GOVERNMENT OF GHANA

MINISTRY OF WATER RESOURCES, WORKS AND HOUSING

NATIONAL WATER POLICY

JUNE 2007

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Mr. Minta A. Aboagye
Director of Water
Ministry of Water Resources, Works and Housing

FOREWORD

Notwithstanding the perceived abundance of water in Ghana, its production and utilisation for consumptive and non-consumptive uses is not at an optimal level. The country experiences inadequate water supply in some parts particularly during the dry season. This situation calls for the efficient and effective management of available water resources.

Ghana has since the mid 1990's, been implementing a string of reforms in the water sector aimed at enhancing the efficiency of the production and utilisation of water. These reforms have culminated in the institutional re-alignment of key institutions in the sector. Despite the implementation of these reforms, a major concern has been the lack of an effective interface among key stakeholder institutions with a view to integrating and harmonizing their various activities. Given this phenomenon, the Ministry of Water Resources, Works and Housing, in concert with other stakeholder institutions and interest groups, in 2004, commenced the process for the formulation of a consolidated national water policy. This document is the output of the interactive process initiated.

The National Water Policy is underpinned by the principles enunciated in the Ghana Poverty Reduction Strategy (GPRS), the Millennium Development Goals (MDGs) and the "Africa Water Vision" of the New Partnership for Africa's Development (NEPAD).

The policy document contains sections on integrated water resources management (including water for energy, food security and transportation), urban and community/small town water delivery. The policy also highlights the international legal framework for the domestic and trans-boundary utilisation of water resources.

Given the dynamics of water resources availability, utilisation and the relationship with the environment, the policy needs to be reviewed periodically to incorporate necessary changes that may come with time.

I wish to take this opportunity to thank all stakeholders whose tireless efforts contributed to the development of this document. It is my expectation and hope that the key actors will be supported to ensure effective policy implementation.

Hon. Hackman Owusu-Agyemang, MP
Minister for Water Resources, Works & Housing

LIST OF ACRONYMS

CBO	-	Community Based Organisation
COM	-	Community Ownership & Management
CWSA	-	Community Water and Sanitation Agency
CWSD	-	Community Water and Sanitation Division
CWS	-	Community Water and Sanitation
DA	-	District Assembly
DOM	-	District Operational Manual
DP	-	Development Partners
DPCU	-	District Planning and Coordinating Unit
DWSP	-	District Water and Sanitation Plan
DWST	-	District Water and Sanitation Team
EIA	-	Environmental Impact Assessment
EPA	-	Environmental Protection Agency
FMPs	-	Facility Management Plan
GIDA	-	Ghana Irrigation Development Authority
GLSS	-	Ghana Living Standards Survey
GPRS	-	Ghana Poverty Reduction Strategy
GPRSII	-	Growth and Poverty Reduction Strategy
GSB	-	Ghana Standards Board
GoG	-	Government of Ghana
GWCL	-	Ghana Water Company Limited
GWSC	-	Ghana Water and Sewerage Corporation
HPN	-	Hand pump Spare Parts Network System
HES	-	Hygiene Education and Sanitation
MDG	-	Millennium Development Goal
M & E	-	Monitoring & Evaluation
MoFA	-	Ministry of Food and Agriculture
MOM	-	Monitoring Operation and Maintenance
MWH	-	Ministry of Works and Housing
MWRWH	-	Ministry of Water Resources, Works and Housing

NDPC	-	National Development Planning Commission
NCWSP	-	National Community Water and Sanitation Programme
NGO	-	Non- Governmental Organisation
O&M	-	Operation and Maintenance
POM	-	Project Operational Manual
PIP	-	Project Implementation Plan
SMCD	-	Supreme Military Council Decree
ST	-	Small Town
PURC	-	Public Utilities Regulatory Commission
RCC	-	Regional Coordinating Council
RPCU	-	Regional Planning Coordinating Unit
RWST	-	Regional Water and Sanitation Team
SIP	-	Strategic Investment Plan
SOE	-	State Owned Enterprise
TA	-	Technical Assistance
WATSAN	-	Water and Sanitation Committee
WRC	-	Water Resources Commission
WS	-	Water and Sanitation
WSS	-	Water and Sanitation Sector
WSDB	-	Water and Sanitation Development Board

INTRODUCTION AND POLICY CONTEXT

1.1 OVERVIEW

Water is essential to the existence of man and all living things. Water is a cross-cutting element of the Growth and Poverty Reduction Strategy (GPRS II) of the Republic of Ghana and is linked to all Eight of the Millennium Development Goals. Improving water services and uses are essential for increasing hygiene and sanitation service levels that affect productive lives of people, enhance enrolment and retention of girls in school, enhance women's dignity and ability to lead, reduce morbidity and mortality, reduce pre and post-natal risks and prevent vector and water borne diseases. Health, nutrition and food production, are dependent on availability of water in adequate quantities and good quality.

Lack of potable water, occurrence of drought or floods expose people, especially women and children, to water-borne and sanitation-related diseases as well as relocation problems including the risk of contracting HIV/AIDs.

Water is central to many industrial activities including, hydropower generation, transport services and tourism. Population growth and concentration, rapid urbanisation and industrialisation resulting in an increase in individual and collective needs have made water increasingly scarce and often of low or reduced quality. In addition to these, current global climatic change processes are expected to affect both the spatial and temporal unpredictability of water availability. The water resource base is, therefore, under threat.

The National Water Policy of Ghana is intended to provide a framework for the sustainable development of Ghana's water resources. It is targeted at all water users, water managers and practitioners, investors, decision- makers and policy makers within the central Governmental and decentralised (district assemblies) structures, non-Governmental organisations and international agencies. The policy also recognises the various cross-sectoral issues related to water-use and the links to other relevant sectoral policies such as those on sanitation, agriculture, transport, energy et cetera.

THE POLICY IS ORGANIZED INTO THREE SECTIONS:

Section 1 presents the Overview of Ghana's water sector comprising the state of water resources and management institutions, development priorities, international obligations, broad principles leading to policy formulation.

Section 2 details the key policy issues related to the basic principles and challenges confronting water resources management development and use in the three sub-sectors – water resources management, urban water supply, and community water and sanitation.

Section 3 outlines proposals and guidelines for implementing the policy including institutional roles and responsibilities, standards, regulations, definitions and references.

1.1.1 WATER RESOURCES POTENTIAL AND UTILISATION

WATER RESOURCES POTENTIAL

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

RAINWATER HARVESTING

Rainwater harvesting has a great potential to increase water availability. Generally, rainfall decreases from the south-west of the country (2,000 mm/year) towards the north (950 mm/year) and the south-east (800 mm/year). With appropriate technology and incentives, rainwater harvesting could provide a reasonable amount of water for household and other institutional water needs thereby reducing demand on the pipe-borne system and therefore the resource.

To harness this potential, government will enact appropriate legislation to be implemented through authorities such as the Metropolitan, Municipal and District Assemblies, and also provide incentives towards making rainwater harvesting a viable option to supplement household and institutional water requirements.

RUNOFF

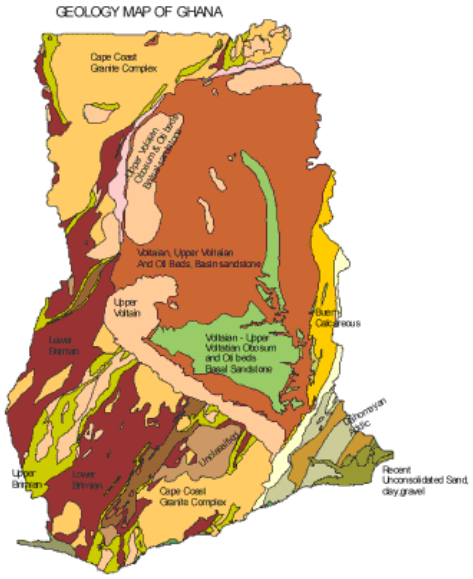
The total annual runoff is 56.4 billion m^3 with the Volta river accounting for 41.6 billion m^3. The mean annual runoff from Ghana alone is about 40 billion m^3. The Volta, South-Western and Coastal systems contribute 65%, 29% and 6%, respectively, of this runoff. The runoffs are also characterized by wide disparities between the wet season and dry season flows. The total water available from surface water sources is 39.4 billion m^3 per annum.

GROUNDWATER RESOURCES

Ghana is underlain by three main geological formations, namely the basement complex comprising crystalline igneous and metamorphic rocks; the consolidated sedimentary formations underlying the Volta basin (including the limestone horizon) and the mesozoic

and cenozoic sedimentary rocks. These formations represent 54%, 45% and 1 % of the country respectively.

The depth of aquifers in the basement complex and the Volta basin is normally between 10m to 60m with yields rarely exceeding 6m³/h. The aquifer depths in the mesozoic and cenozoic formations are usually between 6 and 120 m with average yields of about 184m³/h particularly in the limestone aquifer. Groundwater occurrences in limestone formations, which also exist, are much deeper located, typically in the range of 120 m to 300 m. The average yield in the limestone formation is 180m³/h.



AQUIFER RECHARGE

Recharge to all the aquifer systems is usually in the form of direct infiltration of precipitation through fracture and fault zones along the highland fronts and also through the sandy portions of the weathered zone. Additional recharge occurs through seepage from ephemeral stream channels during the rainy season. Experience has shown that groundwater has a number of advantages over surface water for the provision of water supply and is used as the first choice among other options for community water supplies whenever it is available. It is more reliable throughout the year and in periods of drought, and generally does not require treatment. Springs and wells are preferred sources of water because they are relatively inexpensive and provide a good basic service. In all cases care must be taken that the source provides all year round supply of water.

The potential for increasing groundwater uses is faced with challenges. There are saline intrusions in shallow aquifers along the coastal zone, while borehole yields in the Northern, Upper East, Upper West and parts of Brong-Ahafo regions are often in-sufficient with some occurrence of "dry boreholes". Many borehole sites, particularly hydro-geological formations such as those underlain by crystalline basement rocks, with fractures and fissures while suitable for locating boreholes are also channels for rapid transfer of pollutants. There is therefore potential for contamination from point sources including refuse dumps, latrines as well as from unprotected water points including abandoned hand-dug wells. There are also problems of high iron and fluoride contents in parts of the country including the Western, Northern and Upper East regions.

UTILISATION

CONSUMPTIVE USES

The main consumptive uses of water in Ghana are water supply, irrigation and livestock watering. On the basis of surface water resources alone, the consumptive water demand for 2020 has been projected to be 5 billion m^3, which is equivalent to only some 12% of the total surface water resources. Notwithstanding the availability of water to meet water supply, there are deficits in coverage. While urban water supply coverage is estimated at 55% (2004), the rural and small town coverage is 51.6% (2004). With respect to irrigation, the projected demand by 2020 is about 400,000m^3, to cover a projected area of 100,000 hectares.

NON-CONSUMPTIVE USES

The main non-consumptive uses are inland fisheries, water transport and hydropower generation. Impoundments and reservoirs have been constructed for hydropower generation, potable water supply and irrigation. The first hydroelectric dam, constructed in 1965, is located 100 km from the source of the Volta River. The dam created one of the largest man-made lakes in the world, covering an area of about 8,500 km^2 at the Full Supply Level of 88.5 metres. A smaller, shallower impoundment, the Kpong Head-pond, covering an area of about 40 km^2, was created in 1981 when another hydroelectric dam was completed at Kpong, 20 km downstream of Akosombo. Other important impoundments are the Weija and Owabi Reservoirs on the Densu and Offin Rivers, respectively. The projected demand for hydropower generation by 2020 is 378,430 m^3 as against a projected supply of 1,733,380 m^3. On the Volta Lake, river navigation is undertaken on a 415 kilometers stretch, from Akosombo to Buipe. The non-consumptive demand can also be met from the surface water available.

