision of the water sector is "**sustainable water and basic sanitation for all by 2025**" which, for practical purposes, means "all people living in Ghana have adequate, safe, affordable and reliable access to a basic level of water service, practise safe sanitation and hygiene and that water resources are sustainably managed." The overall goal of this plan is "improved living standards of Ghanaians through increased access and use of safe water, sanitation and hygiene and sustainable management of water resources." This goal is expected to be achieved by 2025 through the implementation of an investment programme from 2012 to 2025 structured along two main prongs – i) service delivery and ii) cross-cutting issues.

The interventions aimed to strengthen the policy, institutional, regulatory and financial frameworks for effective service delivery, including operation and maintenance of water and sanitation services. The total cost of implementing the plan is estimated at US\$5,416.48 million (or GH¢13,692.85 million).<sup>1</sup> This entails a capital cost of US\$4,822.84 million (89.04%) and recurrent cost of US\$593.64 million (10.96%). GoG will finance 41.49% of the total cost through annual budgetary allocations and will secure 48.98% of the total through loans and grants from DPs. The share from user fees and community contributions towards operation and maintenance (O&M) of proposed investments will constitute 3.49% of the total cost, with the Metropolitan, Municipal and District Assemblies (MMDAs) bearing the balance of 6.04%.

The Ministry of Water Resources, Works and Housing (MWRWH) is responsible for facilitating the implementation of this WSSDP and will coordinate the activities of all stakeholders in the sector including the Inter-Ministerial Steering Committee (IMSC), Development Partners, Community Water and Sanitation Agency (CWSA), Ghana Water Company Limited (GWCL), Water Resources Commission (WRC), local and international Non-Governmental Organisations (NGOs), other Ministries, Departments and Agencies (MDAs) and the private sector. MWRWH will also be directly responsible for implementing proposed strategies relating to cross-cutting issues in the sector – such as gender, capacity and assessment exercises.

Planned investments in urban water systems will be implemented by GWCL while CWSA will facilitate the implementation of rural water, basic sanitation and hygiene promotion interventions. Integrated Water Resource Management (IWRM) interventions will be implemented by the Water Resources Commission (WRC). The MMDAs will be responsible for preparing and updating their

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<sup>1</sup> Value at 5<sup>th</sup> March 2014 ( 1USD = GHS 2.528), based on Bank of Ghana's (BoG's) inter-bank foreign exchange rate

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District Water and Sanitation Plans (DWSPs) to respond to the policy objectives, strategies and interventions identified in the WSSDP. MMDAs will be directly responsible for implementing rural and small towns' water supply and basic sanitation interventions in the WSSDP, with technical support from CWSA. MMDAs will further support the implementation of IWRM interventions under the leadership and guidance of the Water Resources Commission.

The Public Utilities Regulatory Commission (PURC) will regulate the urban water sector by reviewing and approving tariffs and monitoring performance standards of GWCL and other secondary and tertiary water suppliers. CWSA will be responsible for defining performance standards and regulating the rural and small towns' water sub-sector. In both the urban and rural water and sanitation sub-sectors, the private sector will continue to supply goods and carry out required services and works.

To ensure adequate monitoring, evaluation and reporting on progress in the implementation of the WSSDP, a sector monitoring and evaluation plan and strategy, together with a management information system (MIS), will be developed and operationalised. It will harmonise and address variations in data sources and collection methods across the sub-sectors. Existing sector learning platforms such as the Mole Conference, National-Level Learning Alliance Platform (NLLAP), the Water and Sanitation Sector Working Group, Ghana Water Forum (GWF) and retreats of key GoG sector leaders will continue to serve as avenues for providing updates on the implementation of the WSSDP.

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## LIST OF ABBREVIATIONS

AFD	Agence Francaise de Developpment
AfDB	African Development Bank
AVRL	Aqua Vitens Rand Limited
BoG	Bank of Ghana
BOO	Build, Own and Operate
BOT	Build, Operate and Transfer
CapManEx	Capital Maintenance Expenditure
CIDA	Canadian International Development Agency, now DFATD
CLTS	Community Led Total Sanitation
CONIWAS	Coalition of NGOs in Water and Sanitation
CSIR	Council for Scientific and Industrial Research
CSO	Civil Society Organisation
CWSA	Community Water and Sanitation Agency
DACF	District Assemblies Common Fund
DANIDA	Danish International Development Agency
DDF	District Development Facility
DESSAPs	District Environmental Sanitation Strategy and Action Plans
DFATD	Department of Foreign Affairs, Trade and Development (of Canada), formerly CIDA
DiMES	District Monitoring and Evaluation System
DP	Development Partner
DPCU	District Planning Coordinating Unit
DWD	District Works Department
DWSP	District Water and Sanitation Plans
ECG	Electricity Company of Ghana
EHSD	Environmental Health and Sanitation Directorate
EPA	Environmental Protection Agency
ESP	Environmental Sanitation Policy
EU	European Union
GAEC	Ghana Atomic Energy Commission
GDHS	Ghana Demographic and Health Survey
GDP	Gross Domestic Product
GES	Ghana Education Service
GHS	Ghana Health Service
GLSS	Ghana Living Standards Survey
GoG	Government of Ghana
GRIDCo	Ghana Grid Company
GSA	Ghana Standards Authority
GSGDA	Ghana Shared Growth and Development Agenda
GSS	Ghana Statistical Services



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GUWL	Ghana Urban Water Limited
GWCL	Ghana Water Company Limited
GWF	Ghana Water Forum
GWSC	Ghana Water and Sewerage Corporation, now defunct
HES	Hygiene Education and Sanitation
HPU	Health Promotion Unit of MoH
IDA	International Development Association
IGF	Internally-Generated Funds
IMSC	Inter-Ministerial Steering Committee
IRC	International Water and Sanitation Centre
IWMI	International Water Management Institute
IWRM	Integrated Water Resource Management
JICA	Japanese International Cooperation Agency
JMP	Joint Monitoring Programme
KfW	Kreditanstalt für Wiederaufbau
LGSS	Local Government Service Secretariat
LI	Legislative Instrument
M&E	Monitoring and Evaluation
MCA	Millennium Challenge Authority
MDAs	Ministries, Departments and Agencies
MDGs	Millennium Development Goals
MICS	Multiple Indicator Cluster Survey
MIS	Management Information System
MLGRD	Ministry of Local Government and Rural Development
MMDAs	Metropolitan, Municipal and District Assemblies
MoE	Ministry of Education
MoEn	Ministry of Energy
MoF	Ministry of Finance
MoFA	Ministry of Food and Agriculture
MoGCSP	Ministry of Gender, Children and Social Protection
MoH	Ministry of Health
MoU	Memorandum of Understanding
MWRWH	Ministry of Water Resources, Works and Housing
NCWSP	National Community Water and Sanitation Programme
NEPAD	New Partnership for Africa's Development
NESCON	National Environmental Sanitation Conference
NESP	National Environmental Sanitation Policy
NESSAP	National Environmental Sanitation Strategy and Action Plan
NGO	Non-Governmental Organisation
NIC	National Insurance Commission
NLLAP	National-Level Learning Alliance Platform

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NWP	National Water Policy
O&M	Operation and Maintenance
ODA	Overseas Development Assistance
PIM	Project Implementation Manual
PURC	Public Utilities Regulatory Commission
PWDs	Persons with Disabilities
RBB	River Basin Board
RCN	Resource Centre Network
SESIP	Strategic Environmental Sanitation Investment Plan
SHEP	School Health Education Programme
SIP	Strategic Investment Plan
SWA	Sanitation and Water for All
SWAp	Sector-Wide Approach
SWG	Sector Working Group
ToR	Terms of Reference
TPP	Tripartite Partnership Project
UNICEF	United Nations Children's Fund
VBA	Volta Basin Authority
VRA	Volta River Authority
WASH	Water, Sanitation and Hygiene
WATSAN	Water and Sanitation
WD	Water Directorate
WHO	World Health Organisation
WRC	Water Resources Commission
WRI	Water Research Institute
WRM	Water Resource Management
WSMT	Water and Sanitation Management Team
WSSDP	Water Sector Strategic Development Plan

## **ACKNOWLEDGEMENTS**

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The Ministry is also deeply indebted to all members of the WSSDP Technical Committee for playing an active role in the preparation of the plan.

We further acknowledge the contributions of the Water Resources Commission, Ghana Water Company Limited and the Community Water and Sanitation Agency in supporting the plan preparation team and consultants during the process of developing the plan.

Lastly, the Ministry is grateful to other allies and stakeholders in the water and sanitation sector, notably Development Partners, MDAs, MMDAs, the private sector and civil society, for providing meaningful inputs to the consultative process.

**Ministry of Water Resources, Works and Housing**  
**Accra**

## 1. INTRODUCTION

### 1.1 Background

This Sector Strategic Development Plan (WSSDP) has been prepared by the Ministry of Water Resources, Works and Housing (MWRWH) for the water sector as part of the key activities in the implementation of the road map towards a Sector Wide Approach (SWAp) in Ghana’s water sector. The plan seeks to facilitate the achievement of the sector’s objectives as captured in the National Water Policy and Ghana Shared Growth and Development Agenda (GSGDA, 2010-2013).

With a population of 24.3 million (as at 2010) growing at 2.4% per annum, Ghana’s population is experiencing rapid urbanisation. Between 2000 and 2010, the urban population grew by 30.4%.<sup>2</sup> Given these trends in population growth, Ghana’s population will be about 35 million by 2025, with a projected 63% of that number living in urban areas. Among the diverse implications of these population statistics is a rapid rise in the demand for water and sanitation services, particularly in urban areas.

*Table 1: Population Growth Trends (2010-2025)<sup>3</sup>*

	<b>Pop 2010</b>	<b>% Pop 2010</b>	<b>Pop 2025</b>	<b>% Pop 2025</b>
Urban	12,545,229	51	21,789,878	63
Rural	12,113,594	49	12,797,230	37
Total	24,658,823	100	34,587,108	100

Ghana’s Gross Domestic Product (GDP) has also been growing. After attaining lower middle-income status in 2006, the economy grew by nearly 28% over the next three years, rising from US\$20.34 billion to US\$25.97 billion. In 2007, Ghana struck oil in commercial quantities and began exporting crude oil in 2011, with GDP peaking at 15% that year.<sup>4</sup> The above indicators put Ghana on a fairly sound footing towards economic development.

Accompanying Ghana’s attainment of lower middle-income status is an expected dip in Official Development Assistance (ODA) in the form of grants for basic social services. In the short to medium term, this is likely to affect the country’s debt servicing ratio as Development Partners (DPs) divert financial resources to other less endowed countries. As a result, Ghana will increasingly have to depend on internally generated funds and loans from international sources – such as International Development Association (IDA), Kreditanstalt für Wiederaufbau (KfW), Agence Francaise de Developpment (AFD), African Development Bank (AfDB) and private banks – in financing basic social infrastructure and services such as water supply and sanitation. A further

<sup>2</sup> GSS (2012): 2010 Population and Housing Census: Summary Report of Final Results, Accra: Ghana Statistical Service

<sup>3</sup> GSS (2012): 2010 Population and Housing Census: Summary Report of Final Results, Accra: Ghana Statistical Service; and NPC (2011): Ghana Population Stabilisation Report, Accra: National Population Council

<sup>4</sup> World Bank (2013): Ghana Overview, <http://www.worldbank.org/en/country/ghana/overview>

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implication of becoming a lower middle-income country is that the level of basic service delivery is now expected to be comparable to what pertains in other lower middle-income economies.

*Table 2: Ghana's Performance on Water & Sanitation Services compared with other Middle-income Countries*

Indicator	Unit	Low-income countries	Ghana		Middle-income countries
		Mid 2000s	Mid 2000s	Late 2000s	Mid 2000s
Access to piped water	% pop	10.1	15.1	13.1	56.4
Access to stand posts	% pop	16.1	20.5	27.5	20.4
Access to wells/boreholes	% pop	38.3	42.1	40.1	6.3
Access to septic tanks	% pop	5.3	10.3	14.1	44.0
Open defecation	% pop	37.1	24.6	23.1	15.8
Urban water assets in need of rehabilitation	%	35.5	42.0	N/A	25.0
Revenue collection	% sales	96.0	75.0	95.0	99.2
Non-revenue water	% production	33.0	53.0	50.8	23.1
Cost recovery	% total costs	56.0	48.4	61.8	80.6
Total hidden costs as % of revenue	%	130.0	183.7	128.9	84.9

*Source: World Bank (2010) Ghana Infrastructure. A Continental Perspective, Africa Infrastructure Country Diagnostic, Country Report*

Table 2 shows that the country's performance in the delivery of selected water and sanitation services is poor as compared to other middle-income countries. For instance, while access to piped water averaged 56.4% in the mid-2000s for middle-income countries, only 13.1% of the population of Ghana had access to piped water. Indeed, in respect of non-revenue water, urban water assets requiring rehabilitation, cost recovery and hidden costs as a percentage of water revenue, Ghana's performance is significantly worse than that of low-income countries as a whole.

The Government of Ghana (GoG) continues to make significant contributions to financing the delivery of water services. GoG contributes about 80% of financing for activities in the water sector through budgetary support and concessionary loans from Development Partners. However, it is significant to note that GoG's contribution to investments in the rural and small towns' water sector is very low. About 90% of investments in the rural and small towns' water sub-sector is financed through Official Development Assistance (ODA) in the form of grants.<sup>5</sup> GoG's contribution to personnel and administrative costs especially in the rural water and water resource

<sup>5</sup> COWI Consult (2006) Assessment of Aid Effectiveness, Alignment and Harmonisation of the Water Sector. Final Report  
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management sub-sectors also falls short of the required amounts. This situation has resulted in the poor delivery of water and basic sanitation services.

For the year 2012, coverage rates<sup>6</sup> for national water and sanitation were estimated at 63.15% and 14.0% respectively. The implication is that about 36.85% of the population lacks access to water services, based on standards set by the service providers, i.e. CWSA and GWCL. Even more troubling, the majority of the populations (over 80%) are not using improved sanitation facilities as defined by the Joint Monitoring Platform (JMP).

In 2009, Ghana signed the Sanitation and Water for All (SWA) compact to accelerate progress towards the Millennium Development Goals (MDGs) for water and sanitation. In signing the compact, the Government of Ghana acknowledged sanitation and water as “essential services” and made a commitment to invest US\$350 million annually, starting 2011, for sanitation and water improvements with the view to meeting the MDG targets, another US\$150 million annually towards hygienic treatment and disposal of septage and faecal sludge as well as sullage and storm-water management. GoG further committed to providing up to 0.5% of GDP (or the equivalent of US\$50 million annually from 2011) for capacity building in hygiene education, Community-Led Total Sanitation (CLTS) and general enhancement of enabling elements. In the GSGDA, GoG also committed to utilising revenue from the oil sector to make investments in basic social services including water and sanitation.<sup>7</sup> These commitments are intended to accelerate progress towards meeting the MDGs for water and sanitation and achieving universal coverage.

This WSSDP therefore outlines GoG’s vision and objectives for the water sector and presents a comprehensive framework for enhancing ownership of sector activities and facilitating the coordinated delivery of sustainable water and water-related sanitation in Ghana.

### **1.2 Purpose of the WSSDP**

The purpose of the Water Sector Strategic Development Plan (WSSDP) is to provide a framework for coordinated implementation of the vision, policy objectives, goals and targets of the water and sanitation sector. It aims to guide the water sector as a whole (government and other sector actors) in the planning, development and management of the nation’s water resources and in the delivery of sustainable water and water-related sanitation services. The WSSDP articulates the medium to long-term priorities of GoG presented in the National Water Policy. It is based on a vision of sustainably managed water resources and universal access to water and sanitation services by the year 2025 and includes a set of specific objectives and prioritised activities together with an associated budget for the period 2012-2025.

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<sup>6</sup> The national water coverage rate relies on “provider-based” data from GWCL and CWSA while the national sanitation coverage rate is “user-based,” extracted from datasets of Ghana Statistical Service and WHO/UNICEF/JMP

<sup>7</sup> Republic of Ghana (2010) Ghana Shared Growth and Development Agenda. Accra: National Development Planning Commission, Accra. Page 163

The WSSDP further sets out the key challenges, strategic priorities and investment requirements to achieve universal coverage and sustainable water and sanitation services as well as an integrated management of Ghana's water resources.

### **1.3 Scope of the WSSDP**

The water sector as defined in the WSSDP includes the following sub-sectors:

- urban water delivery including water supply service in peri-urban communities;
- rural and small towns water delivery;
- basic sanitation<sup>8</sup> and hygiene in rural areas; and
- water resource management

The plan does not address other aspects of environmental sanitation. The WSSDP acknowledges that the Ministry of Local Government and Rural Development (MLGRD) through its Environmental Health and Sanitation Directorate (EHSD) is responsible for overall sanitation service delivery. Accordingly, interventions identified in the WSSDP are intended to complement those in the National Environmental Sanitation Strategy and Action Plan (NESSAP), being implemented by MLGRD. Within the context of this WSSDP, basic sanitation is defined as "disposal of faecal matter as it affects water usage."<sup>9</sup>

### **1.4 Linkages to Existing Policies and Plans**

The WSSDP builds on the policy objectives and proposed strategies in the national development plan – i.e. the Ghana Shared Growth and Development Agenda (GSGDA, 2010-2013) – and the National Water Policy. The plan also responds to Ghana's commitments to regional and global targets such as the Sanitation and Water for All (SWA) Ghana Compact and eThekweni Declarations, and the key stakeholders' Code of Conduct towards operationalising a SWAp in the water and sanitation sector in Ghana.

Beyond these broad national policy and strategy documents, a number of sub-sector-specific plans have been prepared to address issues in the four main sub-sectors of the water sector. The relevant plans are the GWCL Strategic Investment Plan (for urban water), CWSA Strategic Investment Plan (for rural and small towns' water and sanitation), National Environmental Sanitation Strategy and Action Plan (NESSAP) (for environmental sanitation including basic sanitation), the Strategic Environmental Sanitation Investment Plan (SESIP) and the Draft Integrated Water Resource Management (IWRM) Strategic Plan (to guide the management of water resources). These plans have constituted the bedrock for the development of the WSSDP.

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<sup>8</sup> The concept of basic sanitation, as used in this document, includes water-related sanitation and is limited to the provision of safe toilet facilities

<sup>9</sup> Based on UN (2004): Achieving the Millennium Development Goals for Water and Sanitation, by Task Force on Water and Sanitation, The United Nations Millennium Project, Nov. 2004

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At the local level, the Metropolitan, Municipal and District Assemblies (MMDAs) have been assisted by CWSA and EHSD respectively to prepare District Water and Sanitation Plans (DWSPs) and District Environmental Sanitation Strategy and Action Plans (DESSAPs). These plans constitute an indication of investment decisions at the district level for water and sanitation service delivery and attempt to respond to the broad targets and strategies in the CWSA Strategic Investment Plan and NESSAP. The DWSPs and DESSAPs provide the bottom-up link between planning at the national and district level. In order to ensure linkage among the DWSPs, DESSAPs and the WSSDP, at least one district plan from each region was reviewed and proposed interventions fed into the preparation of the WSSDP.

The preparation of the WSSDP was also guided by the framework of Ghana's decentralised governance programme as outlined in Chapter 22 of the Fourth Republican Constitution of Ghana, the Local Government Act of 1993 (Act 462), the Local Government (Departments of District Assemblies) (Commencement) Instrument of 2009 (LI 1961), the Decentralisation Policy Framework and National Decentralisation Action Plan. These documents affirm decentralisation as a process for delivering water and sanitation services and define the administrative and institutional framework at the national, regional, district and sub-district levels for decentralised service delivery in Ghana, with an emphasis on the pivotal role of District Assemblies.



## 2 VISION, GOALS AND OBJECTIVES OF THE SECTOR

### 2.1 Vision of the Ghana Water Sector

The vision of the water sector is "*sustainable water and basic sanitation for all by 2025*" which means ensuring that "all people living in Ghana have access to adequate, safe, affordable and reliable water services, practise safe sanitation and hygiene and that water resources are sustainably managed."

### 2.2 Goal and Objectives of the Sector

The goal of the sector is "to contribute to improvement in the living standards of Ghanaians through increased access to and use of safe water, sanitation and hygiene and sustainable management of water resources."<sup>10</sup> The specific objectives of the sector are:

- To achieve universal coverage for water and sanitation services by 2025:
  1. increase the national water coverage rate from 59%<sup>11</sup> in 2009 to 80% in 2015 and 100% in 2025;
    - a) increase rural and small towns water coverage from 59% in 2009 to 76% in 2015 and 100% in 2025;
    - b) increase urban water coverage from 59% in 2009 to 85% in 2015 and 100% in 2025;
  2. contribute to increasing the national sanitation coverage from 13% in 2008 to 53% in 2015 and 100% by 2025;
- To ensure sustainable financing for investments, operation and maintenance of water services:
  1. increase sector investment to US\$350 million annually for water and sanitation services, and allocate 0.5% of GDP to sanitation and hygiene education between 2011 and 2015;
  2. increase GoG contribution to investment in the rural water sector through budgetary allocations and concessionary loans from about 5% in 2009 to at least 30% by 2015, 50% by 2020 and 100% by 2025;
  3. ensure full recovery of rehabilitation, operation and maintenance costs of urban water service by 2015;
  4. ensure at least 95% functionality of rural and small towns' water systems via effective community operation and maintenance of existing facilities throughout the plan period (2012-2025);

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<sup>10</sup> The goal of the WSSDP is derived from the goal of the GSGDA (2010-2013) and the National Water Policy

<sup>11</sup> The overall national coverage between the two main water supply agencies was estimated as 58.98% (total population served as a percentage of total estimated population by CWSA and GWCL) at the end of 2009 (ref. 2009 Water Sector Performance Report prepared by Water Directorate/MWRWH)

5. secure at least 5% of the water and sanitation sector investment financing from other sources including private sector financing and internally generated funds for investments by 2020; and
  6. Create a mechanism for financing capital maintenance expenditure (CapManEx) for rural and small-town systems by 2025
- To ensure that water sector institutions have the required expertise, information, equipment, logistics and financing to perform their functions efficiently and effectively in a transparent and well-coordinated manner by 2025
  - To ensure sustainable harnessing, utilisation and management of water resources by 2025:
    1. Develop a framework for managing and protecting water resources for improved water security and enhanced resilience to climate change;
    2. Strengthen water resource planning, decision-making and operational capacity through improved access to knowledge and expertise in integrated water resource management;
    3. Ensure that effective institutional coordination and collaborative mechanisms for water resource management are in place; and
    4. Strengthen and improve trans-boundary and international cooperation in the management of shared water resources.

### **2.3 Sector Situation and Challenges**

The vision, goal and objectives of the water sector have been informed by an analysis of existing and emerging challenges in the water sector. The current situation in the water sector has been analysed along two main lines – service delivery and cross-cutting issues. The analysis unearths the strengths and challenges of the sector and proposes a number of strategies for addressing the issues that emerged from the analysis.

#### **2.3.1 Service Delivery**

##### ***2.3.1.1 Water Service Delivery***

The national water coverage rate was estimated at 63.15% in 2012 based on provider estimates and 86.00% in 2010 based on user surveys conducted by the Ghana Statistical Services and reported by the Joint Monitoring Platform (JMP). Given the different means of measuring the coverage rates, there is no disagreement between the two rates and Ghana is on track to achieving the MDG target (78%) for use of safe water.

Based on the provider based estimates for the national water coverage for 2012, about 36.85% of Ghana's population were yet to be served with potable water as at the end of 2012. These were mainly residents of rural areas, low-income urban communities and peri-urban areas. With an anticipated increase in population especially in urban areas, additional investments should be provided to meet future increase in demand for water services.

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### 2.3.1.1.1 Urban and Peri-Urban Water Services

In the majority of urban areas, water is rationed due to a combination of 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 largely anecdotal estimates by GWCL. For 2012, the agency estimates that, against a daily demand of 1,13 Mm<sup>3</sup>, it was only able to produce 0.708Mm<sup>3</sup> (62.65%) per day. GWCL records reveal extremely high losses on account of non-revenue water, reckoned to average around 50%. Its bill collection ratio is also at about 95%. The trends in water production, non-revenue water and bill collection over the period 2008-2012 are presented in Table 3.

*Table 3: Trends in Water Production, Sales and Non-Revenue Water*

Item	Unit	2008	2009	2010	2011	2012
Unit production cost	usd/m <sup>3</sup>	0.812	0.633	0.683	0.760	0.768
Coverage	%	56.5	58.0	59.0	62.2	62.9
Customer strength	Nr	378,267	418,449	438,034	457,842	481,384
Non-revenue water	%	51.5	51.5	49.8	49.1	48.8
Bill collection ratio	%	92.9	96.7	90.9	96.7	98

*Source: GWCL Corporate Planning Unit, November 2013*

The proportion of non-revenue water is more than twice the international best practice level of 20% and even the benchmark of 33% for the low-income country peer group.<sup>12</sup> The average bill collection ratio for the period is also lower than the benchmark of 96% and 99.2% for low and middle-income country peer groups.<sup>13</sup> There are two explanations for the high level of revenue loss. The first is the ageing and poorly maintained distribution infrastructure which is riddled with leaks. Second is a high level of theft from the distribution network, sometimes for the purposes of secondary retailing to sachet (commercial) water producers. Unstable electricity supply, encroachment, illegal small scale mining activities ("galamsey"), delays in payment of compensation, rationing and its effects on equipment and mounting customer indebtedness are all factors that affect the efficiency of GCWL's operations, resulting in the suboptimal delivery of urban water services.

In future, appropriate metering of water production and consumption will have to be established. In order to improve service delivery, it will also be necessary to create stronger incentives for GWCL to address the issue of non-revenue water and to improve water production levels, the distribution network and bill collection.

<sup>12</sup> World Bank (2010) Ghana Infrastructure. A Continental Perspective. Africa Infrastructure Country Diagnostic. Country Report.

<sup>13</sup> *ibid*

### 2.3.1.1.2 Peri-Urban and Low-Income Urban Communities

Although GoG is committed to improving water service delivery in peri-urban areas and low-income communities, a lot more work needs doing to properly define peri-urban areas, establish current water supply levels and supply options and chart a strategy for providing water services to these areas. A study by the Public Utilities Regulatory Commission (PURC) concluded that the majority of the poor are un-served directly by GWCL except through informal services or secondary and tertiary sources.<sup>14</sup> PURC and GWCL are in the process of developing a strategy for improving water service in these areas. In the interim, proposals have been made in the WSSDP to improve the supply of water to these areas.

### 2.3.1.1.3 Rural and Small Towns Water Service

About 38% of the population in rural communities and small towns are yet to be served with potable water supplies.<sup>15</sup> Although communities are responsible for the operation and maintenance of water facilities in the rural and small towns water sub-sector, responsibility for water quality monitoring as well as major rehabilitation and replacement of infrastructure remains to be clarified. It is estimated that between 12% and 20% of water facilities in rural communities and small towns are either non-functional or functioning below the expected standards at any given time.<sup>16</sup> CWSA lacks adequate data on the functionality of water systems and when existing water facilities were installed. This affects planning for operation and maintenance (O&M), rehabilitation and replacement of facilities that may have outlived their lifespan.

Water supply technology options remain limited to hand dug wells (with or without pumps fitted), boreholes (fitted with any of four approved pumps),<sup>17</sup> spring catchment systems, limited mechanisation and piped schemes. Self-supply initiatives and rain water harvesting systems are limited and the needs of persons with disability (PWDs) receive little consideration in the design of water supply systems. Equally disturbing is the fact that the unit cost of delivering water services is higher for Ghana than in other countries in the Sub-Saharan Africa region.<sup>18</sup> More needs to be done towards developing more affordable and disability-friendly technology options designed to reduce the financial and social costs of accessing water in rural areas and small towns.

CWSA has been able to establish a private sector managed distribution system of hand pump spare parts for the four recognised hand pumps in Ghana. Sales outlets have been opened in all of the ten regions and the private operator has completed the repayment of the seed funds provided

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<sup>14</sup> PURC (2005) Public Utilities Regulatory Commission (2005a) Urban Water Tariff Policy. PURC, Accra. February 2005.

<sup>15</sup> Rural and small towns water coverage rates from CWSA for 2012.

<sup>16</sup> Komives et al. (2008) in a study of Volta and Brong Ahafo regions in Ghana concluded that 12% and 8% of handpumps were not functional in the two regions respectively (paper presented at 33<sup>rd</sup> WEDC International Conference, Accra). The World Bank in a Public Expenditure Review of the Water Sector in 2007 reported that senior management of CWSA estimate that about only 80% of all facilities are functional.

<sup>17</sup> The four standardised pumps are Ghana Modified Indian Mark II, AFRIDEV, Nira AS 45 and Vergnet

<sup>18</sup> World Bank (2007) Public Expenditure Review of the Water Sector in Ghana. Final Report

to kick-start the network. According to CWSA, the privatised network is becoming financially sustainable and will stay operational when subsidies to the private operator end in the near future. The challenge remains with extending the distribution network to the district level. Anecdotal evidence shows that the private sector is not interested in spare parts distribution at the district level, where demand volumes tend to be low.