1.1.2 DEVELOPMENT ISSUES – GPRS, MDGS, NEPAD

Ghana's development agenda is driven by the Growth and Poverty Reduction Strategy (GPRS II) which is in itself informed by our commitments to Millennium Development Goals (MDGs), New Partnership for African Development (NEPAD) and above all by the underlying obligations set out in the Constitution of the Republic of Ghana.

Water, in its various occurrences, management and uses, is an essential component of human development and is a cross-cutting factor in current development priorities driving Ghana's goal of achieving sustainable development.

The key development priorities include those of:

GHANA'S GROWTH AND POVERTY REDUCTION STRATEGY

The Growth and Poverty Reduction Strategy (GPRS II) for the period 2006-2009 follows the initial Ghana Poverty and Reduction Strategy (GPRS I) launched in 2003. The provision of water is highlighted in both the current GPRS II and the previous one. The relevant section of GPRS II states: "Improving access to potable water and sanitation is critical to achieving favourable health outcomes, which in turn facilitate economic growth and sustained poverty reduction". Strategies for providing safe water will focus on increasing access to rural, urban and un-served peri-urban and poor urban areas.

This would be achieved by placing emphasis on the provision of water facilities to guinea worm endemic communities that have not been beneficiaries of new investments within the last ten years and on effective management of urban systems. It is anticipated that improvements in management of investments for water services and infrastructure will mitigate water- and sanitation-related diseases as well as droughts and floods that directly affect poor people.

A Strategic Environmental Assessment (SEA) conducted on the GPRS I showed that water, as a cross-cutting thematic issue is highly relevant to promoting livelihood, health and vulnerability issues in Ghana. The preparation of the GPRS II and the National Water Policy gained from the SEA experience and so issues of environment, as far as practicable, have been considered in line with MDG 7, Target 9.

MILLENNIUM DEVELOPMENT GOALS

The United Nations (UN) Millennium Development Goals (MDGs) launched in 2000, consists of a set of concrete measurable targets for achieving poverty reduction and sustainable development. In this connection, improvement in the provision of water supply and sanitation services has been recognized as a core feature. The Government of Ghana is committed to the principles of the MDGs and has therefore endorsed the principles for water which include the following:

- Improving access to safe water supply and sanitation to reduce the proportion of population without access to basic water supply and sanitation by 50% by 2015 and 75% by 2025.
- Promoting efficient and sustainable use of water to address food security and income generation, helping to halve the number of malnourished people by 2015 through investment in irrigated agriculture focusing on economic development as well as on food self- sufficiency.
- Using integrated water resource management (IWRM) to promote cooperation in national and shared water basins for the mutual benefit of all water users and their communities.
- Establishing and strengthening arrangements to benefit all riparian countries with assistance to and support to local and national initiatives so as to derive the benefit and opportunities of regional cooperation, development and integration at the international basin level.
- Acting to prevent, mitigate and manage water related disasters by developing a prevention based culture, strengthening capacity to monitor and mitigate the effects of climate variability and to manage disasters.
- Focusing empowerment and capacity on improving equity and gender sensitivity and promoting pro-poor water governance and water policies".

THE NEW PARTNERSHIP FOR AFRICA'S DEVELOPMENT (NEPAD)

NEPAD, conceived by African leaders, provides a platform for a comprehensive, integrated development plan designed to address key social, economic and political priorities in a coherent and balanced manner. An "African Water Vision 2025" was prepared within the framework of NEPAD. The African Water Vision focuses on more equitable and sustainable use of water resources for poverty alleviation, socio-economic development, regional cooperation and the environment. Countries in Africa are to be assisted to develop their respective national integrated water resources management policies and institutional reforms that would include capacity building.

A short-term action plan was prepared as part of the programme of actions for NEPAD. The action plan is based on the understanding that:

(a) sustainable use of available and finite water resources is essential for the socio-economic development of the continent and for eradicating poverty, and

(b) available resources have to be harnessed to meet the growing basic needs of water supply and sanitation, to contribute to food security and to utilize hydropower potential.

1.1.3 OBLIGATIONS AND AGREEMENTS

Ghana is a riparian state that shares a number of basins with neighbouring countries. The Volta River basin is shared with Cote d'Ivoire, Burkina Faso, Togo, Benin and Mali. The Bia is shared with Cote d'Ivoire, while the lower reaches of the Tano River also form part of the boundary with Cote d'Ivoire.

In addition to national and global development objectives, Ghana is also a signatory to a number of international laws, protocols, agreements and declarations that place obligations on the government in the management of water resources and the environment. These laws, protocols and agreements also place obligations on the government in the use of water resources particularly with other riparian states. Some of these laws, protocols and agreements are:

- Convention on Fishing and Conser-vation of the Living Resources of the high seas
- Convention on Wetlands of International Importance Especially as Waterfowl Habitats: Ramsar Convention, 1971
- Convention on the Elimination of All Forms of Discriminations against Women (CEDAW), 3rd September 1981
- United Nations Convention on the Law of the Sea, 7 June 1983
- Convention on the Rights of the Child, 2nd September 1990
- International Convenant on Economic, Social and Cultural Rights, December 2000

- Volta Basin Declaration outlining a set of key principles for the peaceful management of conflicts related to the shared water resources of the Volta River, August 2002.
- Ghana–Burkina Faso Joint Declaration on improved management of the natural resources of the Volta Basin, August 2002.
- Resolution for the establishment of a Volta Basin Technical Committee, July 2004.
- Communiqué on promoting dialogue towards the establishment of a Volta Basin Organisation, November 2004.
- Memorandum of Understanding on the Establishment of the Volta Basin Authority, December 2005.

In addition to these protocols and agreements within the framework of international cooperation on water resources, the government will:

- initiate and conclude protocols and agreements (eventually resulting in establishment of formal River Basin Organisations where appropriate) between;
- Ghana and the other five riparian countries of the Volta, including any associated aquifers;
- Ghana and Cote d'Ivoire in respect of the Bia and Tano rivers, and any shared aquifers; and
- Ghana and Togo, with respect to the Todzie-Aka basin, and the two countries and Benin for the shared aquifer.

1.2 POLICY FORMULATION PROCESS

Ghana's Water Vision for 2025 has the main objective to *"promote an efficient and effective management system and environmentally sound development of all water resources in Ghana".*

For the nation to achieve the above objective and to respond to current priorities, it is important to adopt a holistic approach to water resources management and development. Adopting Integrated Water Resources Management (IWRM) will enhance sustainable management of water resources and provide appropriate decision support systems for valuating competing uses of water.

In managing demand for competing uses of water, there are challenges in making allocation-decisions, including those concerning the following;

- balancing the needs for improving food supplies with that of preserving water courses or wetlands for fish and wildlife habitat;
- ensuring that wants for hydro electric power generation and other in-stream uses are balanced against demands from human settlements and farms;
- estimating how much groundwater should be pumped now and how much should be preserved for future needs, taking into consideration the need to preserve borehole water quality long after installation;
- forecasting how much ground water and how much surface water should be withdrawn to meet current and future water demands; and
- carrying out studies on how much beneficiaries can afford to pay for sustaining water services.

To ensure sustainable development of water resources which responds to sector issues including those mentioned above, water resources management would be considered within the context of the following two main areas:

- conservation of the water resources stock in all its occurrences to sustain availability and maintain acceptable quality for the betterment of human health and the environment; and
- regulation and control of demands of water use and waste disposal to stay within the natural capacity of the water resources base, which must necessarily maintain its regeneration and self-purification characteristics.

Since the beginning of the 1980´s, the Government of Ghana has introduced a number of policy reforms in the water sector that were specially intended to improve efficiency in rural, urban and irrigation water as well as attain some measure of environmental protection and conservation.

One key challenge has been the absence of a comprehensive water policy focusing on all aspects of water resources management.

In 2002 following a series of broad consultations, a draft Ghana Water Policy was prepared by the Water Resources Commission (WRC) under the auspices of the then Ministry of Works and Housing. With the establishment of the Water Directorate, a wider consultative process was initiated in 2004 to update the policy. As part of the process, policies specific

to urban water supply and community water and sanitation services were developed and incorporated.

The process has been enhanced by applying Strategic Environmental Assessment (SEA) principles to ensure that the policy appropriately addresses environmental sustainability constraints of proposed government policy measures covering natural resources, socio-cultural, economic and institutional issues.

The issues highlighted from the considerations of the overview of the Ghana water sector, the GPRS, MDGs and NEPAD short term action plan, as well as the Africa Water Vision 2025 all fit into the key issues presented in the National Water Policy (NWP). The policy is also set within our commitment to international obligations and protocols and to the broad guiding principles of water management.

1.2.1 GUIDING PRINCIPLES

The key principles that provide the basis for policy direction for sustainable management, development and use of water in Ghana include the following key ones:

i. the principle of fundamental right of all people without discrimination to safe and adequate water to meet basic human needs;
ii. the principle of meeting the social needs for water as a priority, while recognising the economic value of water and the goods and services it provides;
iii. the principle of recognising water as a finite and vulnerable resource, given its multiple uses;
iv. the principle of improving equity and gender sensitivity;
v. the principle of integrating water resources management and development with environmental management in order to ensure the sustainability of water resources in both quantity and quality;
vi. the precautionary principle that seeks to minimise activities that have the potential to negatively affect the integrity of all water resources;
vii. the principle of coordinating water resources planning with land use planning;
viii. the principle of adopting the river basin (or sub-basin) as a planning unit;
ix. the principle of polluter pays, to serve as a disincentive to uncontrolled discharge of pollutants into the environment;

x. the principle of subsidiarity in order to ensure participatory decision-making at the lowest appropriate level in society;

xi. the principle of solidarity, expressing profound human companionship for common problems related to water;

xii. the principle that international cooperation is essential for sustainable development of shared basins;

xiii. the principle of integrating river basin management with management of the coastal zones and wetlands; and

xiv. the principle of the greatest common good to society in prioritising conflicting uses of water.

These principles are in conformity with the GPRS and in line with the statutes of The Republic of Ghana.

STRATEGIC ACTIONS OF POLICY

2.1 OVERALL GOAL

Consistent with the GPRS, the overall goal of the National Water Policy is to "achieve sustainable development, management and use of Ghana's water resources to improve health and livelihoods, reduce vulnerability while assuring good governance for present and future generations". This will be achieved by addressing relevant issues under water resources management, urban water supply and community water and sanitation. For each broad area, a number of focus areas for policy considerations have been identified. Within each the main principles and challenges are listed followed by policy objectives and the corresponding measures.

2.2 WATER RESOURCES MANAGEMENT

Current trends point to the fact that an integrated water resources management approach is needed to ensure that water does not become a constraint to national development.

Previously, water was regarded as a free commodity – considered unlimited in quantity and available as required. However, with continued population growth and urbanisation, and rapidly growing and diversified demands, including water for irrigation, hydropower generation, industrial processes, fisheries and aquatic ecosystem protection, the resource is becoming increasingly scarce and often of inferior quality.