### 2.3.1.1.4 Water Quality Monitoring

Varied forms of water quality monitoring are currently being carried out in the rural/ small towns' and urban water sub-sectors. While PURC is responsible for monitoring urban water quality, it lacks the required equipment and logistics for doing so effectively and, thus, relies on GWCL facilities for water quality testing. In the rural water sub-sector, there is currently no system in place for monitoring water quality at point sources, beyond the initial water quality tests that are conducted prior to handing over these facilities to communities. The operational guidelines developed by CWSA for the Water and Sanitation Management Teams (WSMTs) require WSMTs to carry out water quality monitoring of piped schemes twice a year. The degree of compliance with this requirement has not been established. However, CWSA has developed a framework for water quality monitoring in the rural and small towns' sub-sector which is expected to address the lapses in the current system for water quality monitoring.

WRC is yet to develop a framework for monitoring water quality in river basins. It is expected that a comprehensive national water quality monitoring framework will be developed to address relevant issues across all the three main sub-sectors i.e. rural and small towns, urban, and water resource management.

### 2.3.1.1.5 Basic Sanitation and Hygiene

About 20% of the entire country's population practise open defecation. The practice is much more widespread in the three regions of Northern Ghana (Northern, Upper East & Upper West Regions) where more than 70% of the population practise open defecation.<sup>19</sup> There is also a weak culture (especially in the rural areas) of individual household latrine ownership in Ghana. A high proportion (almost 51%) of Ghanaians uses communal latrines which, according to the Joint Monitoring Programme of WHO/UNICEF, are classified as unimproved. Ghana intends conducting research into the shared latrine phenomenon with a view to developing an agreed national definition for sanitation coverage. The national sanitation coverage rate was estimated at about 14% in 2010.<sup>20</sup> Quite clearly, it will require enormous effort to achieve the MDG target of 53% sanitation coverage by 2015.

The Ministry of Local Government and Rural Development (MLGRD) has prepared a National Environmental Sanitation Strategy and Action Plan (NESSAP) and accompanying Strategic Environmental Sanitation Investment Plan (SESIP) to guide investments in the sector towards

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<sup>19</sup> WSMP Ghana (2008): Use of Improved Sanitation Facilities in Ghana. WSMP-Ghana, Accra

<sup>20</sup> UNICEF/JMP (2012): Estimates for Improved Sanitation Facilities, Ghana

implementing the NESSAP. NESSAP seeks to adopt Community Led Total Sanitation as a means of accelerating the population's access and use of basic sanitation. In line with that agenda, a national rural sanitation model and costed scaling-up strategy have been developed for implementation. A national strategy to promote hand-washing with soap has also been developed by CWSA and, effective 2005, is being implemented in collaboration with allied agencies and the private sector.

### **2.3.2 Cross Cutting Issues**

#### **2.3.2.1 *Institutional Capacity Development and Governance***

##### **2.3.2.1.1 Governance**

Considerable progress has been made in the area of institutional reform and alignment in the water sector. The transformation of the erstwhile Ghana Water and Sewerage Corporation (GWSC) into the Ghana Water Company Limited, the establishment of the Community Water and Sanitation Agency, the involvement of MMDAs and communities in the management of rural and small towns water and sanitation facilities within the framework of the National Community Water and Sanitation Programme (NCWSP) and the establishment of the Water Directorate and the Environmental Health and Sanitation Directorate at MWRWH and MLGRD respectively are key milestones that have improved governance in the water sector.

Reporting on sector progress and tracking of investments by stakeholders – GoG's diverse MDAs, sector DPs and Non-Governmental Organisations (NGOs), and the private sector – has been weak. It has been difficult tracking allocations and expenditures by GoG and DPs in the water sector owing to the lack of a harmonised system for disbursing funds. In particular, there is very little information on the contribution of NGOs to the sector due to the weak regulatory and reporting framework. Civil society and MMDA engagement with sub-sector institutions especially with GWCL is weak. There is much room for improving collaboration between MMDAs and sub-sector institutions, especially between MMDAs and GWCL in urban water delivery.

In the absence of a strong decentralised department to support water service delivery at the district level, CWSA has assisted Municipal and District Assemblies to set up temporary District Water and Sanitation Teams (DWSTs) to take charge of the implementation of WASH services/activities. With the passage of LI 1961 to establish District Works Departments (DWDs), it is anticipated that MMDAs will move quickly to set up these departments and equip them with the required logistics so they could be more effective in the delivery of WASH services at the local level.

With support from CWSA, MMDAs and communities have established sub-district structures to manage existing water and sanitation facilities. These structures include Water and Sanitation (WATSAN) Committees and Water and Sanitation Management Teams (WSMTs). There are also Area Mechanics and Latrine Artisans who provide services on demand at the community level.

Anecdotal evidence suggests that these structures and systems tend to lose their effectiveness once CWSA withdraws support when associated projects wind up. By contrast, WATSAN Committees and WSMTs tend to be sustainable where they continue to receive adequate post-project technical support. However, post-project support has been the exception rather than the norm thus far.

Within the framework of adopting integrated water resource management as the approach to managing the country's water resources, WRC has, in collaboration with MMDAs, facilitated the establishment of two River Basin Boards (RBBs) and offices as the decentralised management structure to oversee the regulation and management of water resources at the basin level. The WRC has been unable to establish other RBBs due to limited funding. Ultimately, it is expected that RBBs will be established for all river basins in Ghana with the active involvement and leadership by MMDAs.

### 2.3.2.1.2 Capacity

The Water Directorate lacks the formal mandate, required staffing and budgetary allocation from GoG to function effectively. This affects its capacity to support MWRWH to provide quality leadership on sector issues. The Directorate has operated with very limited staffing, which includes four team members seconded from GWCL. Funds for the Directorate's operations come mainly from DP largesse, influencing perceptions of its neutrality.

There are significant overlaps in the functions of the sector's three main sub-sector institutions – i.e. CWSA, GWCL and WRC. For instance, it is unclear which institution(s) is/are responsible for peri-urban water service delivery. A clarification of roles is required to ensure a more effective harmonisation of the agencies' activities. Beyond this, there is also the need to appraise and develop capacities of these agencies to enable them perform their functions more effectively and efficiently. GWCL will require capacity building support to improve urban water service delivery i.e. production, distribution, revenue collection and customer care. CWSA will, likewise, require equivalent support in the areas of human, financial and logistical resources at the national and regional level to enable it fulfil its facilitator and regulatory roles in the rural and small towns sub-sector. This is in recognition of the increasing number of districts CWSA has had to deal with and emerging challenges with rural and small towns' water service delivery.

### 2.3.2.1.3 Regulation

The State Enterprises Commission (SEC) sets performance standards for all the three main agencies in the water sector i.e. CWSA, GWCL and WRC while PURC monitors urban water service standards and approves tariffs. This situation creates potentials for conflicting guidance to the sector agencies. There is, thus, the need to harmonise performance standards between PURC and SEC as well as to clarify mandates and roles regarding regulation in the water sector.

The Ghana Standards Authority (GSA) has developed drinking water quality standards and sampling procedures covering the quality of water supplied by public water utilities in Ghana. In the performance of its regulatory function, PURC relies on data and facilities from GWCL which could affect its outcomes and conclusions. The bulk of the water quality testing is currently done at the treatment and distribution points by GWCL itself. There is an urgent need for PURC to monitor water quality further downstream, particularly at the user end of the delivery chain. The regulatory system for rural and small towns is very weak due to lack of an institutional and regulatory framework. A Legislative Instrument (LI 2007) has recently been developed to regulate the rural and small towns' water sub-sector.

### 2.3.2.1.4 Coordination

As observed in Section 2.3.2.1.2, above, there are significant overlaps in service delivery owing to the blurred boundaries in the mandates of CWSA and GWCL especially regarding peri-urban areas and small towns. Within the peri-urban and small-towns arena, there are currently no guidelines for communities who may wish to exit from GWCL management and enter into community management arrangements or vice versa. It will be advantageous to institute a mechanism for CWSA/GWCL and MMDAs to discuss such situations, clarify relevant procedures and foster consensus with other sector stakeholders.

There is broad consensus for a collective impact approach among key sector stakeholders. Indeed, the most influential stakeholders are willing to rally behind a SWAp on condition that GoG demonstrates strong and capable leadership capacity in the areas of strategic direction, financing and coordination. A code of conduct was signed by key stakeholders but has since lapsed and will need renewing. A country assessment study is expected to establish the financing mechanism and arrangements under the SWAp. Coordination among MWRWH, MoF, MLGRD and DPs needs to be strengthened especially through sharing of information, participation in Sector Working Group (SWG) meetings and ensuring that the water sector is given more priority in GoG's budgetary allocations. There is also the need to reach out to other DPs including the Japanese International Cooperation Agency (JICA), Millennium Challenge Authority (MCA), the Chinese government, etc. in order to encourage them to share information and participate in the SWG meetings.

### **2.3.2.2 Finance**

GoG currently pays the cost of personnel emoluments and administrative expenses of all public institutions in the sector i.e. WD-MWRWH, CWSA, GWCL, EHSD-MLGRD, PURC and MMDAs. These expenses are borne by GoG either through budgetary allocations or through internally generated revenue. GWCL, for example, pays personnel emoluments from its internally generated funds. GoG also makes contributions towards services and investment costs in all these agencies. The commitment made by GoG (under the SWA Compact of April 2010) to invest \$350 million annually to accelerate progress towards achievement of the MDG targets has not been fulfilled. However, this commitment is yet to materialise. As shown in Tables 4 and 5, however, GoG contributions to water resource management and to the rural and small towns sub-sector have been low, with



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variations between budgeted and actual allocations reaching as high as 95% in some instances. The financing deficit impacts the performance of sector institutions adversely, creating delays in implementing planned interventions, undermining maintenance and fuelling non-functionality.

*Table 4: CWSA Budgeted & Actual Expenditure (2006-2010)*

Description	2006 (GH¢)	2007 (GH¢)	2008 (GH¢)	2009 (GH¢)	2010 (GH¢)
GoG Approved Budget	2,179,419	3,348,707	8,191,885	35,026,106	60,045,014
GoG Actual Releases	1,439,714	1,667,627	2,810,848	1,450,277	5,455,853
% Variation	33.94	50.20	65.69	95.86	90.91
CWSA Actual Expenditure	10,245,996	10,178,814	13,267,013	24,574,135	39,799,291
DP Releases	8,806,282	8,511,187	10,456,165	23,123,858	34,343,438

*\*Note: There are other DP releases that are not captured here*

*Source: CWSA, 2011*

*Table 5: WRC Approved Budget, GoG Releases, & Actual Expenditure*

Description	2007 (GH¢)	2008 (GH¢)	2009 (GH¢)	2010 (GH¢)
GoG Approved Budget	1,704,735	1,766,952	1,582,280	2,859,435
GoG Actual Releases	373,193	401,802	693,135	901,993
% Variation	78.11	77.26	56.19	68.46
Actual Expenditure	739,667	1,295,705	1,253,755	2,062,654
DP Releases	366,473	893,903	560,620	1,160,661

*Source: WRC, 2011*

GWCL operations are, likewise, hampered by limited financing for investments and renewal of assets. As a result, GWCL has been unable to provide satisfactory service to its customers. With GoG lacking the political will to pass on the full production costs of urban water to consumers, water tariffs have been kept artificially low, starving GWCL of the financial resources required to operate and maintain existing facilities effectively and to expand the network. Meanwhile, urban water consumers who are not directly served by GWCL pay considerably higher tariffs for water services. GWCL's revenue and expenditure trends are presented in Table 6.

*Table 6: GWCL Revenue and Expenditure Trends 2006-2010*

Item	2006 (GH¢)	2007 (GH¢)	2008 (GH¢)	2009 (GH¢)	2010 (GH¢)
<b>Revenue</b>					
Sale of water	55,651,166	67,940,872	98,889,406	103,049,295	147,316,205
Other income	3,431,820	4,881,455	5,809,658	3,815,618	3,367,865
<b>Total Revenue</b>	<b>59,082,986</b>	<b>72,822,327</b>	<b>104,709,064</b>	<b>106,864,913</b>	<b>150,684,070</b>

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Item	2006 (GH¢)	2007 (GH¢)	2008 (GH¢)	2009 (GH¢)	2010 (GH¢)
<b>Expenditure</b>					
<b>Operating Expenditure</b>					
Production	26,100,229	30,275,909	45,607,220	40,620,370	54,368,600
Transmission/Boostering	2,515,200	3,161,212	4,530,120	1,858,888	3,053,085
Distribution	5,992,837	7,416,345	9,485,657	14,543,125	14,802,720
Commercial Marketing	4,227,903	6,124,435	11,765,902	12,938,918	17,317,335
General Administration	18,109,177	28,629,799	36,424,002	29,920,747	34,458,368
<b>Sub total</b>	<b>56,945,346</b>	<b>75,607,700</b>	<b>107,812,901</b>	<b>99,882,048</b>	<b>124,000,107</b>
<b>Non-Operating Expenditure</b>					
Operating Surplus/(Loss) Before Interest and Exchange Loss	<b>2,137,640</b>	<b>(2,785,373)</b>	<b>(3,103,837)</b>	<b>6,982,865</b>	<b>26,683,963</b>
Loans Interest	3,527,008	2,610,720	2,799,998	2,970,068	2,790,551
Exchange Loss	1,592,088	5,083,364	27,776,755	17,245,560	8,365,700
Net Operating Surplus/(Deficit)	<b>(2,981,456)</b>	<b>(10,479,457)</b>	<b>(33,680,590)</b>	<b>(13,232,764)</b>	<b>15,527,712</b>
Income surplus/(Deficit) Balance b/f	(205,629,896)	(208,611,352)	(219,090,809)	(247,360,230)	(307,044,531)
Prior Year Adjustment		(10,479,457)	(33,680,590)	(47,586,571)	26,536,916
Balance c/f		(219,611,352)	(257,771,339)	(307,044,531)	(264,979,903)

Source: Income and Expenditure Statement from GWCL, 2006-2010

The data presented in Table 6 indicates that GWCL consistently incurred deficits between 2006 and 2010.

GoG has instituted lifeline tariffs and subsidies as a means of improving access to water services by the poor. These measures have been poorly targeted and as a result, the subsidies benefit the rich rather than the poor, who tend to use relatively little water.

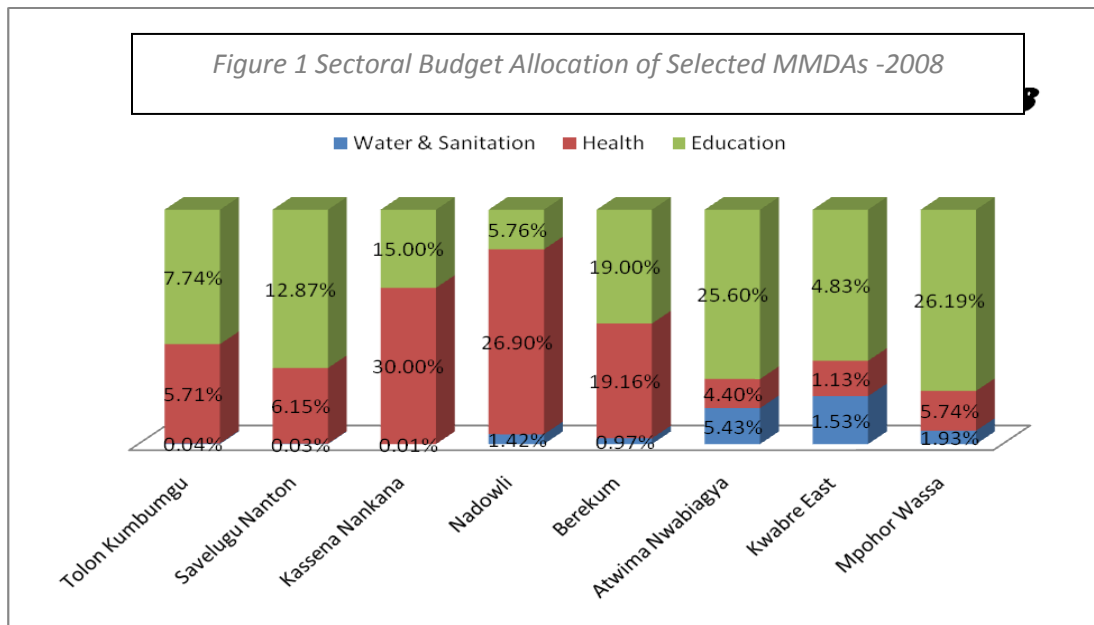
Sector financing is still skewed towards “new infrastructure” with little attention to post-construction and incremental costs by implementing agencies. In a study of investments in the rural and small towns’ water sector since the inception of NCWSP, it was established that investments in new facilities accounted for 58% of investments in the rural and small towns sub-sector as compared to 48% for rehabilitation works.<sup>21</sup> The absorptive capacity of some sector agencies and the private sector in utilising investments in the sector is weak owing to human, procurement and other logistical constraints.

Financial resource allocations for water and sanitation activities also tend to be low at the district level. In a study of selected MMDAs in six regions by the Water Sector Monitoring Platform, it was

<sup>21</sup> WSMP (2009) Compilation of Investments in the Water and Sanitation Sector. Study by MAPLE Consult, Accra

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established that MMDAs only utilised between 0.01 and 5.4% of their District Assemblies Common Fund (DACF) in 2008 for interventions in water and sanitation as shown in Figure 1.



Source: WSMP, 2010

Within the framework of the National Community Water and Sanitation Programme (NCWSP), rural communities and small towns continue to bear the full cost of operation and maintenance of water facilities, in sharp contrast with urban consumers served by GWCL. CWSA had until 2006, carried out major rehabilitation and replacement of some existing water facilities. No provision has been made in the CWSA SIP (2008-2015) for rehabilitation and replacement of existing facilities. This situation is a challenge for sustainable water service delivery. Government has abolished the payment of community contribution to capital cost although this decision is yet to be officially documented.

In future, the water sector will require increased financial investment from GoG and other non-traditional sources of financing including private sector sources to ensure sustainable financing of the sector as traditional aid from DPs begins to decline with Ghana's attainment of lower middle-income status. GWCL, the sole urban water service provider, will be expected to operate as a viable financial entity by significantly reducing its losses from non-revenue water and increasing internally generated revenues. GoG is also expected to increase the required financing for planned investments in the urban water sub-sector.

### **2.3.2.3 Knowledge Management, Gender and M&E**

Research, gender, monitoring and evaluation constitute cross-cutting issues in the water and sanitation sector. The emerging issues around these thematic areas are as follows:

#### **2.3.2.3.1 Knowledge Management**

Research has been carried out on several sector issues over the years. These conclusions have sought to address sector issues on institutional development, policy and strategy development, financing and science and technology for the sector. Financial support will be required to support further research on other emerging issues in the sector.

A considerable number of sector learning and sharing platforms – such as the National Learning Alliance Platform (NLLAP) – have been established in the sector, especially at the national level. There are currently attempts at replicating the learning platforms at the regional and district levels. There is the need to strengthen and coordinate sector documentation and sharing/reporting. These initiatives will be supported by the WSSDP in order to improve knowledge generation and sharing on sector issues.

#### **2.3.2.3.2 Gender**

The complementary roles of both sexes (males and females) have been captured within the framework of the NCWSP. As a result, women have representation on all WATSAN Committees/WSMTs. Males and females have complementary roles in integrated water resource management as well as in the delivery and management of water and sanitation services at the household level. There is the need to intensify efforts at mainstreaming gender in WASH services delivery.

#### **2.3.2.3.3 Monitoring and Evaluation**

The Ghana Statistical Service provides user-based data on water and sanitation while sector institutions (particularly GWCL and CWSA) generate provider-based data. As a result, there are substantial variations in data and in the sector. Beyond this, there is also the need to harmonise data on coverage rates between CWSA and GWCL. The population of people served by the two agencies when combined is more than the total national population figure. While CWSA and GWCL claimed to be serving 27.2 million in 2009 (Table 7), the census recorded a significantly lower population of 24.3 million (11% fewer residents) for 2010, even with population growing at over 2%. These variations will have to be harmonised in order to generate data that will be acceptable and applicable to all sector stakeholders.

*Table 7: Computation of National Water Coverage Rates by CWSA and GWCL*

Population			Population served			% coverage		
Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
15,673,313	11,529,723	27,203,036	9,242,366	6,802,536	16,044,902	58.97	59	58.98

*Source: Water and Sanitation Sector Performance Report, 2009*

Three out of the five main water and sanitation sector institutions have units responsible for providing information on the state of the sub-sector e.g. GWCL has a Corporate Planning Unit and WRC has an Information and Education Department while CWSA has a Management Information System Unit (Information Technology Unit). All these units provide data on water coverage in their respective areas of operation. The Water Directorate and Environmental Health and Sanitation Directorate are yet to establish units to be responsible for M&E and reporting on the sector.

In future, there will be the need to establish a sector monitoring and evaluation system based on sub-sector M&E plans and strategies that responds to information/data need at all levels in order to ensure effective planning and decision making. This will also include the improvement of sector management information systems (MISs). The system will be based on the M&E framework defined by the WSSDP. The M&E system will also provide data and set targets for M&E at the national level and across the three main sub-sectors of the water sector.

#### **2.3.2.4 Water Resource Management**

The Water Resources Commission (WRC) has oversight responsibility in the management of the country's water resources. WRC has been active in developing the regulatory, policy and institutional framework for regulating and managing Ghana's water resources and creating a trans-boundary agency, the Volta Basin Authority (VBA) in respect of the Volta river basin. There is significant agreement between GoG and other sector stakeholders on the use of the river basin approach to Integrated Water Resource Management (IWRM).

The inadequacy of the skilled human resource is a major challenge for water resource management and for implementing IWRM at all levels. The sub-sector also faces challenges with enforcing regulations and ensuring compliance with the terms of permits granted (particularly in the area of monitoring sewage outfalls and controlling discharges of industrial effluent). A further issue is the inadequacy of data on water quality and groundwater resources resulting from a weak capacity for collecting reliable hydrologic, meteorological and water quality data. The inability of WRC to regulate activities in river basins has fuelled catchment degradation and deterioration in water quality. The challenges of climate change and climate variability further impact on water and other natural resources. Proposals have been made in this plan to address these challenges.

## **2.4 Strategic Framework of the WSSDP**

The WSSDP has been developed to address challenges in the water sector and ensure universal coverage in equitable and sustainable water and sanitation service delivery. The plan provides the framework for the development of the water and sanitation sector over the period 2012 to 2025. Strategies and activities have been developed to address these and existing and emerging challenges in the sector in light of the results of the situational analysis, the vision, goal, objectives and guiding principles of the WSSDP. The strategies and activities have been developed in line with the NWP and GSGDA, and clustered into two main packages as follows:

- Service Delivery
  1. Urban and peri-urban water services
  2. Rural and small towns water services
  3. Rural water-related sanitation and hygiene services
  
- Cross Cutting Issues
  1. Institutional Capacity Development and Governance
  2. Finance
  3. Knowledge Management, Gender and Monitoring and Evaluation; and
  4. Water Resource Management

The policy objectives and strategies under each of these components are outlined in Table 8.

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Table 8: Policy Objectives and Strategies of WSSDP

PACKAGE	Policy Objectives	Strategies
<b>SERVICE</b>		
Urban & Peri-urban Water Services	(1) Improve access to water services for all in urban and peri-urban areas	(1) Increase water services in low-income and peri-urban communities (2) Improve water production and distribution system
Rural & Small Towns Water Services	(1) Improve access to water services in rural and small towns	(1) Provide new water facilities in under-served and un-served rural areas and small towns (2) Institute appropriate mechanism for rehabilitation, operation and maintenance of existing facilities
Rural and Small Towns Sanitation & Hygiene Services	(1) Maximise health benefits through integration of water, sanitation and hygiene education interventions	(1) Promote safe sanitation and hygiene practices in all water beneficiary institutions and communities
<b>CROSS CUTTING ISSUES</b>		
Institutional Capacity Development and Governance	(1) Ensure that all institutional structures perform their roles efficiently and effectively	(1) Strengthen capacity of all institutional structures
	(2) Ensure that the water sector operates in a transparent and accountable manner	(1) Facilitate timely reporting and participatory discussion of results/issues in the water sector (2) Institute appropriate mechanism to track funds flow and investment in the sector
	(3) Ensure an effectively harmonised and aligned water sector	(1) development and implementation of a sector coordination framework
Finance	(1) Ensure sustainable financing of investment and operation and maintenance cost of water services	(1) Periodic review of urban water tariffs to reflect full operation and maintenance cost of service delivery
		(2) Attract private sector financing for investment and operation and maintenance of water services
		(3) Implement measures to reduce non-revenue water
		(4) Create a mechanism for financing capital maintenance expenditure for rural and small-town systems
Water Resource Management	(1) Strengthen the regulatory framework for managing and protecting water resources for water security and enhancing resilience to climate change	(1) Enhance the implementation of existing regulations on WRM (2) Develop and implement additional regulations on Dam Safety and Effluent discharges (3) Ensure the protection and conservation of river basins and wetlands for water security as well as enhanced resilience and adaptation to climate change
		(2) Enhance public awareness and education in water resource

## Water Sector Strategic Development Plan

PACKAGE	Policy Objectives	Strategies
SERVICE		
	management issues	for WRM-related initiatives
	(3) Improve access to water resource knowledge base to facilitate water resources planning and decision making	(1) Improve hydrological and meteorological data and information management (2) Implement a developed Groundwater Management strategy to increase access to accurate groundwater resource information (3) Strengthen water quality monitoring and data assessment
	(4) Improve trans-boundary and international cooperation in the management of shared water resources	(1) Facilitate the development of bilateral and multilateral agreements/ protocols to strengthen cooperation with riparian countries in shared basins
Knowledge Management, Gender and M&E	(1) Promote generation, sharing and utilization of knowledge relevant to the water sector	(1) Support research, dissemination and discussion of research results on key issues affecting water and sanitation service delivery (2) Promote scientific investigations and research in water resources assessment, management and development
	(2) Provide evidence-based data and knowledge to improve decision making in the water sector	(1) Development and operationalisation of a national M&E system to track sector progress
	(3) Ensure gender equity in participation in water and sanitation management at all levels	(1) Empowering both sexes to appreciate their complementary roles in water and sanitation service delivery

The overall strategic framework of the plan is presented in a matrix as APPENDIX 1. It entails the policy objectives, strategies, activities, time frame for implementing proposed activities and the institutions responsible for implementing the proposed activities. Proposed interventions to operationalise the strategies and implementation arrangements are discussed in Section 3.



### **3 IMPLEMENTATION PLAN**

#### **3.1 Implementation Packages**

Based on the strategies proposed in Section 2.4, the activities to be implemented have been distinguished as follows:

- Service Delivery
  1. Urban and peri-urban water services
  2. Rural and small towns water services
  3. Rural and small towns water-related sanitation and hygiene services
  
- Cross Cutting Issues
  1. Institutional Capacity Development and Governance
  2. Finance
  3. Knowledge Management, Gender and Monitoring and Evaluation; and
  4. Water Resource Management

#### **3.2 Service Delivery Package**

##### **3.2.1 Water Service Delivery**

In order to meet the MDG targets (76% coverage in rural areas/ small towns and 85% coverage in urban areas by 2015) and attain universal coverage in water service by 2025, this plan proposes new investments and rehabilitation works in the urban water sub-sector and in the rural and small towns' water sub-sector. In implementing planned investments, priority will be given to providing water services in un-served areas, peri-urban and low-income communities.

The planned investments in water services in both rural and urban water sectors have been informed by projections of water demand and population increases over the planning horizon, i.e. 2012-2015 and 2016-2025 as captured in the Strategic Investment Plans of CWSA and GWCL. Details on the proposed investments and costs are presented in **APPENDIX II**. GoG will leverage the required financing from domestic and external sources to implement the proposed investments to improve service delivery. With the implementation of proposed investments in both the rural/small towns and urban sub-sectors, it is expected that all households will receive at least a basic level of water service in Ghana by 2025.<sup>22</sup>

GoG will develop and implement a national water safety plan to address challenges with water quality monitoring across all sub-sectors – urban, rural and water resource management. The framework will build on work already done by PURC, CWSA and the Ghana Standards Authority and will be anchored within the existing framework for water quality monitoring.

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<sup>22</sup> A basic level of service is defined by GWCL and CWSA as access to at least 20 lcpd and 37 lcpd in rural and urban areas respectively within a distance and travelling time (round trip) of 500 metres and 30 minutes

### **3.2.1.1 Urban Water Services**

In the urban water sub-sector, GoG recognises the urgent need to address the problem of non-revenue water as a critical factor in improving service delivery. GoG will implement the following measures to reduce non-revenue water from 49.8% in 2010 to 45% in 2015 and 33% by 2025.