These trends are exacerbated by past practices whereby planning, development and management of the resource for the envisaged uses were approached from a sectoral perspective without recourse to coordination and dialogue among the relevant agencies and institutions. The result of this prevalent situation has often been in the form of non-optimal and unsustainable use of the resource. Additionally, in the past, environmental sustainability – integrating natural resources issues with socio-economic dimension - in water resources management has not featured prominently among policy makers and planners concerned with the development and utilisation of the resource. Today, however, modern approaches to natural resource management acknowledge that planning for use and preservation of

the natural resource must take the wider sustainable development needs of society into consideration.

2.2.1 FOCUS AREA 1 - INTEGRATED WATER RESOURCES MANAGEMENT

PRINCIPLES AND CHALLENGES

The main principles applicable to IWRM are:

(i) recognising water as a finite and vulnerable resource, given its multiple uses;

(ii) integrating water resources management and development with environmental management in order to ensure the sustainability of water resources in both quantity and quality;

(iii) coordinating water resources planning with land use planning;

(iv) adopting the river basin (or sub-basin) as a planning unit; and

(v) integrating river basin management with management of the coastal zone and wetlands.

The main challenges in integrated water resources management are;

(i) ensuring that there is adequate water, both quantity and quality, to restore and preserve the natural character and functions of eco-systems;

(ii) adhering to stipulated standards of water quality;

(iii) ensuring that human activities do not adversely impact on long-term availability of water resources; and

(iv) ensuring that the appropriate institutional arrangement and human resources are available.

POLICY OBJECTIVES

The key policy objectives of applying the principles and meeting the challenges above are to:

(i) achieve sustainable management of water resources;

(ii) ensure equitably sustainable exploitation, utilisation and management of water resources, while maintaining biodiversity and the quality of the environment for future generations.

POLICY MEASURES AND/OR ACTIONS

In order to meet the above objectives, Government will:

(i) adopt water resources planning as a cross-cutting basic component of national economic planning;

(ii) ensure preparation of IWRM strategies using the various river basins as the planning units;

(iii) establish appropriate institutional structures and enhance capacity building;

(iv) ensure water resources planning to be made with due recognition of "environmental flow" requirements;

(v) adopt sustainable practices that avoid damage to critical natural capital and irreversible ecological processes;

(vi) promote partnerships between the public and private sectors for the protection and conservation of water resources through the use of cleaner and efficient technologies, effective waste management and sound land management and agricultural practices; and

(vii) ensure cost recovery and sustainability of water projects, taking into account the specific needs and preferences of the poor.

2.2.2 FOCUS AREA 2- ACCESS TO WATER

PRINCIPLES AND CHALLENGES

The main principles and challenges include:

(i) the fundamental right of all people without discrimination to safe and adequate water to meet basic human needs;

(ii) ensuring a minimum water requirement for the maintenance of health and well-being is assured.

POLICY OBJECTIVES

The policy objectives are to;

(i) facilitate improving access to potable water without discrimination; and

(ii) enhance the management and development of water resources in a manner which, as first priority, safeguards that the entire population, particularly the poor and vulnerable, will have access to adequate and potable water;

POLICY MEASURES AND/OR ACTIONS

In order to meet the above objectives Government will:

(i) strengthen and ensure sustainability of ongoing community management, operation and maintenance of facilities, in order to safeguard investments already made;

(ii) strengthen District Assemblies to assume a central role in supporting community management of water and sanitation facilities, and in maintaining the integrity of aquatic ecosystems;

(iii) increase the stake of and clearly define the role of the formal and informal private sector in the provision of water and sanitation in urban and rural communities and ensure the facilitative role of Government agencies;

(iv) promote partnership between the public and private sectors in the provision of water supply and sanitation services for improved management and to facilitate capital inflows;

(v) improve efficiency in production and distribution through effective and improved O&M and pricing mechanism (strategy and structure) taking into account the poor and vulnerable; and

(vii) ensure sustainability through cost recovery, taking into account the basic right to a threshold level of supplies ("some for all"), especially for the segment of the populace who can demonstrably not afford the full cost of supplies.

2.2.3 FOCUS AREA 3- WATER FOR FOOD SECURITY

PRINCIPLES AND CHALLENGES

The key principles are:

(i) recognising water as a finite and vulnerable resource, given its multiple uses; and
(ii) integrating gender equality principles into all aspects of IWRM.

The main challenge with regards to food security is;

(i) ensuring availability of water for food security for all seasons.

POLICY OBJECTIVES

The key objectives are to:

(i) ensure availability of water in sufficient quantity and quality for cultivation of food crops, watering of livestock and sustainable freshwater fisheries to achieve sustainable food security for the country; and
(ii) ensure availability of water in sufficient quantity and quality to support the functions of the eco-systems in providing alternative livelihoods.

POLICY MEASURES AND/OR ACTIONS

The Government will take the following measures and/or actions for achieving food security:

(i) Support the establishment of micro-irrigation and valley bottom irrigation schemes among rural communities with the assistance of district assemblies;
(ii) strengthen district assemblies to assume a central role in supporting community operation and maintenance of small-scale irrigation and other food production facilities;
(iii) Promote partnership between the public and the private sector in the provision of large commercial irrigation infrastructure taking into consideration effects on economy, culture, environment and health;
(iv) encourage the efficient use of fertilizers to reduce pollution of water bodies and ensure conservation of water;
(v) promote and encourage water use efficiency techniques in agriculture and reduce transmission losses of water in irrigation systems; and
(vi) manage land use and control land degradation, including bush fires, to reduce soil loss and siltation of water bodies.

2.2.4 FOCUS AREA 4 - WATER FOR NON-CONSUMPTIVE AND OTHER USES

PRINCIPLES AND CHALLENGES

The principles applicable here are:

(i) the precautionary principle that seeks to minimise activities that have the potential to negatively affect the integrity of all water resources;

(ii) the polluter pays principle, to serve as a disincentive to uncontrolled discharge of pollutants into the environment; and

(iii) recognising water as a finite and vulnerable resource, given its multiple uses.

The challenges include:

(i) ensuring availability of water in suitable quantities for energy production and other non-consumptive uses;

(ii) ensuring effective water demand management, improved efficiency of use, effective conservation measures, realistic pricing and prevention of pollution of water resources and the environment; and

(iii) balancing the competing and conflicting demands of water between mining firms and adjacent communities.

POLICY OBJECTIVE

The policy objectives are to:

(i) ensure availability of water for hydropower generation, various industrial and commercial uses, mining operations, water transport and recreational purposes; and

(ii) ensure adequate protection of water sources in mining and other industrial areas.

POLICY MEASURES AND/OR ACTIONS

Government will take the following measures and actions:

(i) facilitate availability of water resources for industrial uses through sustainable water resources management;

(ii) require industries, including mining operations, to develop and implement environmental management systems which take into account the impact of industries on the country's water resources;

(iii) fully implement the enacted requirements related to licensing of water uses (permits) and issuance of waste water (effluent) discharge permits;

(iv) encourage development of codes of practice for efficient water use and cleaner production technologies in industrial activities; and

(v) formulate hydropower development plans to meet current and future demands in conjunction with other uses, through sustainable water resources management.

2.2.5 FOCUS AREA 5 - FINANCING

PRINCIPLES AND CHALLENGES

The underlying principle in financing water resources management is:

(i) meeting the social needs for water as a priority, while recognising the economic value of water and the goods and services it provides.

The main challenges are:

(i) ensuring sustainability in water resources management through appropriate pricing mechanisms while ensuring equity;

(ii) ensuring water resources management is adequately funded and appropriate levies instituted for raw water abstraction to promote efficiency, sustainability and equity; and

(iii) sustaining appropriate levels of funding to the sector to meet MDGs.

POLICY OBJECTIVES

The policy objective is to;

(i) ensure that adequate funds are available for the development of the water sector to achieve the goal of making water available for all.

POLICY MEASURES AND/OR ACTIONS

To achieve the objectives Government will:

(i) permit the application of cost sharing with vulnerable communities to cover capital costs, in view of the social value of water;

(ii) where appropriate, encourage the adoption of a tiered tariff structure system (for example, as for instance, for water supply and hydropower services);

(iii) promote incentives for demand management measures in order to ensure the rational allocation and conservation of water resources; and

(iv) institute appropriate water charges, e.g. water use fees, with the dual purpose of providing a tool for regulating water use; and the means of defraying the costs incurred in maintaining an efficient system for IWRM activities

2.2.6 FOCUS AREA 6 – CLIMATE VARIABILITY AND CHANGE

PRINCIPLES AND CHALLENGES

The relevant principles include:

(i) recognising water as a finite and vulnerable resource, given its multiple uses;

(ii) coordinating water resources planning with land use planning; and

(iii) adopting the river basin (or sub-basin) as a planning unit;

The main challenges of mitigating the effects of extreme events and disasters are:

(i) ensuring adequate response strategies are in place; and

(ii) ensuring adequate support to vulnerable people for implementing their own coping strategies.

POLICY OBJECTIVES

The policy objectives are;

(i) to minimize the effects of climate variability and change; and
(ii) to institute measures to mitigate the effects of, and prevent damage caused by extreme hydrological occurrences (floods and droughts).

POLICY MEASURES AND/OR ACTIONS

In order to assure preparedness for extreme events and disasters, Government will:

(i) construct flood protection structures at appropriate locations;
(ii) apply appropriate technologies to provide the necessary information for detection and early warning systems for floods and drought;
(iii) establish and enforce appropriate buffer zones along river banks including measures to compensate for loss of lands.;
(iv) ensure that land-use planning/building regulations are adequate and enforced in respect of waterways and flood-prone areas;
(v) provide water conservation structures of adequate capacity after carrying out environmental assessments taking into account multiple uses (e.g. fisheries and tourism) and removing conflicts (e.g. fencing of intakes in dams to allow for restricted fishing);
(vi) ensure rainwater harvesting techniques are incorporated into the building code and enforced; and
(vii) ensure implementation of mitigation strategies in consultation with affected communities.

2.2.7 FOCUS AREA 7 - CAPACITY BUILDING AND PUBLIC AWARENESS CREATION

PRINCIPLES AND CHALLENGES

The relevant principles are:

(i) adopting the river basin (or sub-basin) as a planning unit; and
(ii) subsidiarity in order to ensure participatory decision-making at the lowest appropriate level in society; and

(iii) integrating gender equality approaches in IWRM.

The main challenges with respect to capacity building and awareness creation include:

(i) ensuring training and retention of adequate number of sector professionals;
(ii) ensuring adequate capacity encompassing administrative, financial, technical and logistical provisions;
(iii) ensuring effective dissemination of information to enable decision-making by the public on progress towards MDGs; and
(iv) developing and maintaining institutional structures responsive to the need for sustainable management of water resources.

POLICY OBJECTIVES

The key policy objectives are:

(i) to develop and strengthen human resources and institutional and operational capacities; and
(ii) to promote the generation and wide dissemination of information on IWRM to the general public.

POLICY MEASURES AND/OR ACTIONS

To achieve the objective, Government will:

(i) support the development of skills related to various water management functions at all levels;
(ii) adequately empower and equip water management institutions and DAs with appropriate tools and sustainable resources to effectively undertake their functions;
(iii) ensure public awareness is propagated through a network of major stakeholders, including DAs, NGOs and traditional self-help organisations;
(iv) integrate IWRM in relevant curricula at all levels of the educational system and encourage its interdisciplinary nature at the tertiary level;
(v) support analyses on whether proposed dam projects comply with World Commission on Dams recommendations as well as effective dissemination of findings thereof; and
(vi) ensure particular emphasis is placed on the use of public participatory mechanisms, including enhancement of the role of members of disadvantaged groups, youth, and local communities, with a special focus on women.