- First, the appropriate metering of water production and consumption will be pursued. This will ensure the availability of the required data in order to track water production and losses along the distribution chain. This measure will also be complemented with the introduction and scaling up of zonal metering to track leakages and theft within the distribution network.
- Second, GoG will carry out an institutional capacity assessment which will inform the design and implementation of a capacity building plan and institutional reforms for GWCL. These activities are expected to address work ethics, customer care and efficiency in service delivery among staff.
- Third, GWCL will be supported to further decentralise its operations and strengthen collaboration with MMDAs and sub-district structures. Additional District Offices of GWCL will be established especially within the major urban centres with the active involvement of MMDAs. GWCL District Officials will be tasked to participate in General Assembly and Executive Committee meetings of MMDAs and interact with other stakeholders at the district level. It is hoped that an increased involvement of MMDAs and sub-district structures will assist in curbing theft on the distribution network. This proposal will be funded as part of the recurrent expenditure of GWCL.
- Fourth, GoG will provide the required financing for rehabilitation, upgrading and expansion of all the 82 urban water systems being managed by GWCL, as captured in GWCL's Strategic Investment Plan (SIP), to reduce leakages.
- Fifth, the current urban water tariff is set to include a non-revenue water component. GoG will support PURC to progressively reduce the proportion of non-revenue water component on water tariffs to 40% by 2020 and 33% by 2025. This will ensure that GWCL's inefficiencies are not passed on to consumers through the upward adjustment of tariffs and also inject efficiency in urban service delivery.

#### **3.2.1.1.1 Peri-urban and Low-income Communities Water Service**

The Ministry of Water Resources Works and Housing will commission a study to map out low-income urban and peri-urban communities which are currently un-served and under-served with potable water supply and develop a framework for targeting the poor, address the annulling effect of "compound housing" (i.e., multi-habitation) on lifeline tariffs for the poor and improve water service delivery in low-income communities.

In order to improve water service delivery in peri-urban water areas, MWRWH will convene meetings with CWSA and GWCL to review, on a case-by-case basis, the supply and management options for providing water to peri-urban communities. MMDAs will play active roles in discussions

on the management and supply options for peri-urban and low-income communities. The options to be considered will include the following:

- WSDB management of a water facility or distribution of bulk water supply from GWCL or community owned network;
- Area Council/ Unit Committee management of a water facility or bulk water supply from GWCL or community-owned network; and
- Private operator management of a water facility or bulk water supply from GWCL or community-owned network.

GoG appreciates the critical role of secondary and tertiary suppliers of urban water services especially tanker operators and water vendors. In this regard, GWCL has established designated tanker service points in the major cities of Accra and Kumasi where tankers could legally draw water for sale. PURC has also developed tanker service guidelines and will collaborate with MMDAs and GWCL in enforcing the guidelines to ensure the supply of safe water to consumers as an interim measure to augment institutional supplies. In the long term, GoG will provide the required financing for rehabilitation, upgrading and expansion of the urban water system to ensure 100% water coverage in urban areas by 2025.

### 3.2.1.1.2 Water Service Delivery in Emergencies

In the event of emergencies or shortage of water, MWRWH will collaborate with GWCL to mount water tanks at vantage points to supply water to consumers. GWCL will employ tanker services as a model for water delivery in emergencies. Considering that this model is generally expensive and not appropriate for the delivery of affordable water, GoG will provide the required external financial support to GWCL to meet water demand as a short term measure. GWCL will collaborate with PURC to develop appropriate mechanisms to monitor water quality, pricing and distribution during emergencies. This will ensure that interventions reach the intended beneficiaries.

### **3.2.1.2 Rural and Small Towns Water Services**

Investments in the rural water sub-sector over the years have focused on new infrastructure rather than the rehabilitation, operation and maintenance of existing facilities. GoG will commission a functionality study to create a database on all water facilities, establish their functionality and their respective dates of installation. The outcome will be used in designing an elaborate programme to rehabilitate and replace facilities that have outlived their lifespan.

### **3.2.1.3 Water Quality Monitoring**

To enhance the quality of water supplied, a national water quality safety plan will be developed and implemented by 2016. The framework will clarify safety standards for water supply in urban areas, rural areas and river basins. The framework will establish the value chain for water service delivery i.e. from production to consumption. The framework will be developed with the active involvement and participation of PURC, GSA, WRC, GWCL and CWSA. The framework will also delineate the responsible institutions and areas of collaboration and coordination in water quality

monitoring. The framework will build on work already done in water quality monitoring across all the three sub-sectors.

### **3.2.2 Water-related Sanitation and Hygiene Services**

CWSA will facilitate the implementation of the rural sanitation programme under the WSSDP and within the framework of the NESSAP and related implementation documents and policies notably:

- the *National Sanitation Model and Scaling Up Strategy (developed by EHSD-MLGRD)*: this strategy has been developed based on a three-pronged approach of sanitation marketing; Community Led Total Sanitation (CLTS) for changing attitudes towards safe hygiene and sanitation practices and triggering demand for and use of household latrines; and providing microcredit through rural and community banks and microfinance institutions to support household latrine construction;
- the *National Hand-washing with Soap Strategy (developed by CWSA)*: the strategy seeks to promote a routine of hand-washing with soap through an active partnership between the public and private sectors ; and
- the *National Household Water Treatment and Safe Storage Strategy*: this strategy seeks to promote household water treatment technologies and approaches as a means to improving hygiene. The strategy will contribute to a measurable reduction in waterborne disease by encouraging the adoption and long-term use of effective HWTS, especially by those populations that do not have access to safe drinking water.

## **3.3 Cross Cutting Issues Package**

### **3.3.1 Institutional Capacity Development and Governance**

#### ***3.3.1.1 Policy Framework***

At the national level, the National Water Policy (NWP), National Environmental Sanitation Policy (NESP) and the Ghana Shared Growth and Development Agenda (GSGDA) are the broad national policy documents that will guide the implementation of the WSSDP. Both the NWP and ESP entail policy objectives and strategies across the four main sub-sectors of the water sector i.e. rural and small towns' water, urban water, water-related sanitation and water resource management. Given the dynamic nature of the water sector, the NWP will be reviewed by MWRWH by 2015 to address emerging challenges and clarify mandates and roles among sector stakeholders and institutions especially GWCL, CWSA, WRC, PURC and MMDAs.

The National Community Water and Sanitation Programme (NCWSP) Strategy and the Project Implementation Manual (PIM) that guide the implementation of rural and small towns' water and sanitation programmes have been reviewed in the light of emerging challenges in the policy and institutional landscape in rural and small towns water supply and sanitation delivery. The revised documents elaborate on implementation arrangements for rural water and sanitation delivery in this plan.

## Water Sector Strategic Development Plan

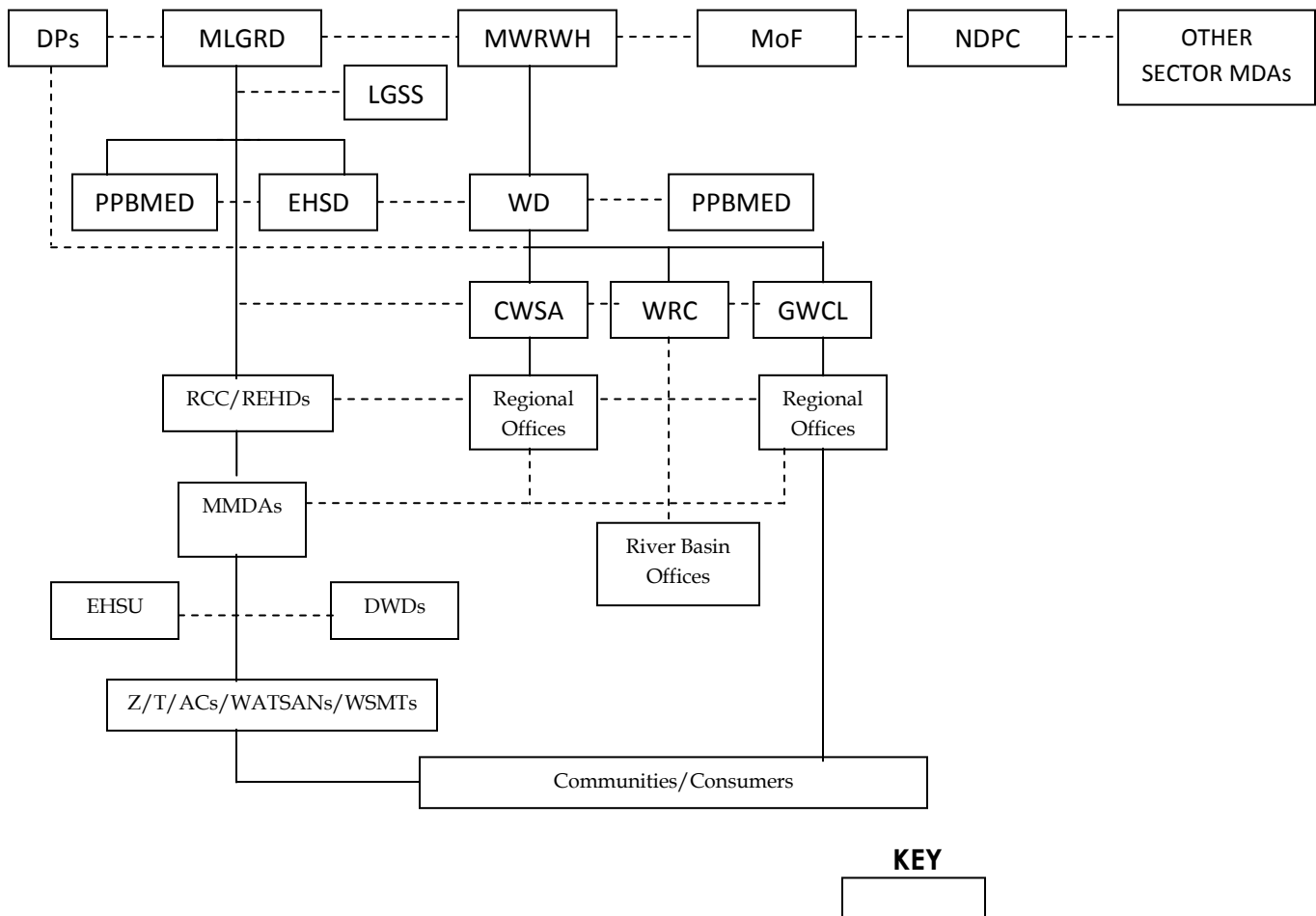
The private sector plays a critical role in water and sanitation services delivery. The private sector currently provides goods, services and works in the water and sanitation sector. GoG has developed a framework for private sector participation in the rural and small towns' water sector.<sup>23</sup> The pilot testing and rolling out of the framework will be completed in 2015. GWCL and PURC are in the process of developing a pro-poor urban water service delivery strategy and a strategy for peri-urban water service delivery. GoG will review the proposed policy and support its implementation as part of activities in this WSSDP.

In 2005, PURC developed a social policy and strategy for urban water regulation and an urban water tariff policy. The social policy entails initiatives aimed at improving accessibility and affordability of potable water to the urban poor. PURC is implementing a pro-poor pilot project in selected communities in the Greater Accra Region. GoG, with support from PURC and GWCL, will revise and implement the social policy and strategy based on the outcome of the pilot project.

### 3.3.1.2 Institutional Framework

The institutional framework for implementing the WSSDP is presented in Figure 2.

Figure 2: Institutional Framework



<sup>23</sup> MWRWH (2011) Framework for Private Sector Participation in the Water Sector. MWRWH, Accra.



***Ministry of Water Resources, Works and Housing***

The Ministry of Water Resources, Works and Housing (MWRWH) is responsible for providing leadership for sector activities in policy development, implementation, coordination, monitoring and evaluation. The Ministry, as the oversight institution for the sector, will be responsible for implementing this WSSDP through delegation to the Water Directorate (WD).

MWRWH through its WD will review the WSSDP every four years in line with the national planning timeframe. Independent of this arrangement, WD will undertake annual reviews (in June/ July) of progress in the implementation of the WSSDP and incorporate programmes and projects from the WSSDP into MWRWH’s budget for onward submission to MoF in line with the national planning and budgeting guidelines (in August/ September each year).

Given the critical role of the WD in implementing this plan, GoG will provide the required human, logistical and budgetary support for the WD by 2015. Afterwards, additional capacity needs of WD will be addressed as part of an on-going process to assess capacity needs and implement a capacity building plan for the water sector. The plan will address capacity building needs of other institutions such as WRC, GWCL, CWSA and DWDs. The various sector agencies and MMDAs will implement their respective capacity building plans, with annual targets from 2012 to 2015.

***Ministry of Local Government and Rural Development***

The Ministry of Local Government and Rural Development, through its Environmental Health and Sanitation Directorate (EHSD), has oversight responsibility for sanitation. MLGRD has developed and is currently implementing a National Environmental Sanitation Policy and an accompanying plan, the National Environmental Sanitation Strategy and Action Plan (NESSAP) and Strategic Environmental Sanitation Investment Plan (SESIP).

Within the framework of implementing this WSSDP, CWSA will collaborate with EHSD to facilitate the implementation of the rural water-related sanitation component of the WSSDP. Specifically, CWSA will, in collaboration with EHSD, support the implementation of the following strategy documents:

- rural sanitation model and scaling up strategy;
- national hand-washing with soap strategy; and
- national household water treatment and safe storage strategy.

CWSA will collaborate with EHSD to facilitate sanitation delivery on all ongoing projects. In the long term, CWSA and EHSD will support MMDAs to directly implement sanitation projects through their respective Environmental Health Units and District Works Departments.

MLGRD provides oversight responsibility for the activities of Regional Coordinating Councils (RCCs) and MMDAs within the framework of Ghana's decentralisation programme. Direct implementation of the aforementioned strategy documents will be carried out by MMDAs.

With support from NDPC and CWSA, MLGRD will ensure that MMDAs prepare and update their District Water and Sanitation Plans (DWSPs) and District Environmental Sanitation Strategy and Action Plans (DESSAPs) as part of the process of preparing their District Medium Term Development Plans. The DMTDPs, DWSPs and DESSAPs will be revised or updated in 2014, 2018 and 2022 in tandem with the national planning timelines.

### ***Local Government Service Secretariat***

Within the framework of Ghana's decentralisation programme, staffs of decentralised departments of the MMDAs including the District Works Departments (DWDs) have been placed under the Local Government Service Secretariat (LGSS). LGSS is therefore responsible for the recruitment, placement, promotion, transfer and dismissal of all staff of MMDAs. LGSS will collaborate with MLGRD to establish DWDs in all MMDAs and ensure the required skill mix. MLGRD will also ensure that all MMDAs equip the DWDs with the required logistics to enable them perform their functions effectively.

The capacity building needs of DWDs will be established within the framework of the annual performance assessment of MMDAs using the Functional and Organisational Assessment Tool (FOAT). Identified capacity building needs of the DWDs will be addressed as part of the capacity building component of the District Development Facility (DDF) which is administered jointly by MLGRD and LGSS. The MWRWH will develop a proposal to enable MLGRD revise the annual FOAT performance assessment tool by 2015 to include indicators for assessing basic social service delivery by MMDAs including water and water-related sanitation. This will ensure that identified capacity needs directly improve water and sanitation delivery.

### ***Ministry of Finance and Economic Planning***

The Ministry of Finance and Economic Planning (MoF) is responsible for the preparation and approval of the national revenue and expenditure budget. MoF will ensure the timely disbursement of budget allocations to the sector and support GoG in securing the required financing for the sector. MoF will track fund disbursements and utilisation in the sector and address discrepancies reported by MoF, DPs and MDAs such as CWSA, WRC and GWCL. MWRWH will liaise with MoF to designate a contact person at MoF to serve as the sector's liaison to ensure that critical current, ongoing and future budget allocations are in line with commitments made by GoG in regard to the Sanitation and Water for All (SWA) Compact and are strategically aligned to the WSSDP.

***Ministry of Education/Ghana Education Service***

The Ministry of Education (MoE) and Ghana Education Service (GES) provide oversight responsibility for basic, secondary and tertiary education in Ghana. The Water, Sanitation and Hygiene component of the School Health Education Programme (SHEP) is an integral part of the strategies for promoting basic water-related sanitation in rural and small towns. SHEP activities have been captured in the National Sanitation Model and Scaling-up Strategy as well as in the sanitation promotion activities of both CWSA and EHSD and are therefore a feature of the WSSDP. School hygiene and sanitation promotion activities will be implemented by GES/ SHEP in collaboration with CWSA and EHSD.

***Ministry of Energy***

The Ministry of Energy (MoEn) will play a key role in implementing the WSSDP. The provision of water in urban areas and small towns depends on the availability and regular supply of a reliable source of energy especially electricity. MoEn, through its sector agencies i.e. Electricity Company of Ghana (ECG), Ghana Grid Company (GRIDCo) and Volta River Authority (VRA) will liaise with GWCL, CWSA and MMDAs to ensure the adequate and regular supply of electricity to water supply installations. Working arrangements on this issue will be discussed at meetings of the Inter-Ministerial Steering Committee (ref. 3.7.2 of this document). In the long term, MWRWH will dialogue with MoEn to ensure that direct transmission lines are used in supplying electricity to water treatment plants.

GoG will strengthen collaboration between MoEn and MWRWH especially as MoEn intends to facilitate the construction of several mini hydro dams for electricity generation in the long term. The development dams have both positive and negative effects on access to water for domestic and other uses. This issue will be reviewed on a case-by-case basis and decided upon by the Inter Ministerial Steering Committee.

***Ministry of Health/ Ghana Health Service***

The Ministry of Health (MoH) supports the water and sanitation sector through its Health Promotion Unit (HPU), which is responsible for preventive health programmes. The GHS/ HPU plays an active role in the eradication of water and sanitation-related diseases, personal hygiene and environmental sanitation. Within the framework of the WSSDP, the GHS/ HPU will collaborate with CWSA and EHSD in the implementation of water-related sanitation activities of the WSSDP.

***Ministry of Food and Agriculture***

The Ministry of Food and Agriculture (MoFA) is responsible for food production and makes significant use of water for hydropower and irrigation in the process. Mindful of the effects of these activities on access to potable water, proposed hydropower and irrigation development projects submitted to MoEn by MoFA will be discussed on a case-by-case basis at meetings of the proposed Inter-Ministerial Steering Committee. This will ensure that such projects do not have detrimental effects on access to potable water.



### ***National Development Planning Commission***

The National Development Planning Commission (NDPC) will provide guidelines and support MWRWH to review the WSSDP in accordance with the national planning cycle. As a result, it is envisaged that the WSSDP will be reviewed every four years. The revised WSSDP will inform the Strategic Investment Plans of CWSA, GWCL and WRC. The NDPC, in conjunction with CWSA has also developed guidelines for preparing District Water and Sanitation Plans (DWSPs). NDPC and CWSA will assist MLGRD to ensure that DMTDPs and DWSPs are prepared concurrently.

### ***Ghana Water Company Limited***

The Ghana Water Company Limited (GWCL) will remain the sole provider of urban water in the medium to long term. GWCL in 2006 entered into a five-year management contract with a private operator, Aqua Vitens Rand Limited (AVRL) which ended in May 2011. GoG decided not to renew the management contract and established in the interim, the Ghana Urban Water Limited (GUWL) as a special purpose vehicle responsible for managing urban water service delivery for one year. That arrangement came to an end in July 2013 when Cabinet agreed to recommendations that the two companies should be amalgamated.

GoG is, however, committed to enhancing private sector participation in urban water service delivery and will pursue measures to reduce non-revenue water, rehabilitate and improve existing infrastructure, enhance the financial viability of GWCL and enhance efficiency in urban water service delivery. These measures will be complemented with an institutional capacity assessment and the design and implementation of institutional reforms for GWCL.

### ***Community Water and Sanitation Agency***

CWSA's mandate is to facilitate the delivery of water and sanitation services in rural areas and small towns. Even in the absence of a strong decentralised department to support water and sanitation service delivery at the district level, CWSA played and will continue to play its facilitative role in providing technical assistance for the planning and implementation of water and sanitation facilities in the districts.

The enactment and implementation of a Legislative Instrument (LI) for CWSA will regulate the activities of all actors in the sub-sector to ensure that they adhere to the technical standards and acceptable code of practice developed by the Agency.

Having recently assumed the additional role as a *regulator* of rural water service delivery, CWSA will continue to facilitate the implementation of the rural and small towns' projects of the WSSDP.<sup>24</sup> The additional role of CWSA has an implication for capacity development of the Agency

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<sup>24</sup> Facilitation as defined in the current draft of the LI means "carrying out reasonable acts essential to expedite the implementation of water and sanitation activities including the regulation of the community water and sanitation sub-sector"

and this will be addressed as part of the capacity building assessment and plan for the water sector as captured in the WSSDP.

### ***Water Resources Commission***

The Water Resources Commission (WRC) is responsible for the regulation and management of water resources and for the coordination of policies in relation to them. WRC provides a focal point in fostering coordination and collaboration among the various actors involved in the water resources sub-sector. WRC will be responsible for implementing the water resource management component of the WSSDP which has largely been based on the Integrated Water Resource Management Strategic Plan (2011-2015). In implementing this component, WRC will collaborate with other stakeholders including the Attorney General's Department and data management institutions, Environmental Protection Agency (EPA), VRA and civil society organisations.

### ***Ghana Standards Authority***

The Ghana Standards Authority (GSA) sets drinking water standards for water services in Ghana and will continue to perform this function within the implementation framework of the WSSDP. These standards are set in line with the World Health Organisation (WHO) guidelines on drinking water quality.

### ***Public Utilities Regulatory Commission***

The Public Utilities Regulatory Commission (PURC) is responsible for monitoring water quality standards in urban areas in line with standards set by the Ghana Standards Authority. GoG will provide the required equipment and other logistics to strengthen PURC's water quality monitoring functions as part of measures to establish a national drinking water quality monitoring framework by 2016.

PURC is also responsible for fixing rates for water services and has since 2011 been reviewing tariffs quarterly. In 2013, PURC began setting water tariffs to allow for full cost recovery. This new regime is being augmented with extensive advocacy and public education on the need to recover the cost of providing urban water services. Tariffs set by PURC will now include an increasing allowance for a return on total capital. This is expected to support rehabilitation and replacement of urban water supply systems.

PURC is in the process of developing a framework for pro-poor water service delivery in urban areas. Provision has been made in this plan to implement the framework that will be developed to improve water service in low-income communities in urban areas by 2015.

### ***Ghana Statistical Service***

The Ghana Statistical Service (GSS) conducts surveys and census and generates information on socio-economic indicators including those for the water and sanitation sector. Data from GSS are used by the WHO/UNICEF-supported Joint Monitoring Programme (JMP) on water and sanitation

in assessing Ghana's progress towards the MDGs and other international development targets. GSS will provide the required data through the regular conduct of surveys on sector issues as part of the Multiple Indicator Cluster Survey (MICS), Ghana Demographic and Health Survey (GDHS) and the Ghana Living Standards Survey (GLSS).

Given the variations in provider-based and survey-based data on sector indicators, GSS – along with service agencies such as CWSA, GWCL and WRC – has a key role in harmonising definitions, terminology and monitoring systems in the sector. Each of these institutions will be represented on the Sector M&E Coordination Group responsible for jointly developing the M&E plan and strategy for the sector.

### ***Metropolitan, Municipal and District Assemblies***

Metropolitan, Municipal and District Assemblies (MMDAs) are responsible for the provision of water and sanitation services within their respective areas of jurisdiction, including the planning and implementation of projects where necessary. They will prepare DWSPs as part of their DMTDPs and be directly responsible for project design, procurement, construction supervision, monitoring and evaluation. It is envisaged that CWSA will continue to provide technical assistance through backstopping to the DWDs and quality assuring services.

MMDAs will be responsible for establishing, providing adequate resources for and supervising the activities of the District Works Departments. They will also facilitate the establishment and ensure the continuous functionality of sub-district structures including community Water and Sanitation (WATSAN) Committees /Wate and Sanitation Management Teams (WSMTs) as well as support the implementation, operation and maintenance of water and sanitation facilities. They will also monitor the activities of WATSAN Committees and WSMTs.

In order to ensure sustainability in rural water service delivery, rural and small town communities will bear the full cost involved in operating and maintaining their water facilities while MMDAs bear the full cost of major rehabilitation and replacement of the facilities. Households will be responsible for the construction and maintenance of their own improved toilets.

### ***Research Institutions & Ongoing Sector Initiatives***

There are a number of research institutions that provide vital research for sector activities. These include the Water Research Institute (WRI) of the Council for Scientific and Industrial Research (CSIR), Ghana Statistical Service (GSS), Hydrological Services Department, Ghana Meteorological Agency and selected Universities. GoG will, on an annual basis, support research to address challenges in the water sector and provide the platform for dissemination and discussion of research results.

The water sector is also host to a number of special projects and knowledge management initiatives and institutions such as Triple S (Sustainable Services at Scale), WASH Cost, Tripartite

## Water Sector Strategic Development Plan

Partnership Project (TPP), Water and Sanitation Monitoring Platform, Resource Centre Network (RCN) and the National Learning Alliance. These projects will continue to provide critical inputs into policy formulation, planning of water and sanitation services delivery and water resource management in the short, medium and long term. GoG will support the implementation of policy recommendations from these initiatives.

### ***Civil Society Organisations***

In order to foster harmony in the activities of sector CSOs and to align their operations within the sector, the Coalition of NGOs in Water and Sanitation (CONIWAS) was established as an umbrella body. In addition to promoting harmonisation and alignment, CONIWAS serves as an advocacy organisation for its members to promote dialogue between sector CSOs, GoG and other stakeholders. CONIWAS holds an annual conference under the name "Mole Conference".

GoG will partner CONIWAS in designing and rolling out an advocacy and sensitisation programme as part of measures to ensure full cost recovery in urban water service delivery. CONIWAS will also be assisted to track investments as well as monitor and report on the activities of NGOs in the sector, particularly the number of physical facilities they construct or rehabilitate annually to be captured in the sector M&E System. GoG recognises the contribution of civil society organisations in service delivery and will develop effective partnership with civil society in order to improve service delivery.

### ***Private Sector***

The private sector will continue to play a key role in delivery of goods, services and works in the water sector. GoG will finalise and implement the policy framework for the involvement of the private sector in the rural/ small towns' water and urban water sub-sectors. The framework will define supporting measures to encourage private sector participation in operation and maintenance of water systems as well as financing arrangements e.g. Build, Own and Operate (BOO), Build, Operate and Transfer (BOT) etc.

For basic sanitation, the national rural sanitation model and scaling up strategy recognises the role of the private sector in the provision of hygiene and sanitation facilities at the household and institutional levels. The private sector will supply the required household and institutional sanitation facilities as a result of demand which is expected to be created through the adoption of Community Led Total Sanitation (CLTS) approach to sanitation and hygiene promotion. GoG will implement a microcredit scheme through community banks and microfinance institutions to provide loans for household latrine construction. GoG will provide microcredit for the construction of 50,000 household latrines annually from 2011 to 2025. This will contribute to improving access to safe sanitation facilities.<sup>25</sup>

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<sup>25</sup> This proposal has been captured in the NESSAP

### ***Community and Sub-district structures***

Communities participate in planning and managing their water supply systems and water resources through their elected WATSAN Committees, Water and Sanitation Development Boards, Unit Committees and Area Councils.

Within the framework of implementing the WSSDP, refresher training programmes will be designed and implemented by MMDAs in accordance with guidelines and standards established by CWSA for sub-district and community-level structures at least once in every four years, in step with the local government election cycle. The training programmes will also include gender mainstreaming issues to enhance the complementary role of men and women in water and sanitation service delivery. The purpose is to strengthen community-level capacity and ensure sustainability in the use of water facilities provided.

#### ***3.3.1.3 Governance***

The water sector has several stakeholders involved in various activities across the sub-sectors. In order to ensure harmonisation and alignment of sector activities, GoG is committed to supporting the operationalisation of a SWAp for the sector and will provide the required leadership for implementing the road map towards SWAp. The Memorandum of Understanding (MoU) for the SWAp including risk and sanctions has been drafted and is currently undergoing review. It is expected to be signed and implemented by 2012. Meanwhile, sector assessment studies on gender, monitoring and evaluation, capacity development and country risk assessment are underway. The outputs will feed into the MoU and the WSSDP.

GoG will set up an Inter-Ministerial Steering Committee for the water and sanitation sector. This committee will be chaired and hosted by the Minister for Water Resources, Works and Housing and will have representation from the following Ministries:

- Water Resources, Works and Housing
- Women and Children's Affairs
- Environment, Science and Technology
- Energy
- Local Government and Rural Development
- Finance and Economic Planning

The committee will meet bi-annually to review progress and areas of collaboration in implementing the WSSDP. In addition, MWRWH will take part in the quarterly meetings of the National Environmental Sanitation Policy Coordinating Council (NESPoCC) established by MLGRD. This will provide the platform for coordinating policy issues related to sanitation and hygiene.

Beyond this level, GoG will institutionalise the monthly Sector Working Group meetings in 2012. The various sub-sector agencies i.e. CWSA, GWCL and WRC will take active part in these meetings and report on progress in implementing their respective components of the WSSDP. MLGRD will

## Water Sector Strategic Development Plan

report on progress of implementation of the overall sanitation component as well as interventions at the MMDA level.

To further enhance collaboration and coordination of sector activities, the National Water Policy will be reviewed in 2012 to clarify roles and responsibilities of stakeholders in view of the changes in the institutional and regulatory landscape and address emerging challenges in the sector.