2.2.8 FOCUS AREA 8 - GOOD GOVERNANCE

PRINCIPLES AND CHALLENGES

The underlying principles of water resources management contributing to good governance include:

(i) the principle of subsidiarity in order to ensure participatory decision-making at the lowest appropriate level in society;

(ii) the principle of solidarity, expressing profound human companionship for common problems related to water; and

(iii) the principle of the greatest common good to society in prioritising competing uses of water.

The challenges include:

(i) ensuring that water planning and decision-making follow a participatory approach in which all affected parties are included, and in which gender issues are mainstreamed; and

(ii) ensuring appropriate conflict resolution processes and mechanisms are instituted.

POLICY OBJECTIVES

The objectives for assuring Good Governance are to:

(i) ensure participation of all stakeholders, including the private sector, local communities, particularly women, in decision- making on water-related issues; and

(ii) ensure good governance and a stable macro-economic situation to provide the enabling environment for sustainable water resources management and development

POLICY MEASURES AND/OR ACTIONS

To buttress the above objectives in water resources management, Government will:

(i) deepen democratisation of society, through transparent and accountable leadership, adherence to the rule of law, recognising the role of the press and access to information;

(ii) accelerate the representation of women at all levels and in all spheres of water management activities;

(iii) expand the private sector's role and participation in identification and implementation of water resources development projects;

(iv) ensure accountability and cost effectiveness at all levels in the sector in order to safeguard investments;

(v) facilitate the application of relevant laws[1] that govern water use and resolution of conflicts; and

(vi) adhere to international water laws and conventions;

2.2.9 FOCUS AREA 9 - PLANNING AND RESEARCH

PRINCIPLES AND CHALLENGES

The relevant principles include:

(i) recognising water as a finite and vulnerable resource, given its multiple uses;

(ii) integrating water resources management and development with environmental management in order to ensure the sustainability of water resources in both quantity and quality; and

(iii) the principle that international cooperation is essential for sustainable development of shared basins.

The main challenge in the planning and research area is:

(i) ensuring availability of adequate and timely data to users at all levels

POLICY OBJECTIVE

The objective in addressing planning and research challenges is to;

(i) promote and support scientific, technological and socio-economic research, including the development and use of appropriate technologies and practices for sustainable water resources development.

POLICY MEASURES AND/OR ACTIONS

In order to improve and streamline planning and research, Government will:

(i) support water sector institutions to extend the traditional fields of water research;

(ii) encourage interdisciplinary and participatory research that recognises the need for a link between technology and communities;

[1]Water Use Regulations, 2001 (L.I. 1692), provide means for conflict resolution regarding permitting for various water uses.

(iii) support the data collection agencies to provide data and information on land use and water resources;

(iv) support the standardisation of methods of data collection, archiving, processing and dissemination, both at national and regional levels, for use by all riparian countries; and

(v) ensure that assessment and analysis of water resources availability and the impact of climate change and catchment degradation on water resources, are facilitated.

2.2.10 FOCUS AREA 10 - INTERNATIONAL COOPERATION

PRINCIPLES AND CHALLENGES

The principles of, and challenges in maintaining international cooperation between Ghana and its riparian neighbours include:

(i) the principle that international cooperation is essential for sustainable development of shared basins; and

(ii) the challenge of pursuing on-going consultations and newly established cooperation mechanisms governing the management of internationally shared water resources with the aim that the collaboration of the riparian countries ensures that the Volta river and other shared basins will be developed for the reasonable and equitable benefit of all the countries concerned.

POLICY OBJECTIVES

The objectives are to:

(i) promote international cooperation in the management of shared water resources; and

(ii) ensure efficient basin-wide planning and efficient use of water resources as well as promotion of mutually beneficial economic cooperation with riparian countries.

POLICY MEASURES AND/OR ACTIONS

In order to vigorously pursue international cooperation, Government will:

(i) encourage standardisation of data collection and exchange of data and information, and their use with respect to trans-boundary issues;

(ii) encourage the sharing of benefits of water resources of shared basins and aquifers, for example, by extending hydropower, potable water and water transport to the other co-riparian countries, where feasible;

(iii) encourage the Governments of the riparian countries to ratify current and future international conventions on trans-boundary waters; and

(iv) encourage water resources planning and development, with a shared vision, among the riparian countries for shared basins and aquifers.

2.3 URBAN WATER SUPPLY

Ghana is in a period of rapid urbanization. Forty-four percent of the 18.9 million people live in urban areas, and almost half of Ghana's 8.3 million urban residents live in the country's largest cities – Accra and Kumasi. Migration from rural areas to towns and cities is driving urban growth. If growth rates of the 1990$_s$ persist, the urban population will reach 14 million by 2015, at which point half of Ghana's population will be living in towns and cities.

The rate of urbanization outstrips current levels of urban water supply. GWCL currently operates 82 urban systems with an average daily output of 572,012 m^3/day as against a daily demand of 1,049,306 m^3/day. Water is rationed to many consumers with only a few customers able to get 24-hour supply. In the peri-urban areas and the densely populated poor urban areas customers receive supplies once a week or none at all.

Among the urban poor, water can be a critical resource in short supply. Nationally, the Ghana Demographic and Housing Survey found that only four out of ten respondents (41.4%) living in urban areas had piped water in their homes and a similar number (42.6%) purchased water form a public tap or neighbour's residence. The Ghana Living Standards Survey, Round 4 (GLSS4) reported that approximately forty percent (40%) of urban families were relying on neighbours and vendors for their water. With rapid expansion of new housing developments, often ahead of utility services, more and more urban residents will depend on vendors and tanker services, at costs far in excess of utility rates. Additionally, the urban centres are the focus of Ghana's industrial and commercial activities many of which rely on adequate and reliable water supplies for efficient production.

Most of the water supply systems were built over 30 years ago. The yields from supply sources are thus no longer able to meet current demand. In addition, the variability of rainfall has increased and dry season shortages are becoming more pronounced.

The quality of water resources are increasingly being degraded as a result of agricultural, housing, commercial, industrial and mining activities. Treatment costs are therefore increasing.

The other key challenges facing the urban sub-sector include:

- the urgent need for improved management in operations and maintenance of water supply
- low-service quality and tariffs not linked to levels of service
- difficulty in setting tariffs to recover costs in view of high levels of wastage (high levels of unaccounted for water, over 50%)
- inadequate revenue and investment, in large part the result of overage facilities

The GoG is determined to halt the falling trends in water supply coverage and quality and resume a programme of expansion and improvement. This requires consistent high levels of investment from public and increasingly, private (local and foreign) sources.

Among the broad principles listed in Section 1.2.1, those of particular relevance to urban water supply are principles (i) – (v), (x) and (xii).

2.3.1 FOCUS AREA 1 - WATER SOURCES

CHALLENGES

The main challenges facing the urban water sub-sector in relation to water resources include:

(i) increasing and improving existing water sources, tapping new sources and managing catchments to eliminate or abate depletion and degradation of water resources;

(ii) meeting increasing demand within finite supplies; and

(iii) increasing degradation of water quality resulting in high treatment costs

POLICY OBJECTIVES

The objective for overcoming the above challenges is to:

(i) ensure water resources are planned and managed by appropriate agencies to make it available at all times for life and health.

POLICY MEASURES AND/OR ACTIONS

In order to meet the above objective, Government will:

(i) ensure effective conservation and protection of existing water sources; and
(ii) ensure that the land and water agencies that are responsible for river basin management fulfil their mandates;
(iii) ensure that alternative sources will be harnessed to meet present and future demand; and
(iv) ensure that due consideration be given to water harvesting as a source of water supply in building regulations.

2.3.2 FOCUS AREA 2 - IMPROVING ACCESS TO WATER

CHALLENGES

The main challenges of improving access to water in the urban sector include:

(i) rehabilitation and expansion of existing infrastructure;
(ii) achieving equity in access to water supply for peri-urban and urban poor to meet their basic needs at affordable cost;
(iii) improving operations and management; and
(iv) reducing the high level of physical losses.

POLICY OBJECTIVES

The objectives of meeting the above challenges are:

(i) to ensure sustainable financing of the infrastructure deficit to meet present and future demand; and

(ii) to improve management and operations.

POLICY MEASURES AND/OR ACTIONS

To achieve the above objective, Government will:

(i) introduce private sector participation in the operations and management of urban water supply

(ii) carry out rehabilitation and upgrading of reservoirs to restore and increase their capacities, where feasible, using appropriate means (e.g. dredging, raising spillway levels), and new ones built where required;

(iii) prioritise new investments in system extensions and expansion of bulk water production based on well-established criteria that include health factors; and

(iv) ensure that an equitable amount of investment resources are dedicated to extending services to low-income communities.

2.3.3 FOCUS AREA 3 - FINANCE

CHALLENGES

The main challenges of financing urban water supply include:

(i) reducing the consistent high non-revenue water;

(ii) paying exchange rate losses in the annual financial statements of GWCL, to reduce the debt burden;

(iii) improving the financial position of GWCL, to be able to attract funds for investment to rehabilitate and expand its infrastructure to meet growing demand;

(iv) gradually increasing tariffs to recover costs fully while paying attention to affordability, particularly of the poor;

(v) improving the management of the macro-economy to reduce inflation, exchange rate losses, and the depreciation of the cedi; and

(vi) improving the number of viable urban water supply systems

POLICY OBJECTIVES

The objective is;

(i) to ensure a financially viable utility and adequate funding levels to rehabilitate, improve and expand infrastructure, and also undertake operation and maintenance.

POLICY MEASURES AND/OR ACTIONS

To meet the challenges and objectives, Government will:

(i) ensure efficient asset management by GWCL (e.g. GWCL setting up a Depreciation Fund (for replacement of fixed assets), and a Sinking Fund (for expansion development);

(ii) identify and source the required financing and undertake the required extensions to extend coverage of the water supply system to the unserved urban population;

(iii) encourage the private sector to participate in the share-holding of the management of GWCL;

(iv) support PURC in ensuring that average water tariffs reflect the full efficient cost of water supply;

(v) ensure the timely payment of water bills by subvented organizations;

(vi) support GWCL in exploring the potential of mini-hydro power installations at main reservoirs (and water falls) to reduce cost

2.3.4 FOCUS AREA 4 - HYGIENE EDUCATION AND ENVIRONMENTAL SANITATION

CHALLENGE

The key challenge of hygiene education and environmental sanitation in urban water supply include:

(i) preventing pollution of water sources through indiscriminate discharge of wastes (solid/liquid) from domestic, commercial and industrial (mining) activities; and

(ii) sustaining GWCL's support to management of Accra Central Sewerage system.

POLICY OBJECTIVES

The objective is to;

(i) minimize the pollution of water sources from poor environmental sanitation services and thus contribute to improving the health of communities

POLICY MEASURES AND/OR ACTIONS

To meet the challenges and achieve the above objective Government will:

(i) maintain its Environmental Sanitation Policy and ensure the GWCL co-operates with local governments which have been given the responsibility for overall environmental sanitation including excreta disposal;

(ii) adhere to the policy of charging a percentage of the cost of drinking water supplied as fee for providing sanitation services by local governments.