GoG will publish the annual audited statement of accounts of the three sub-sector agencies i.e. WRC, GWCL and CWSA in the public newspapers from 2012. The purpose is to enhance transparency and accountability and develop public interest in their operations. MMDAs will continue to be responsible for water and sanitation service delivery at the district level. Through their respective DWDs and EHSUs, MMDAs will monitor activities of WATSAN Committees and WSMTs and ensure that they are accountable to their respective communities. MMDAs will regularly audit and publish the annual statement of accounts of WSMTs.

### **3.3.2 Finance**

GoG is committed to the operationalisation of a SWAp for the water and sanitation sector. Government has a vision of a uniform treasury system through which financing for all investments, including those in the water and sanitation sector, is channelled. A comprehensive assessment of the risks entailed in rolling out a water SWAp has been carried out with the support of the DP community. The conclusions will assist GoG and DPs to take appropriate pre-emptive and remedial steps and to identify the most suitable financing modalities for implementing the WSSDP.

GoG remains committed to increasing public sector funding to the water sector especially the rural/ small towns and the water resources sub-sectors. In a bid to fulfil GoG's commitment of providing \$350 million dollars annually to the sector under the SWA compact, GoG has pledged to provide 20,000 boreholes between 2011 and 2015.

GoG will continue to leverage additional financing for sector activities through increased budgetary allocations, grants, loans and private sector financing. It is expected that GoG's contribution to investments for the rural/ small towns and water resources sub-sectors will reach 30% by 2015, 50% by 2020 and 100% by 2025. GoG will explore private sector financing arrangements such as Build, Operate and Own (BOO) and Build, Operate and Transfer (BOT) within the framework for private sector participation in the rural and small towns sub-sector. GoG's target is to secure private sector financing to the tune of about 5% of sub-sector investment by 2015.

GoG will also support measures to improve the financial viability of GWCL. GoG will implement measures to reduce non-revenue water in urban water service delivery (from 49.8% in 2010 to 45% in 2015 and 33% by 2025) in order to meet full operation and maintenance cost and for rehabilitation. GoG will support PURC to recover full costs in accordance with PURC's automatic adjustment formula to cover the full cost of operation and maintenance in the delivery of urban

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water supplies. GoG is committed to ensuring that urban consumers progressively bear the full cost of rehabilitation of urban water systems. Proposed measures in the WSSDP to reduce non-revenue water and increase water production levels are expected to lead to an increase in GWCL revenue from sale of water which will be used in financing rehabilitation works. From 2015, pending progress of GWCL in reducing non-revenue water, PURC will progressively review urban water tariffs to meet 50% of rehabilitation cost by 2020 and 100% by 2025.

Rural water development levy payment to CWSA will be tied to revenue inflows to GWCL. MWRWH will convene a forum with representatives from GWCL and CWSA to discuss the implementation modalities. This will improve financing of CWSA's activities in the rural and small towns sub-sector.

To ensure that available water resources are preserved, it is being proposed that 1% of the cost of new investments in water services should be allocated to the Water Resources Commission for water resource management. This will ensure that the water resource potential of water sources is preserved. The funds will be utilised by WRC to design and implement a water resource management programme as an intervention accompanying new investments.

With transfers of financial resources and implementation responsibilities to districts rising, especially since the institution of the District Development Facility (DDF), MMDAs will be encouraged to allocate resources for investment in water and sanitation service delivery. While communities will bear the full cost of operation and maintenance of water facilities, MMDAs will bear the cost of major rehabilitation works and replacement of water facilities that have outlived their lifespans. This support will be complemented with the implementation of follow-up training programmes for community-level structures (e.g. WATSANs, WSMTs etc.) every four years to ensure at least 95% functionality of rural and small towns' water systems. MMDAs will ensure that WSMTs allocate adequate funds for major rehabilitation and replacement of small town piped schemes.

MWRWH and CWSA will explore different possibilities for the creation of a financing mechanism to cover the costs of capital maintenance expenditure in small-town systems. This will include liaising with the National Insurance Commission (NIC) to explore the possibility of getting insurance companies to provide insurance cover for existing water facilities. If feasible, MMDAs will be encouraged to insure existing water facilities in their respective areas of jurisdiction by 2015. This will contribute to ensuring that water facilities remain functional over their full lifespan.

### 3.3.3 Water Resource Management

Strategies in the Medium Term Strategic Plan for Integrated Water Resource Management (2011-2015) have been harmonised with strategies (or proposed interventions) in other sub-sectors and will be implemented within the framework of the WSSDP. Five key strategies will be pursued:

- Strengthening the regulatory framework for managing and protecting water resources for improved water security and enhanced resilience to climate change;

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- Improving access to knowledge and expertise in integrated water resource management to facilitate water resource planning and decision making;
- Improving institutional and human resources capacities for IWRM implementation at all levels;
- Enhancing public awareness and education in water resource management issues; and
- Enhancing trans-boundary and international cooperation in the management of shared water resources.

Although the IWRM strategic plan is limited to the period 2011-2015, the WSSDP will extend the implementation of the five key strategies to the period 2016-2025.

### **3.3.4 Knowledge Management, Gender, Monitoring and Evaluation**

#### **3.3.4.1 Knowledge Management**

Government of Ghana will support research on cost-saving measures, innovations and best practices in water and sanitation service delivery. Research areas or topics will come from the various water sector agencies and departments as well as civil society and the private sector. Research institutions and the private sector will then be financially supported annually to undertake the research for dissemination and discussion at the Ghana Water Forum, the National Environmental Sanitation Conference (NESCON) and other sector learning platforms e.g. National Learning Alliance Platform, Mole Conference etc. The National Learning Alliance platform will be strengthened and extended to the regional and district levels by 2014. The district-level learning alliance sessions will also provide the platform for discussing reports on the activities of WSMTs including audited accounts at the district level. The Ghana Water Forum will provide an additional platform to discuss and share knowledge on sector issues.

GoG will provide funds for periodic sector-specific surveys similar to and between the Multiple Indicator Cluster Survey (MICS) and Ghana Demographic and Health Survey (GDHS), to cover rural/ small towns and urban water supply, basic sanitation and hygiene. The first round of these sector-specific surveys will take place by 2016, and it will be repeated every four years.

#### **3.3.4.2 Gender Mainstreaming**

As part of the capacity building support measures proposed in Section 3.3.1.2, WATSAN Committees/ WSMTs will be trained on the complementary roles of both sexes in water and sanitation service delivery. Women will be encouraged to take up leadership positions in water and sanitation service delivery in rural communities and small towns. A framework will be developed to define modalities for involvement of the Ministry of Gender, Children and Social Protection (MoGCSP) in water and sanitation delivery by 2015.



### **3.3.4.3      *Monitoring and Evaluation***

The MWRWH is currently leading the development of a Sector Information System (M&E Framework) for the Sector. The M&E system will be developed based on agreed sector indicators and will be fed with data from the four main sub-sectors of the water and sanitation sector. The Water Directorate will be adequately resourced to monitor and evaluate the implementation of the WSSDP and to provide relevant data on agreed sector indicators.

Corresponding to this activity will be the setting up of M&E Units at GWCL, WRC and CWSA by 2014. This might necessitate a re-alignment of existing units within the agencies to accommodate the new roles in M&E. The M&E Units will be adequately resourced to provide regular and timely information to the Water Directorate. This will enable the Water Directorate provide timely reports to NDPC and MoF as part of the annual and quarterly reporting under the GSGDA.

At the district level, CWSA will be supported to roll out the District Monitoring and Evaluation System (DiMES) M&E software to all MMDAs by 2014. This will entail installation of the DiMES software in all MMDAs and training of staff of DWDs. The DiMES software will also be reviewed by 2014 to include indicators on functionality and sustainability of water and sanitation services. In the long term, GoG will explore the possibility of introducing SMS messaging at the sub-district level to facilitate data transfer from communities and reduce M&E costs.

## 4 COSTING AND FINANCING THE WSSDP

### 4.1 Costing

The WSSDP has been costed based on the guidelines used in costing the GSGDA as well as the NDPC guidelines on costing sector medium-term development plans:

- The costs of both new and on-going programmes and projects necessary for meeting sector targets were included in the total cost of implementation;
- The implementation of the WSSDP involves activities that may be carried out by the public sector alone, or by the private sector in partnership with the public sector. In the case of the latter, only the public sector activities are costed;
- Costs have been separated according to the recurrent and capital components. The capital costs comprise investments in physical infrastructure, machinery, fixtures and fittings while the recurrent costs relate to non-physical activities.

### 4.2 Summary of Cost

The total cost of implementing the WSSDP over the period 2012-2025 is **US\$5,416.48 million (or GH¢13,692.85 million)**.<sup>26</sup> This cost entails a capital cost of US\$4,822.84 million (89.04%) and recurrent cost of US\$593.64 million (10.96%) as shown in Table 9. This underscores the huge investment required in order to improve water and sanitation service delivery to meet demand up to 2025.

*Table 9: Summary of Cost of WSSDP*

Item	US\$m	GH¢m	%
Recurrent Cost	593.64	1,500.73	10.96
Capital Cost	4,822.84	12,192.12	89.04
Total cost	<b>5,416.48</b>	13,692.85	100

The distribution of costs across the two main packages in the WSSDP is presented in Table 10, below.

<sup>26</sup> Value at 5<sup>th</sup> March 2014, based on Bank of Ghana's (BoG's) inter-bank foreign exchange rate

Table 10: Allocation of Financial Resources under WSSDP (2012-2025)

PACKAGES	Recurrent Cost		Capital Cost		Total Cost (US\$ million)	
	Absolute (US\$m)	%	Absolute (US\$m)	%	Absolute (US\$m)	%
<b>SERVICE DELIVERY</b>						
Urban water service	224.70	5.79	3,657.00	94.21	3,881.70	71.66
Rural and small towns water service	7.90	0.85	917.50	99.15	925.40	17.08
Rural and small towns basic sanitation and hygiene service	138.00	42.2	189.00	57.8	327.0	6.04
<b>Sub total</b>	370.60	7.22	4,763.50	92.78	5,134.10	94.79
<b>CROSS CUTTING ISSUES</b>						
Institutional Capacity Development and Governance	120.963	69.56	52.933	30.44	173.896	3.21
Finance	0.2	100.0	0.0	0.0	0.2	0.0
Water Resource Management	71.85	94.23	4.40	5.77	76.25	1.41
Knowledge Management, Gender, Coordination and M&E	30.03	93.76	2.00	6.24	32.03	0.59
<b>Sub total</b>	223.04	78.99	59.33	21.01	282.38	5.21
<b>TOTAL</b>	<b>593.64</b>	<b>10.96</b>	<b>4,822.84</b>	<b>89.04</b>	<b>5,416.48</b>	<b>100</b>

The total cost of implementing the WSSDP equates to an average annual cost of US\$386.89 million (or GH¢978.06 million). This cost entails average recurrent and capital costs of about US\$42.40 million (GH¢107.19 million) and US\$344.49 million (GH¢870.87 million) respectively.

Out of the total resource budget, 94.79% is expected to go into service delivery. This amount will go into financing new investments as well as replacing and rehabilitating infrastructure. A total of 71.66% of the total envelope will go into urban water service delivery while 17.08% will go into water service delivery for rural and small towns and 6.04% will be allocated to basic sanitation and hygiene services in rural and small towns. The allocation for sanitation and hygiene services is based on the proposed budget in the NESSAP and SESIP for implementing a nationwide sanitation and hygiene programme based on the concept of CLTS. Additional allocations have also been made to implement strategies for hand-washing with soap and safe storage and treatment of water. The recurrent component of the total expenditure on service delivery is US\$370.60 million which constitutes 7.22% of the total cost of service delivery.

A total of US\$282.38 million (5.21%) has been earmarked for implementing activities under the cross-cutting issues package. This entails institutional capacity development and governance (3.21%); finance (0.1%); water resource management (1.41%); and knowledge management, gender, coordination and M&E (0.59%).

### 4.3 Financing

The various sources of financing the implementation are described in Table 11.

Table 11: Sources of Financing WSSDP

Source	Total Amount (US\$ m)	Total Amount (GH¢m) <sup>27</sup>	Average Annual (US\$m)	Average Annual (GH¢m)	%
Development Partners	2,653.04	6,706.88	189.50	479.07	48.98
MMDAs	327.14	827.01	23.4	59.07	6.04
Household Contribution for Basic Sanitation Only	189.00	477.79	13.5	34.13	3.49
GoG	2,247.30	5,681.17	160.50	405.80	41.49
<b>Total</b>	<b>5,416.48</b>	<b>13,692.85</b>	<b>386.90</b>	<b>978.07</b>	<b>100</b>

#### 4.3.1 MMDA Financing

MMDAs generate revenue from two main sources – i.e. central grants and internally-generated funds (IGF). The latter source of revenue accrues from levies, rates, fees and fines administered by MMDAs. Anecdotal evidence suggests that this revenue had, traditionally, been used by MMDAs mainly to meet administrative expenses. With the introduction of the annual performance assessment of MMDAs using FOAT, MMDAs have begun to use some proceeds from IGF to finance development expenditure. The existing central government grants are from two main sources – DACF and DDF. Although data on total disbursement under the DDF are not available, data from MLGRD indicates that allocations per MMDA ranged from GH¢455,074 to GH¢1,075,480 in 2008 and GH¢422,437 to GH¢ 683,412 in 2009. DDF transfers to Metropolitan and Municipal Assemblies alone average GH¢185,912 and GH¢494,831 in 2009 and 2010 respectively.<sup>28</sup> Available data on IGF, DACF and HIPC for the period 2006-2008 and growth in grants are presented in Tables 12 and 13.

Table 12: IGF, DACF and HIPC Allocations to MMDAs

Revenue	2006	2007	2008	Average (GH¢)	6% of Average (GH¢)
IGF	GH¢31,984,444	GH¢40,705,317	GH¢47,380,612	40,023,458	2,401,407
DACF	GH¢90,515,198	GH¢89,266,122	GH¢116,448,111	98,743,144	5,924,589
HIPC	GH¢29,665,755	GH¢27,862,352	GH¢22,380,065	26,636,057	1,598,163
Total	GH¢150,994,536	GH¢157,833,791	GH¢186,208,788	165,012,372	9,900,742
US\$ Equivalent	107,853,240	112,738,422	133,006,277	117,865,980	7,071,959

Source: Adapted from Strategic Environmental Sanitation Investment Plan, MLGRD, May 2010.

<sup>27</sup> Value at 5<sup>th</sup> March 2014, based on Bank of Ghana's (BoG's) inter-bank foreign exchange rate

<sup>28</sup> IDA (2011) Project Appraisal Document on Local Government Capacity Support Project. Feb, 2011

Table 13: Growth in MMDA Grants (2006-2008)

Revenue	Growth (2006-2007)	Growth (2007-2008)	Average Growth
IGF	27.3	16.4	21.8
DACF	-1.4	30.5	14.5
HIPC	-6.1	-19.7	-12.9
Total	4.5	18.0	11.3

Available data indicates that MMDA grants are growing at an average of 11.3%. Disbursements from the HIPC Fund, however, indicate a downward trend over the period. Assuming that MMDAs invest about 6% of grants in the sector as stated in Table 12, this will amount to US\$ 7.1 million ( GH¢9.9 million, as at 2008) annually.

This means there will be an annual financing gap of US\$ 16.3 million (refer to Table 11). This implies that in order to meet the financial gap, MMDAs should be made to allocate at least 20% of their total resources annually for water and sanitation services. Allocating 20% will amount to US\$ 23.5 million annually (this assumption is based on figures as at 2008, Table 12).

#### 4.3.2 User Fees

This constitutes a significant component of resources required for ensuring the availability of adequate resources for operation and maintenance of existing and planned water and services. **This is, however, not included in the budget for implementing the WSSDP.** GoG will, through the relevant sector agencies (i.e. GWCL, CWSA and MMDAs) ensure that users of water services pay user fees for services provided in order to cater for the operation and maintenance of services.

It is estimated that an annual average amount of US\$288.9 million (or the equivalent of GH¢730.34 million)<sup>29</sup> will be required to effectively operate and maintain existing and proposed facilities for both rural and urban sub-sectors in the WSSDP. For rural and small towns' water services, communities will continue to bear the full cost of operation and maintenance of their water and sanitation facilities within the framework of the NCWSP. In urban areas, water tariffs will periodically be adjusted to cover the full cost of operation and maintenance.

The computation of user fees and community contribution towards O&M for urban water services have been based on revenue from sale of water to GWCL (refer to Table 6), while that of rural and small towns water services has been based on the minimum O&M cost of rural and small towns water and sanitation facilities.<sup>30</sup> The annual O&M costs for water services in both urban and

<sup>29</sup> Value at 5<sup>th</sup> March 2014, based on Bank of Ghana's (BoG's) inter-bank foreign exchange rate

<sup>30</sup> Boreholes/ hand dug wells = US\$4 per head per annum; limited mechanisation = US\$15,000 per system; small towns water system = US\$45,000; rain water systems = US\$3,000. According to CWSA, the following facilities had been provided as at 2011: boreholes = 24000; hand dug wells = 4,300; rain water harvesting systems = 22; limited mechanization = 63 and small towns schemes = 397

rural/small towns' have been computed based on an assumption of a 5% annual increase in O&M costs over the planning period. In the urban water sector, the anticipated increase in water production, increase in bill collection ratio and reduction in non-revenue water is expected to increase revenue from sale of water which could provide additional resources for implementing the WSSDP.

### **4.3.3 Household Contribution for Basic Sanitation Only**

Within the context of sanitation promotion through the implementation of CLTS and sanitation marketing, households will bear the cost of constructing household latrines. GoG will design and implement a micro-credit scheme (revolving fund) as proposed in the NESSAP to provide micro-finance to enable households construct their own latrines. The cost of constructing household latrines is estimated at about US\$189 million for the plan period (2012-2025).

### **4.3.4 Government and Development Partners' Financing**

GoG will continue to bear the cost of personnel emoluments and administrative expenses of all the agencies in the water sector over the plan period. Beyond this, GoG will make an annual average contribution of US\$160.5 million (or the equivalent of GH¢405.8 million)<sup>31</sup> to the sector and will also raise an additional US\$189.5 million (or the equivalent of GH¢479.07 million) from Development Partners through grants and loans. Detailed financial arrangements is provided in appendix II.

## **4.4 Funds Flow and Tracking**

Within the broader SWAp agenda, GoG envisions a uniform treasury system for harnessing both public sector and DP funds for water and sanitation sector investment. A country risk assessment study (Phase 1) has been undertaken to enable GoG and DPs decide on the appropriate financing modality under SWAp.

In the interim, the various funding modalities for GoG and DP interventions in water and sanitation service delivery will continue and will be used in financing the WSSDP until the financing modalities under SWAp are agreed upon by DPs and GoG. MWRWH, MLGRD and MoF will be responsible for tracking fund disbursement, utilisation and reporting at the national level and will be supported by the various sector agencies – i.e. CWSA, WRC and GWCL. MWRWH will liaise with MoF to designate a contact person at MoF as the sector's liaison to ensure that critical current, on-going and future budget allocations are in line with commitments made by GoG in regard to the Sanitation and Water for All (SWA) compact and are strategically aligned to the WSSDP.

At the regional levels, the RCCs will receive monthly financial reports on the utilisation of various funds (mainly DACF and DDF) by MMDAs for onward submission to MoF, DACF and MLGRD.

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<sup>31</sup> Value at 5<sup>th</sup> March 2014, based on Bank of Ghana's (BoG's) inter-bank foreign exchange rate

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MLGRD and MoF will share information received with MWRWH. This will enable MoF, MWRWH and MLGRD to track fund disbursement and utilisation for sector activities. The regional and district-level learning alliance platforms will also provide additional avenues for civil society to track fund disbursement and utilisation at their respective levels.

## **5 MONITORING AND EVALUATION OF THE WSSDP**

### **5.1 Proposed Framework and Reporting System**

The M&E framework and reporting system for the WSSDP has been designed in line with the NDPC guidelines for preparation of sector medium-term plans. The proposed framework takes into consideration the institutional framework of the water sector. Beyond this, the results-based monitoring system has also been adopted in defining the framework for M&E. As a result, clear indicators for outputs, outcomes and impacts have been defined for each activity and programme area in the WSSDP.

### **5.2 Reporting System**

At the *national level*, MWRWH through its Water Directorate and the Policy Planning, Monitoring and Evaluation Directorate (PPMED) will be responsible for monitoring the implementation of planned interventions in this WSSDP. MWRWH will expedite action on the development of the Sector Information System ( M&E Framework) for the sector. The establishment of M&E Units at CWSA, WRC and GWCL is expected to complement the work of PPMED at MWRWH and MLGRD. The role of the Ghana Statistical Service and sub-sector agencies such as GWCL, WRC and CWSA in generating accurate data is vital to the successful implementation of the M&E framework. The M&E Group and PPMED-MWRWH will be responsible for providing quarterly and annual updates on progress in implementing the WSSDP. Information received will be disseminated and discussed through the website of MWRWH and those of sector learning platforms such as RCN, GWF, NESCON, Mole Conference and the National Learning Alliance.

The preparation of the M&E plan and strategy by PPMED as indicated in this WSSDP is also critical to this process. Beyond addressing the M&E component of this plan, the proposed M&E plan will further elaborate the processes and procedures for generating, disseminating and utilising data for planning and other purposes within the sector. MWRWH will liaise with EHSD/MLGRD to receive information on the implementation of the water-related sanitation and hygiene component of the plan.

At the *regional level*, the regional offices of CWSA, GWCL and RCC/EHSD and the River Basin Boards will be responsible for data gathering or receiving information from MMDAs and compiling such information for onward transmission to their national offices and for dissemination and discussion at regional sector learning platforms. They will prepare quarterly reports and submit these reports to their respective national offices.

At the *district level*, the District Planning Coordinating Units (DPCUs) in cooperation with the DWDs/DEHDs will be responsible for gathering data at the district and sub-district levels and preparing and submitting quarterly reports to their respective RCCs in accordance with NDPC guidelines. These reports will be received by NDPC and MLGRD through the RCCs. Afterwards, MLGRD will make relevant information/ excerpts on water and sanitation available to MWRWH.



Data gathered at the district level will also be disseminated and discussed at the learning platforms to be established at the district level.

### 5.3 Monitoring and Evaluation Framework

Table 14: Results Based Monitoring and Evaluation Framework

Thematic Area	Indicators	Means of Verification
<b>Institutional Capacity Development Programme</b>		
<p><b>IMPACT</b></p> <ul style="list-style-type: none"> <li>Improved access to regular and affordable water and sanitation services</li> <li>Improved health status of people</li> </ul>	<ul style="list-style-type: none"> <li>National water coverage increased to 80% by 2015 and 100% by 2025</li> <li>30% reduction in diarrhoea infections from 2012 to 2015; and a further 10% reduction by 2025</li> </ul>	<ul style="list-style-type: none"> <li>Annual provider-based data from GWCL and CWSA</li> <li>Data from Ghana Health Service</li> </ul>
<p><b>OUTCOME</b></p> <p><b>SERVICE DELIVERY PACKAGE</b></p> <ul style="list-style-type: none"> <li>Improved water coverage and service delivery in rural/small towns and urban areas</li> <li>Improved sanitation coverage and appropriate hygiene practices among people</li> </ul> <p><b>CROSS CUTTING ISSUES PACKAGE</b>  <b>Institutional Capacity Development &amp; Governance</b></p> <ul style="list-style-type: none"> <li>Institutional structures at the national, regional, district and sub-</li> </ul>	<ul style="list-style-type: none"> <li>Urban water coverage increased to 85% in 2015 and 100% in 2025</li> <li>Access to potable water in low-income communities is increased by 30% from 2012 to 2015</li> <li>Rural and small towns water coverage increased to 76% by 2015 and 100% by 2025</li> <li>95% of water facilities are functional by 2015; and increased to 98% by 2025;</li> <li>60% of households in rural communities and small towns practise hand-washing with soap</li> <li>National sanitation coverage increased from 13% in 2010 to 54% in 2015 and 100% by 2025</li> <li>Proportion of population practising open defecation reduced from 23.1% in 2008 to 5% in 2015 and 0% in 2020;</li> <li>WD-MWRWH, GWCL, CWSA, WRC,PURC, DWDs-MMDAs have adequate resources and deliver services in an efficient and effective manner</li> <li>All WSMTs have annual audited accounts from 2012 to 2025;</li> <li>CWSA, GWCL and WRC publish accounts annually from 2015;</li> </ul>	<ul style="list-style-type: none"> <li>Annual Water and Sanitation Sector Performance Report</li> <li>GDHS, MICS and UNICEF/WHO JMP data</li> <li>Annual Water and Sanitation</li> </ul>

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Thematic Area	Indicators	Means of Verification
<p>district levels perform all their roles efficiently and effectively</p> <ul style="list-style-type: none"> <li>Improved accountability and transparency through timely reporting and participatory discussion of results/issues in the water sector;</li> <li>Improved coordination and collaboration of sector activities particularly among DPs, MWRWH, MoF and MLGRD.</li> </ul> <p><b>Finance</b></p> <ul style="list-style-type: none"> <li>Increased financing sources and investments in the water and sanitation sector</li> </ul>	<ul style="list-style-type: none"> <li>MoU on SWAp is signed in 2014 and implemented in 2015</li> <li>IMSC established and functional by 2015</li> <li>Sector Working Group meetings are institutionalised by 2012 and meetings held quarterly over plan period (2012-2025)</li> <li>NWP reviewed in 2014 and roles of stakeholders clarified</li> <li>WSSDP revised in 2016, 2020 and 2024</li> <li>GoG annually invests US\$200 million for improved water supply and basic sanitation, US\$150 million for septage, sullage and storm water management, and 0.5% of GDP for promoting improved behaviour on sanitation and hygiene from 2011 to 2015</li> <li>GoG increases its direct investment in the sector from about 5% in 2009 to at least 30% by 2015, 80% by 2020 and 100% by 2025;</li> <li>GWCL recovers full rehabilitation, operation and maintenance costs of urban water service by 2015;</li> <li>Secure at least 5% of the water and sanitation sector financing from other sources including private sector financing by 2015.</li> </ul>	<p>Sector Performance Report</p> <ul style="list-style-type: none"> <li>Consolidated national accounts (2012-2015) from CAGD, MoF and Audit Service</li> <li>Annual Water and Sanitation Sector Performance Report &amp; Annual National Budget (2012-2015) from MoF</li> </ul>
<p><b>Water Resource Management</b></p> <ul style="list-style-type: none"> <li>Regulatory framework for managing and protecting water resources for water security and enhanced resilience to climate change strengthened</li> <li>Access to water resources knowledge base to facilitate water resources planning and decision making improved</li> </ul>	<ul style="list-style-type: none"> <li>Updated versions LI1692 and LI 1827 reviewed and adopted by 2015</li> <li>Draft regulations on dam safety and effluent discharges prepared by 2014</li> <li>Draft rainwater harvesting policy implemented by 2015</li> <li>National IWRM and 2 Basins plans developed by 2012</li> <li>WR database available at WRC by 2015</li> <li>Web portal for information exchange established by 2015</li> </ul>	<ul style="list-style-type: none"> <li>Annual Report from WRC</li> </ul>

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Thematic Area	Indicators	Means of Verification
<ul style="list-style-type: none"> <li>Public awareness and interest in water resource management issues enhanced</li> <li>Trans-boundary and international cooperation in the management of shared water resources improved</li> </ul>	<ul style="list-style-type: none"> <li>Framework protocols for water resources data sharing by 2014</li> <li>Bilateral trans-boundary waters agreements with Côte d'Ivoire and Togo prepared by 2015</li> <li>Statutory financial contributions made to VBA and other international organisations every year</li> </ul>	
<p><b>Knowledge Management, Gender and M&amp;E</b></p> <ul style="list-style-type: none"> <li>Improved learning, sharing, and dissemination/discussion of issues to inform the delivery of affordable and reliable water and sanitation service as well as the assessment and management of water resources.</li> <li>Improved participation of males and females in water and sanitation services at national, regional and district levels.</li> <li>Improved coordination of M&amp;E and reporting on sector performance and indicators</li> </ul>	<ul style="list-style-type: none"> <li>Sector learning platforms e.g. GWF, NLA, Mole Conference, NESCON organised, well-coordinated and results disseminated and replicated in sector activities annually from 2012-2025;</li> <li>NLA learning platform extended to regional and district levels by 2015;</li> <li>Enhanced participation of women in management of water and sanitation services at all levels by 2015;</li> <li>PPMED adequately resourced and M&amp;E Units established at CWSA, GWCL and WRC and functional by 2014</li> <li>DiMES successfully installed and rolled out in all MMDAs by 2014</li> </ul>	<ul style="list-style-type: none"> <li>Reports on GWF, NLA, NESCON</li> <li>Annual Water and Sanitation Sector Performance Report</li> <li>Annual reports of CWSA, GWCL and WRC</li> </ul>

# **APPENDIX 1**

## **WSSDP FRAMEWORK**

# **APPENDIX II**

## **COST DETAILS OF THE WSSDP FRAMEWORK**