2.3.5 FOCUS AREA 5 - PUBLIC PRIVATE PARTNERSHIPS

CHALLENGE

The key challenges include:

(i) creating an enabling environment for public-private partnerships in urban water supply, especially for extending supply to peri-urban areas;

(ii) ensuring viability of urban town systems

POLICY OBJECTIVES

The policy objectives for addressing the above challenges are;

(i) to promote private sector participation in investment and management of urban water supply as a means of mobilizing investment and improving overall efficiency; and

(ii) to encourage community ownership and local private sector participation.

POLICY MEASURES AND/OR ACTIONS

To achieve the above objectives, Government will:

(i) where feasible, enter into management contracts with private operators to manage the supply of water from source to consumer;

(ii) reduce arrears of payment of water bills through provision of incentives (e.g. charging interest on delayed payments by large consumers, pre-paid metering etc.); and

(iii) further lease the assets of GWCL to private operators to run for specific periods on conditions which promote efficiency in service, affordability of tariffs and profitability on investment.

(iv) reform the regulatory regime to allow for participation of private entrepreneurs.

2.3.6 FOCUS AREA 6 - CAPACITY BUILDING

CHALLENGES

The key challenges of capacity building include:

(i) rationalising manpower levels based on industry standards;

(ii) restructuring the Commercial Department of the company and building its capacity as a matter of urgency, at the district levels in particular; and

(iii) instituting capacity building in a holistic manner to cover organization and systems and not just staff training, especially for PSP environment.

POLICY OBJECTIVE

The policy objective is;

(i) to develop and strengthen human resources and institutional /operational capacities

POLICY MEASURE AND/OR ACTION

Government will therefore:

(i) support the review and update of operational guidelines on capacity building to ensure adequate capacities at all levels.

2.3.7 FOCUS AREA 7 - GOOD GOVERNANCE

CHALLENGE

The main challenge is:

(i) ensuring public accountability in GWCL operations; and
(ii) integrating women and gender sensitivity;

POLICY OBJECTIVE

The policy objective is:

(i) to ensure that existing regulations regarding participation, disclosure and procurement are adhered to.

POLICY MEASURES AND/OR ACTIONS

Government will therefore:

(i) ensure that public hearings provided under the PURC Act/Regulations are adhered to;
(ii) ensure that GWCL publishes its annual report and audited accounts as required by the Companies Code; and
(iii) ensure that delivery of GWCL services recognise the needs of the vulnerable and is gender-sensitive.

2.3.8 FOCUS AREA 8 - RESEARCH AND DEVELOPMENT

CHALLENGE

The main challenge of research and development in the urban water sub-sector is:

(i) ensuring availability of adequate data and appropriate technologies to support improved urban water supply in the face of increasing demand.

POLICY OBJECTIVE

(i) To ensure evidence-based decision making in provision of urban water.

POLICY MEASURES AND/OR ACTIONS

To improve research and development in support of decision-making, Government will:

(i) continue to strengthen and support the WRIS institutions to provide accurate and regular data about the water cycle;
(ii) support and build the capacities of the CSIR research institutes and University departments in the land and water sectors;
(iii) support local private sector entrepreneurs to produce equipment and instruments used in the water supply industry; and
(iv) support studies into alternative options for improving services to low-income areas and serving the poor more effectively.

2.3.9 FOCUS AREA 9 - MONITORING AND EVALUATION (M&E)

CHALLENGE

The main challenge is:

(i) institutionalizing M&E processes

POLICY OBJECTIVE

The policy objective in addressing this challenge is;

(i) to ensure that policies are implemented to achieve desired results of improving access and livelihoods.

POLICY MEASURES AND/OR ACTIONS

Government will therefore:

(i) support the development of appropriate sector indicators; and

(ii) ensure adequate support to institutions for carrying out M&E.

2.3.10 FOCUS AREA 10 - EMERGENCY AND EXTREME EVENTS

CHALLENGE

The key challenge is:

(i) effectively taking care of the increasing occurrences of water-related emergencies and extreme events.

POLICY OBJECTIVE

The policy objective is:

(i) to effectively mitigate the effects of droughts and floods and other water-related emergencies.

POLICY MEASURES AND/OR ACTIONS

In order to assure the preparedness of the urban water sub-sector in responding to extreme events and disasters, Government will:

(i) facilitate the development of Emergency Water Supplies Action Plan for each system in consultation with the relevant emergency services and critical consumers;

(ii) make every effort to facilitate the delivery of adequate quantity of water for public emergency event in the timeliest manner possible; and

(iii) make sure that water supplied for public emergency event takes precedence over supplies for domestic consumers while taking steps to prevent and reduce conflicts of demand and access.

2.3.11 FOCUS AREA 11 -PRO-POOR ISSUES

CHALLENGES

The main challenges of making the urban sector sensitive to pro-poor issues include:

(i) increasing tariffs to recover costs fully while paying attention to affordability, particularly by the poor

(ii) achieving equity in access to water supply for peri-urban and urban poor to meet their basic needs at affordable cost; and

(iii) understanding the needs of the poor and designing interventions to suit their supply and payment choices.

POLICY OBJECTIVE

The key objective in responding to urban-water issues affecting the poor is:

(i) to ensure improved and sustainable access to water by the poor for their basic needs.

POLICY MEASURES AND/OR ACTIONS

To achieve the above objective, Government will:

(i) adopt a tariff structure that provides an optimal benefit to consumers including low-income consumers;

(ii) encourage cooperation between private operators and small-scale independent providers, rather than grant exclusivity to either party, to facilitate adequate and affordable provision of safe drinking water to unserved and underserved areas;

(iii) establish a programme such as a Social Connection Fund to support the connection of low-income consumers to the network;

(iv) facilitate defining unserved zones and identity cost-effective alternatives for progressively extending services to these areas; and

(v) recognise the current roles of small-scale providers (secondary and tertiary) in the water supply chain and provide support where appropriate.

2.4 COMMUNITY WATER AND SANITATION

Ghana's long term plans outlined in the Ghana Poverty Reduction Strategy (GPRS) and other related development priorities, give focus to improved rural water supply, sanitation, health and, the control and eradication of water-borne diseases. A significant achievement of the last decade is the development of the appropriate institutional structure to implement the NCWSP. CWSA is now firmly established in all the 10 regions of the country and continues to facilitate and provide support to District Assemblies in executing water and sanitation facilities including project planning and procurement.

An underlying principle of the NCWSP is its emphasis on community ownership and management (COM), which entails effective community participation in the planning, implementation and management of the water and sanitation facilities in the belief that, as custodians, communities will ensure the sustainability of these systems. Water and Sanitation Boards (WSDBs) and Water and Sanitation Committees (WATSANs) have been established for all facilities and have been given some level of training to take care of their water and sanitation facilities. A necessary condition for promoting good health requires a change in behaviours and attitudes towards hygiene and so another important aspect of the NCWSP is to maximise health benefits by integrating water, sanitation and hygiene education/promotion (including hand washing) interventions.

All water and sanitation interventions must recognise and protect the specific needs and roles of women, men and children and the physically challenged. Both women (and girls) and men (and boys) use water in different ways and share the burden of collecting water disproportionately and mainstreaming gender issues and concerns are important considerations under the NCWSP. Women must be seen not only as beneficiaries and water

users, but also as water and waste managers and decision-makers. The role of women in the COM concept is crucial and must be fully operationalized.

The NCWSP has made some progress since its launch in 1994. Some of the achievements over the decade 1994 -2003 are: rehabilitation of over 3,683 boreholes and hand-dug wells (HDWs); construction of 3216 new bore-holes and water points; the assumption of responsibility for 113 small town piped water systems for community management and construction of over 8072 household & institutional latrines. These projects have had some impact on coverage with the national average rising from 30% in 1994 to 46.3% in 2003 for potable water and to 29% for improved sanitation. These were however far below the targets set.[2]

To sustain gains made and make accelerated progress to meet MDGs, the continued operation and use of existing facilities is critical. Sustaining the use and functioning of facilities at the community level depend not only on performance of WATSANs and WSDBs but a lot also on regular maintenance. Routine maintenance depends on the presence of area mechanics and small enterprises to provide these services. A critical aspect of the chain in maintenance services is the reliable supply of spare parts sustained by ready markets for the delivery of these goods and services.

The National Hand pump Spare Parts Network System, established in 2001 as part of the NCWSP, supports the supply chain for spares to meet of community needs within limits of cost. The distribution network is a public-private-partnership between CWSA and a network manager (private company), with regional distribution outlets that assures spares availability to districts and communities. Maintaining sufficient returns from sale of spares to sustain the distribution network remains a critical challenge.

Among the broad principles, those of particular relevance to the community water and sanitation sub-sector include principles (i) – (v), (viii) - (x) and (xiii) of Section 1.2.1

2.4.1 FOCUS AREA 1 - ACCESS TO POTABLE WATER

CHALLENGE

The key challenge of improving access to potable water to rural and small town communities is:

[2]The achievements are more elaborately presented in CWSA's SIP documents.

(i) achieving accelerated coverage and sustainability through community ownership and management.

POLICY OBJECTIVE

The policy objective for assuring sustainable provision of and access to potable water to rural communities and small towns is:

(i) to provide basic water and sanitation services for communities that will contribute towards the capital cost and ensure payment for normal operation, repair and replacement costs of their facilities, mindful of the need to ensure affordability, equity and fairness for the poor and vulnerable.

POLICY MEASURES AND/OR ACTIONS

In order to achieve the above objective, Government will:

(i) promote an equitable demand responsive approach where communities express demand by participating in making informed decisions on choices of services that fit their needs; and

(ii) support institutions responsible for providing information on ground-water occurrence and availability (quantity and quality).

2.4.2 FOCUS AREA 2 - DECENTRALISED DELIVERY OF WATER AND SANITATION SERVICES

CHALLENGES

The critical challenges include:

(i) decentralising the effective management of the delivery of water and sanitation services;

(ii) ensuring the sustained provision of interventions by DAs owing to their inadequate financial and institutional (including shortage of trained human resources) circumstances; and

(iii) ensuring the presence of good calibre private sector service providers at district level to support services.

POLICY OBJECTIVES

The objectives for meeting the above challenge are to;

(i) support DAs to meet their statutory obligations of providing services to communities within their jurisdictions; and

(ii) ensure sustainability through effective community ownership and management of facilities, active participation of women, public sector facilitation and private sector provision of goods and services.

POLICY MEASURES AND/OR ACTIONS

To achieve the above objective, Government will take the following measures and actions:

(i) support DAs to develop, and contribute to financing, District Water and Sanitation Plans (DWSPs) as a key requirement for participating in the NCWSP;

(ii) support District Assemblies to actively promote and market water and sanitation projects at the community level, with support from RWSTs;

(iii) ensure that District Assemblies and other agencies live up to the provisions of decentralization measures and create the required structures such as District Works Departments (DWDs);

(iv) build capacity at the community level for the provision of water and sanitation services; and

(v) support DAs in the monitoring and supervision of water and sanitation services; and

(vi) promote the establishment of relevant institutions at regional/district level for drinking and raw water quality assurance,

2.4.3 FOCUS AREA 3 - FINANCE

CHALLENGES

The main challenges of sustainable financing include;

(i) financing capital and operation and maintenance costs including low internally-generated funds to complement those provided by development partners;

(ii) setting tariffs to ensure the sustainability of operations

(iii) current leveraging of donor funds by GoG that has created an imbalance and a heavy dependence on funds from the country's development partners, creating doubts as to GoG commitment to meeting the sub-sector's goal

(iv) the problem of sustaining spare parts supply owing to inadequate involvement of the private sector.

POLICY OBJECTIVE

The key objective in addressing the above challenges is:

(i) to mobilize adequate financing in a sustainable fashion for scaling up delivery including an increase in local financing of investment.

POLICY MEASURES AND/OR ACTIONS

In order to achieve the objective Government will therefore:

(i) progressively increase its portion of public sector funding through greater budgetary allocations as will be indicated in the Strategic Investment Plan for the sub-sector.

(ii) facilitate and ensure that rural water development levy on payments for urban water is transferred for use in community water sub-sector (e.g. set up a Fund for the purpose);

(iii) encourage District Assemblies to dedicate a portion of their Common Fund to meet the contribution to the capital cost of water projects by poor and vulnerable communities;

(iv) leverage more grant/credit financing for the NCWSP; and

(v) provide guidelines on WSDBs as entities providing utility-services, and facilitate payment of bills by state institutions.

2.4.4 FOCUS AREA 4 - HYGIENE EDUCATION AND SANITATION (HES)

CHALLENGES

The key challenges facing the community water and sanitation sub-sector concerning HES include:

(i) ensuring change in behaviours and attitudes towards fundamental principles of hygiene

(ii) mainstreaming and highlighting sanitation activities under the NCWSP

POLICY OBJECTIVE

The policy objective in taking cognisance of the challenges is;

(i) to maximise health benefits through integration of water, sanitation and hygiene education interventions.

POLICY MEASURES AND/OR ACTIONS

In working towards achieving the above objectives, the Government will:

(i) support the integration of water, sanitation and hygiene education/promotion (including hand washing) interventions; and
(ii) ensure all water supply projects have budgets allocated to sanitation delivery and hygiene education to meet NCWSP requirements.

2.4.5 FOCUS AREA 5 - PUBLIC PRIVATE PARTNERSHIP

CHALLENGE

The main challenges include:

(i) attracting and protecting private investments in community water and sanitation services;
(ii) utilizing the potential of the private sector for preparation, implementation and O&M of water supply facilities and systems; and
(iii) ensuring private sector participation in managing parts supply chains in a sustainable manner.

POLICY OBJECTIVE

The objective is:

(i) to create the enabling environment that will aid the attraction of non-traditional sources of finance.

POLICY MEASURES AND/OR ACTIONS

Government will therefore:

(i) actively promote and protect the involvement of the local private sector in water delivery through arrangements that are beneficial to all stakeholders (operators, consumers and public entities); and

(ii) implement a scheme of tax incentives to private investors in community water and sanitation services.

2.4.6 FOCUS AREA 6 - CAPACITY BUILDING

CHALLENGES

The challenges of building adequate capacity for the CWS sub-sector include:

(i) building knowledge among sector practitioners to support the NCWSP;

(ii) instituting a continuous capacity building process for national agencies, regional, district and community level actors; and

(iii) improving the current low involvement of local private firms in the CWS sub-sector which affects installation and O&M.

POLICY OBJECTIVES

The policy objectives are to:

(i) build capacities of CWSA, DAs, and all key actors including DWSTs, NGOs, CBO, CSOs, WATSANs; and

(ii) enhance the capacity of local private sector to play a greater role in the delivery of goods and services.

POLICY MEASURES/ACTIONS

Government will therefore:

(i) enhance engagement of private sector and tertiary institutions in training of relevant water sector practitioners;

(ii) encourage and give support to the formation of joint-venture and other partnership arrangements between local and foreign firms to promote technology and know-how transfer; and

(iii) promote and support local manufacture of equipment.

(iv) build knowledge among sector practitioners to support the NCWSP; and

(v) support mechanisms that ensure sustained provision of post-installation capacity building to facility and system managers.

2.4.7 FOCUS AREA 7 - GENDER MAINSTREAMING AND GOOD GOVERNANCE

CHALLENGES

The principles of good governance in the CWS sub-sector include:

(i) adhering to the principle of integration of women and gender sensitivity; and

(ii) ensuring active involvement of women in decision making in promoting transparency and accountability.

POLICY OBJECTIVES

To meet the above challenges, the objectives will be;

(i) to ensure active participation of women as a tool for empowering them to take charge of water and sanitation issues at all levels; and

(ii) to ensure that there are transparent processes for accountability of managing and delivering the NCWSP.

POLICY MEASURES AND/OR ACTIONS

The key measures to be taken by Government include:

(i) empowering women through training at all levels to perform their roles in partnership with their male counterparts;

(ii) ensuring accountability and transparency through timely reporting and participatory discussion of results; and

(iii) facilitate effective coordination of the sector and harmonize DP activities and ensure collaboration particularly between the MWRWH and MLGRD.

2.4.8 FOCUS AREA 8 - RESEARCH AND DEVELOPMENT

CHALLENGES

The main challenge is;

(i) the need for a clearly defined and adequately funded research strategy that ensures continues knowledge sharing of "good practice" obtained from implementation of the NCWSP.

POLICY OBJECTIVE

The objective is;

(i) to promote generation, sharing and utilization of knowledge relevant to NCWSP

POLICY MEASURES AND/OR ACTIONS

Government will therefore take the following measures and actions:

(i) ensure the provision of funds for research on key issues affecting decentralised service delivery and management by community-level structures;

(ii) promote interaction and training networking activities that support the creation of effective partnerships among sector stakeholders; and

(iii) promote coordination of existing research as well dissemination to stakeholders.

2.4.9 FOCUS AREA 9 - OPERATION AND MAINTENANCE (O&M)

CHALLENGES

The main challenges of O&M include;

(i) sustaining O&M by communities to ensure continued use of facilities during useful-life of installed facilities;

(ii) assuring effective supply chain management for spare parts close to community users;

POLICY OBJECTIVE

The policy objective is to;

(i) promote sustained use of facilities through continual awareness creation on the benefits of routine and regular maintenance practices;

POLICY MEASURES AND/OR ACTIONS

To meet the above objective Government will:

(i) strengthen DAs with the required structures and capacity for supporting communities with O&M;
(ii) provide sufficient support to institutions that train pump mechanics, operators and managers of community and small town systems;
(iii) provide support to local equipment and machinery manufacturers, suppliers and distributors in a bid to sustain markets for spare parts; and
(iv) ensure that area mechanics are recognised as important partners in sustaining delivery of community water services and given adequate business development support.

2.4.10 FOCUS AREA 10 - MONITORING AND EVALUATION

CHALLENGES

The main challenge facing the CWS sub-sector regarding M&E is that of:

(i) institutionalizing a well-defined participatory M&E system for CWS that adequately informs government and all stakeholders of sector progress; and
(ii) strengthening the application of the M&E system at the DA level; and
(iii) ensuring compliance by donor- and NGO-assisted projects.

POLICY OBJECTIVE

(i) to provide evidence-based decision making and investments in community water and sanitation services.

POLICY MEASURES AND/OR ACTIONS

To meet the above objective Government will:

(i) set up a national M&E coordination group;

(ii) support the relevant agencies to define indicators for M&E and ensure implementation of a sector M&E plan and strategy;

(iii) support institutional strengthening of national-level agencies, DAs and lower-level structures in carrying out M&E;

(iv) support the establishment of mechanisms for DA- and community-level monitoring and assessment of functionality of systems and the reliability of mode of parts distribution and ability of communities to pay for spare parts; and

(iv) ensure that relevant agencies, at all levels, provide timely and reliable data and information for tracking sector progress and contributing to the annual GPRS update.

POLICY IMPLEMENTATION ARRANGEMENTS

This section provides an outline of the relevant policy implementation procedures and guidelines including institutional roles and responsibilities, standards, regulations, definitions and references (e.g. implementation manuals – project, district, community operational manuals – and established instruments of agencies).

The implementation of this policy in the medium term will follow the broad framework of GPRSII which recognises the critical and cross-cutting role of water in meeting basic human needs, promoting accelerated growth and good governance.

The Focus Areas discussed under Section 2 cover the main areas of water uses and services in Ghana. The Water Directorate of the Ministry of Water Resources, Works and Housing is responsible for developing the implementation plan for the whole policy, while sector agencies responsible for specific areas will develop implementation strategies and plans for delivering the relevant policy actions.

3.1 INSTITUTIONS - ROLES AND RESPONSIBILITIES

An important aspect of supporting the implementation of the National Water Policy is ensuring effective inter-institutional coordination and collaboration. This is achievable by identifying and defining the roles and responsibilities of the various institutions responsible for implementing and providing the necessary guidelines for various water uses and services as well as for environmental health and sanitation. The institutions responsible for various water uses and services are divided into "principal sector agencies" that deal with direct facilitation and implementation and "allied sector agencies" that play supporting roles including regulation and oversight.

3.1.1 OVERVIEW OF KEY WATER SECTOR INSTITUTIONS

The Ministry of Water Resources, Works and Housing (MWRWH) is the lead government institution responsible for water. The MWRWH's main focus is on overall water resources management and drinking water supply, while other sector ministries deal with sector-related water uses such as irrigation under Ministry of Food and Agriculture, fisheries under Ministry of Fisheries, hydro-power under Ministry of Energy and water transport under Ministry of Harbours and Railways.

The key agencies of MWRWH carrying out the ministry's water resources management and drinking water programmes are the WRC, GWCL and CWSA.

The WRC was established by the Water Resources Commission Act, 1996 (Act 522) to harmonize water resources management and related issues concerning all consumptive and non-consumptive uses of water in the country.

The Government of Ghana (GoG), in 1965, transformed the then Water Supply Division of MWRWH, which was responsible for water supply services, into a parastatal, the Ghana Water and Sewerage Corporation (GWSC). The Corporation was made responsible for the provision, distribution and conservation of both the urban and rural water supplies in Ghana for public, domestic and industrial purposes. In addition, it was made responsible for the establishment, operation and control of sewerage systems and given powers to control effluent discharges into water bodies, set standards including those for drinking water and set tariffs and charges for its services. GWSC was required to manage its affairs in accordance with practices obtained in public utility enterprises, and in particular to cause its functions to be carried out so as to ensure gradual improvement in its financial position. For the efficient management of its assets, it was required to set up and maintain a Depreciation Fund for replacement of fixed assets and a Sinking Fund for expansion and development. However, GWSC's operations have not been self-sustaining and it has relied on GoG to subsidise its operation and maintenance costs and to bear full responsibility for capital investments.

In order to focus on, and meet its commitment of reducing poverty in rural areas, the Government of Ghana formally launched the National Community Water and Sanitation Programme (NCWSP) in 1994 to address the problems of water and sanitation in rural communities and small towns. An underlying principle of the NCWSP is its emphasis on community ownership and management (COM), which entails effective community participation in the planning, implementation and management of the water and sanitation facilities in the belief that, as custodians, communities will ensure the sustainability of these systems.

In 1994, a Community Water and Sanitation Division (CWSD), was established within the GWSC to manage the NCWSP and cater solely for rural water and sanitation. In 1998, the Government transformed the CWSD into the Community Water and Sanitation Agency (CWSA) by Act 564, charged with coordinating and facilitating the implementation of the NCWSP in District Assemblies.

As part of policy measures to strengthen various State Owned Entreprises (SOEs), GWSC was converted to a limited liability company Ghana Water Company Limited, (GWCL) in 1999 to focus on urban water supply.

The following section summarise the key functions of principal water sector institutions and their roles:

i) The Ministry of Water Resources, Works and Housing (MWRWH) is the principal water sector ministry responsible for overall policy formulation, planning, coordination, collaboration, monitoring and evaluation of programmes for water supply and sanitation.

The Water Directorate of MWRWH is the focal point for coordination of the water and water-related sanitation sector for policy harmonization, sector-wide monitoring and evaluation of GPRS outcomes and MDG targets as well as coordination of foreign assistance.

ii) The Ministry of Local Government, Rural Development and Environment is responsible for implementing the Environmental Sanitation Policy including management and regulation of solid and liquid wastes by local government bodies viz. Metropolitan, Municipal and District Assemblies (DAs).

iii) The District Assembly is the basic unit of Government at the district level and is the statutory deliberative and legislative body for the determination of broad policy objectives of the development process within their jurisdictions. DAs are responsible for the planning, implementation, operation and maintenance of water and sanitation facilities and the legal owners of communal infrastructures in rural communities and small towns. The detailed functions and mandates of Metropolitan, Municipal and District Assemblies (DAs) are defined in Local Government Act, 1993 (Act 462) and establishment instruments ((Legislative Instruments) of the Assemblies

iv) The Water Resources Commission is responsible for the regulation and management of water resources and for the coordination of policies in relation to them, and provides a focal point in fostering coordination and collaboration among the various actors involved in the water resources sector. The responsibilities of the Commission are wide ranging and key responsibilities are set out in Water Resources Commission Act, 1996 (Act 522).

v) The Ghana Water Company Limited (GWCL) is responsible for overall planning, managing and implementation of urban water supply. Their roles, responsibilities and mandates are set in the Ghana Water Company Limited (GWCL) Act, 1999 (Act 461).

vi) The Community Water and Sanitation Agency (CWSA) of the MWRWH emerged from the Community Water and Sanitation Division of the Ghana Water and Sewerage Corporation (GWSC). CWSA is the lead facilitator of the rural water supply and sanitation sub-sector (rural communities and small towns), and is responsible for external liaison and co-ordination of the National Community Water and Sanitation Programme (NCWSP). The key functions of CWSA are set out in the Community Water and Sanitation Agency (CWSA) Act, 1998 (Act 564).

vii) The Ghana Irrigation Development Authority (GIDA) under the Ministry of Food and Agriculture (MOFA) was established in 1977 by SMCD 85 to replace the Irrigation Department which started as a purely Water and Soil Conservation Unit and later expanded into Irrigation and Reclamation. GIDA focuses mainly on water conservation and irrigation and is responsible for the development of the country's water resources for irrigated farming, livestock watering and supports fish culture in irrigation ponds and dams. GIDA dams also serve as sources of water for domestic supplies in many rural communities.

viii) The Ministry of Fisheries is responsible for fisheries and fish culture and regulates activities for both in-land water and marine fishing.

ix) The Ministry of Harbours and Railways is responsible for water transport and navigation and regulates activities within both in-land and coastal territory of Ghana.

x) The Ministry of Energy is responsible for water-for-energy and regulates the provision of hydro-power including its distribution.

xi) The Ministry of Health is responsible for policy formulation and implements its plans and programmes through the Ghana Health Service (GHS)

The allied institutions in the water sector and their roles are as follows:

xii) The Water Resources Information Services (WRIS) institutions i.e. the Hydrological Services Department, the Water Research Institute under the Council of Scientific and Industrial Research, and the Ghana Meteorological Agency. The WRIS institutions provide data and other water resources related information and services to support planning and decision making.

xiii) The Public Utilities Regulatory Commission regulates the standard of services including the quality of drinking water provided by the GWCL and also the tariff set by the

company for urban water supply. Other functions of PURC are provided in the Public Utilities Regulatory Commission (PURC) Act, 1997 (Act 538).

xiv) The role of the Environmental Protection Agency (EPA) covers among others protection of water resources and regulation of activities within catchment areas including setting effluent standards. The functions of EPA are set out in the Environmental Protection Agency (EPA) Act, 1994 (Act 490).

xv) The Ghana Standards Board is responsible for developing and setting quality standards drinking water including certification and other related uses.

xvi) The Town and Country Planning supports DAs in physical planning of towns and provides layouts of towns that give land-use and directs development of services like roads, drainage networks, electricity and water supply distribution lines. This is to guide DAs to regulate the grant of permits for various classes of buildings (housing, industrial, commercial, institutional) and control development.

xvii) The Ministry of Finance and Economic Planning (MOFEP) administers all public investments in water including negotiating for grants and loans.

xviii) The Ministry of Women and Children (MOWAC) is the lead agency responsible for implementing the National Gender and Children's policy launched in September 2004. The National Gender and Children's policy is the framework for gender equality issues. Policy issues on water that affect the well-being of women and children is within the mandate of MOWAC.

xix) The Parliamentary Committee on Works and Housing and the Parliament of Ghana provides legislative oversight of the water sector.

3.1.2 LEGAL AND REGULATORY FRAMEWORK

It is essential to provide clear legal and regulatory framework to facilitate effective implementation of policy objectives and actions such as:

- promulgation of a Legislative Instrument on technical standards, code of practice and inspection of equipment, by the relevant agencies;

- bye-laws and regulations for entities in charge of operating and managing services in DAs, approved by Regional Authorities and gazetted to provide legal recognition to such entities (e.g. WSDBs);
- clear mandates of the relevant water sector institutions concerning monitoring and enforcement of water standards for water quality.

As and when appropriate, the MWRWH shall recommend appropriate legislation to support policy implementation. These recommendations shall recognise customary and traditional laws, and practices in Ghana for water conservation, pollution control, protection of catchment areas and protection of fisheries and existing legal enactments such as the Water Resources Commission Act and previous ones such as The Rivers Ordinance (Cap 226 of 1903).

OWNERSHIP AND PROTECTION OF WATER RESOURCES IN GHANA

Water, as an essential natural resource, falls within the provisions of Article 269 of Ghana's Constitution, which seeks to protect water resources by setting up a Commission to regulate, manage and coordinate Government policies in relation to it. Section 12 of the Water Resources Commission Act (1996) stipulates that "the property in and control of all water resources is vested in the President on behalf of, and in trust for the people of Ghana". The vesting of the water resources in the President is to make water resources management consistent with general natural resources management in Ghana and the 1992 Constitution.

The principle implies that there is no private ownership of water in Ghana, but that the President, or anyone so authorised by him, may grant rights for water use. It also implies that with good governance and practice, the principle is expected to ensure that water allocation for various uses will be beneficial to the public interest and also for the greatest good of society. The WRC Act also provides for certain categories of water uses which are exempted from the requirement of prior permit. For instance, Section 13 (2) of the WRC Act provides for the use of water resources for the purpose of fighting fires, while Section 14 (1) states that "a person who has lawful access to water resources may abstract and use such water for domestic purposes".

3.1.3 STANDARDS AND REGULATION FOR WATER USES AND SERVICES

A. WATER RESOURCES MANAGEMENT

The WRC Act, 1996 (Act 552) conferred on the Water Resources Commission the mandate to enact regulations on water use. The Water Use Regulations, 2001 (L.I. 1692) provides procedures for allocating permits for various water uses including domestic, commercial, municipal, industrial, agricultural, power generation, water transportation, fisheries (aquaculture), environmental, recreational and under water (wood) harvesting.

B. URBAN WATER SERVICES

The operations of service providers in the urban sector shall be subject to the laws of the Government of Ghana regarding the provision of goods, services and works and shall follow defined standards and operation guidelines set by PURC, GSB and GWCL. These include the following:

- Certificates of Incorporation and Commencement of Business of GWCL
- Regulations of GWCL
- GWCL Performance Contracts
- GWCL Quarterly and Annual Reports
- GWCL Annual Corporate Budget
- GWCL Annual Operations and Maintenance Budget
- Strategic Investment Plan
- Private Sector Participation Contract Framework
- Urban Water Tariff Policy
- Tariff Schedules
- Specifications (for construction of boreholes and hand-dug wells, standards for small towns, designs for household and institutional latrines, and Terms of References for supply of goods, services and works pertaining to projects)
- Manuals and Guidelines on Operationalising and Implementing Projects

C. COMMUNITY WATER SERVICES

The operations of service providers and others under the NCWSP shall meet defined standards. In line with this, all actors – communities, WATSANs, WSDBs, DAs, CWSA/RWSTs, NGOs, private operators and others, shall ensure adequate self-regulation as well as subject themselves to external and peer monitoring and regulation.

The standards shall be defined in relevant CWSA manuals and guidelines (published from time to time) and include the following;

- CWSA Act, 1998 (Act 564)
- Strategic Investment Plan
- Specifications (for construction of boreholes and hand-dug wells, standards for small towns, designs for household and institutional latrines, and Terms of References for supply of goods, services and works pertaining to projects)
- CWSA Small Towns Guidelines
- Project Operational Manual (POM)
- District Operational Manual (DOM)
- Community Operational Manual (COM)
- MOM guidelines and strategies
- Project Implementation Plans
- Procurement Manual and Public Procurement Act 2003, Act 663 ,
- Corporate Plan,

D. WATER FOR FOOD PRODUCTION

D1. IRRIGATED AGRICULTURE

The Irrigation Development Authority Regulations, 1987 (L.I. 1350) provides procedures for managing irrigation projects including water management within such projects. GIDA's Technical Guidelines for Irrigated Agriculture, 2004, gives further details on how to effectively manage water

for Irrigation Agriculture including water supply, distribution and application management.

D2. FISHERIES AND AQUACULTURE

The Ministry of Fisheries created in 2004, is the line ministry responsible for fisheries and aquaculture including research and regulating activities in the sector both at national and community-level. The Fisheries Act, 2002 (Act 625) provides for development of the fishing industry and sustainable exploitation of fishery resources and related matters including regulations for aquaculture as well as correlating the fisheries sector with other water uses and environmental protection.

E. WATER FOR ENERGY (HYDRO-POWER)

The Ministry of Energy has the oversight responsibility for the energy sector and provides the guidelines for the management, production and use of all forms of energy. The Volta River Authority (VRA) established by the Volta River Development Act, 1961 (Act 46) is responsible for, among others, the generation of electricity by means of the water resources of the river Volta, and by other means and also for the administration of certain land adjacent to the Volta Lake. The Volta River Authority is responsible for the planning, development and management of the Volta river including the use of the Volta lake as a source of fish and means of transportation, among others.

F. WATER FOR TRANSPORT

The Ministry of Harbours and Railways have the oversight responsibility for inland-water and ocean transport of Ghana. The Ghana Maritime Authority Act, 2002 (Act 630) provides for regulating

and coordinating activities of the maritime industry. The Ghana Maritime Authority implements enactments on water-borne transport and navigation including those of in-land waterways.

The Volta Lake Transport Company (VLTC) operates the largest inland water way transport on the Volta Lake. The VLTC was created in 1970 as a subsidiary of the Volta River Authority (VRA) to operate as a public-carrier of all forms of water-borne transport for persons and freight as well as other forms of transport supplemental to the business of the company.

3.1.4 INTERFACING ISSUES

INTERFACE BETWEEN COMMUNITY-MANAGED SYSTEMS AND UTILITY-MANAGED URBAN WATER SUPPLIES

GWCL will operate within the supply areas currently covered by the 82 systems they own. There shall however be definite guidelines for small towns that may wish to exit from urban water management or enter into community-managed arrangements and vice versa. This is to ensure harmonisation in sector planning, proper targeting of subsidies and clear definition of roles of GWCL and CWSA/District Assemblies. These guidelines will bear in mind community aspirations as well as any contractual arrangements that may exist for the management of the urban water supply systems.

In addition, a number of issues shall be taken into account in developing the guidelines. These include:

- balancing the need to promote community management of small town systems with the benefits that are derived from economies of scale from GWCL management of urban water systems;
- ensuring the proper targeting of subsidies to those who actually need them, as the subsidy policies are different between the urban and rural/small town water supply; and
- ensuring that currently unprofitable urban systems that depended on cross-subsidies from other systems operated by GWCL are not dumped on to communities, with implications for future sustainability.

For this purposes, the MWRWH will periodically come out with parameters for determining which communities qualify to go under which management arrangement.

These parameters shall take account of:

- the population size and water demand;
- complexity of the water supply system
- the potential supply area of the GWCL system
- the possibility of GCWL entering into an arrangement with a local private operator to work in collaboration with the community to manage the system;
- GWCL will provide operation guidelines that are in conformity with industry standards and meet performance targets;
- the level of subsidies that will be required to operate and maintain the system and the prospects for long-term financial sustainability

To minimise duplication of investments and to ensure that the targets set in CWSA's Strategic Investment Plan are attained, CWSA and GWCL will work closely together with a view to developing a mechanism where communities can benefit from water supplied through GWCL managed systems whilst still employing the principles of community management at the retail end of the service. This shall be relevant where water supply can play a key role in creating growth points and supporting economic development in a small town or a rural community that is able and willing to pay the tariffs of GWCL.

3.1.5 FINANCING ARRANGEMENTS

A key factor in ensuring success in achieving the objectives of the National Water Policy is the availability of timely and adequate funding. The financing framework for water resources management, urban water supply and community water and sanitation services are outlined as part of policy measures and actions in Section 2.

In relation to policy actions under Section 2.3.3, the Strategic Investment Plan (SIP) of CWSA presents the financing requirements of the National Community Water and Sanitation Programme (NCWSP). The SIP outlines arrangements for financing and mobilising resources from all stakeholders, for achieving set targets. The financing arrangements have implications for all stakeholders, i.e. households, communities, DAs, Government of Ghana and Development Partners.

The preparation and/or revision of the SIP should, therefore engage all key stakeholders in a transparent process. The Ministry of Water Resources, Works and Housing in consultation with sector stakeholders and the Ministry of Finance and Economic Planning will from time to time determine the financing arrangements and this will inform the update of the SIP accordingly.

3.1.6 COORDINATION AND COLLABORATION

SECTOR-WIDE APPROACH TO IMPLEMENTATION

The Government of Ghana, through its various agencies, will follow a sector-wide (programme) approach (SWAP) to implementing policies, plans and programmes in the water sector. This is to ensure effective harmonisation in implementation and monitoring approaches, and reduce the overall cost of delivery of plans and programmes.

The objective of this approach is to strengthen linkages between sector programmes and the country-wide planning, budgeting and evaluation processes at all levels - communities, districts and the central agencies. Development partners will be given a participatory role in the definition of policies and in monitoring the impact of sector-wide programming.

The Ministry of Water Resources, Works and Housing, in consultation with Development Partners, is taking appropriate steps towards implementing this approach. The ministry and its agencies will co-operate and work with NGOs, civil society, professional, trade, service and other organisations, whose purpose is to promote and strengthen developments in community water and sanitation delivery.

The implementation of the NCWSP has, so far, relied on a project approach in which each development partner financed specific projects or focused on and 'adopted' preferred region(s). These projects employed different implementation approaches with the result that sector norms and procedures that have evolved over a decade of practice are sometimes ignored and CWSA's facilitative role are often side-stepped. The situation also affected the true state of sector progress as reporting was not unified and affected overall central planning and GoG's allocation of investments to the sector. Harmonising approaches in the water sector will eliminate such weaknesses.

Definitions

ADVOCACY
Creating awareness and getting the commitment of decision-makers for a social cause.

AGRICULTURAL WATER USE
The use of water to enhance agriculture output by means of irrigation or the use of water to sustain livestock.

AQUIFER
Underground layers of porous rock that are saturated with water from above or from structures sloping towards it.

COASTAL ZONE
Lands and water adjacent to the coasts that exert an influence on the uses of the sea and its ecology, or whose uses and ecology are affected by the sea. The term "coastal zone" means the coastal water (including the lands therein and there-under) and the adjacent shore-lands (including the waters therein and there-under).

COMMUNITY
Includes groups of individuals living in close proximity to each other and/or other social groups, grassroots entrepreneurs or associations able to identify a need and come together to access project funds. The size of the community varies depending on the type of project intervention and includes people from all areas that make direct use of the project.

COMMUNITY CONTRIBUTION
The amount of valued resources in cash, in-kind and labour, as well as time and local knowledge, committed by community members toward planning, implementing and managing interventions for improving water and sanitation services. The level of community contribution reflects both initial investment costs and recurrent costs.

DISTRICT ASSEMBLY (ALSO MUNICIPAL OR METROPOLITAN ASSEMBLY)
A local government or authority organized in accordance with the Constitution and laws of Ghana, and the Local Government Act, 1993 (Act 462), which is responsible for planning for and implementing all development projects within its jurisdiction and regulated by the appropriate act of parliament in the form of legislative instruments.

DEGRADATION OF WATER QUALITY
A decrease in quality, which makes water unsuitable for specific uses.

DEMAND RESPONSIVE APPROACH

The provision of water and sanitation services to meet specific locality requirements based on effective demand by communities actively seeking to improve these services.

DOMESTIC WATER USE

The use of water for household purposes and personal hygiene.

DOMESTIC WASTEWATER

Wastewater principally derived from households, business buildings, institutions, etc., which may or may not contain surface runoff, groundwater or storm water.

DRINKING WATER QUALITY

A term used to describe the chemical, physical, and biological characteristics of water, usually in respect to its suitability for drinking. The level of water quality is based upon the evaluation of measured quantities and parameters, which then are compared to water quality standards, objectives or criteria.

EFFECTIVE DEMAND

The demand by communities for improved water and sanitation services based on their informed decisions on, levels of service, location of facilities, implications of participating in planning and implementation, capital costs, O&M and cost-recovery.

EFFLUENT DISCHARGE

This is fluid such as municipal sewage and industrial liquid waste (untreated, partially treated, or completely treated), which flows out of a treatment plant, sewer, or industrial outlet or domestical outlets. Generally it refers to wastes discharged into surface waters.

EFFLUENT STANDARD

This is the maximum amount of specific pollutants allowable in wastewater discharged by an industrial facility or wastewater treatment plant. The standards are set for individual pollutants and apply across all industrial categories.

ENVIRONMENTAL FLOW

Flows, or characteristics of the flow pattern, which are either protected or created for an environmental purpose and provided within a river, wetland or coastal zone to maintain ecosystems and their benefits where there are competing water uses and where flows are regulated.

ENVIRONMENTAL MANAGEMENT

The processes and systems for dealing with the environmental effects of developments.

ENVIRONMENTAL IMPACT ASSESSMENT

Detailed studies, which predict the effects of a development project on the environment and provide plans for mitigation of adverse impacts.

ENVIRONMENTAL SANITATION

This is concerned with the on-going management, operation and maintenance of the removal and disposal of liquid and solid wastes from all premises and their surroundings and their disposal in a way that it does not cause harm to either people's health or the environment.

ENVIRONMENTAL WATER USE

The release of maintenance of certain level of flow of water for the purpose of maintaining specific environmental and recreational purposes.

FOOD SECURITY

There is food security when all persons obtain a nutritionally adequate, culturally acceptable, affordable and adequate quality of diet at all times through local non-emergency sources. when they have safe and nutritious food available to them at all times.

FISHERIES WATER USE

The release or maintenance of a certain flow of water for the purpose of meeting the needs of aquaculture or fisheries activities.

GENDER-SENSITIVITY AND MAINSTREAMING

Is the process of ensuring that policy formulation, project development and monitoring are gender sensitive by integrating and institutionalizing gender issues in policies, plans and programmes.

GROUND WATER

Subsurface water in a saturation zone below the surface of the earth often in naturally occurring reservoirs in permeable rock strata or aquifer; the source for wells and natural springs.

GOOD GOVERNANCE

The adherence to subsidiarity for assuring transparent and accountable decision-making in planning of investments, implementation and management of water and sanitation services involving ALL stakeholders.

GROUND-WATER RECHARGE

Inflow of water to aquifer systems from the surface through infiltration of precipitation and its movement to the water table.

GUINEA WORM DISEASE

This an infestation contracted by drinking stagnant water contaminated with Guinea worm larvae that can mature inside a human's abdomen until the worm emerges through the person's skin.

HEALTH EDUCATION
The teaching of ways of developing and teaching healthy practices as part of health promotion.

HYGIENE EDUCATION
The process of developing and teaching hygienic practices as part of health promotion including providing teaching and learning materials as well as supporting information, education and communication for awareness creation on the effects of poor hygiene. The aim is for behaviour change for maintaining personal hygiene and cleanliness of facilities and surroundings.

INDUSTRIAL USE
The use of water by major non-municipal industrial establishments.

INTEGRATED WATER RESOURCES MANAGEMENT (IWRM)
Integrated water resources management is based on the perception of water as an integral part of the ecosystem and other natural resources, and a social and economic good, whose quantity and quality determine the nature of its utilization.

LEVEL OF SERVICE
A specified type of water and sanitation service appropriate for meeting the health and welfare (including environmental considerations) needs of targeted communities. The services are provided relying on effective demand by communities.

MUNICIPAL WATER USE
The diversion, treatment, and distribution of water by a water supply utility to satisfy a range of domestic and non-domestic demands within a given municipality.

MUNICIPAL WASTEWATER
A mixture of domestic wastewater, effluents from commercial and industrial establishments, and urban runoff.

POLLUTANT
This is generally any substance when introduced into the environment in excess quantities of the natural background concentrations, adversely affects the usefulness of a resource or the health of humans, animals, or ecosystems.

POLLUTION
In relation to a water resource, this means any direct or indirect alteration of the physical, thermal, chemical or biological properties of the water resource so as to make it less fit for any beneficial purpose for which it is or may reasonably be expected to be used; or harmful to the welfare, health or safety of human beings, any aquatic or non-aquatic property or the environment.

POTABLE WATER
Water of specified quality standard meant for drinking purposes. Also safe water.

POWER GENERATION WATER USE
The use of hydraulic potential of water for the generation of power by diverting it through penstocks and turbines.

RAINWATER HARVESTING
The collection of rainwater for use in growing crops and for other human use. It's done through run-off harvesting or roof water harvesting.

RAW WATER QUALITY
A term used to describe the chemical, physical, and biological characteristics of untreated water, usually in respect to its suitability for a particular purpose.

RECREATIONAL WATER USE
The use of water for activities such as swimming, boat surfing etc.

RIPARIAN HABITAT
The dynamic complex of plant, animal and micro-organism communities and their non-living environment adjacent to and associated with a watercourse.

RIVER BASIN
The land area drained by a river and its tributaries or the land area surrounding one river from its headwaters to its mouth.

RURAL COMMUNITY
Community with a population of less than 5,000 people or any other figure which the Minister of Water Resources, Works and Housing, in consultation with appropriate government agencies, may from time to time declare by publication in the Gazette and the mass media.

SANITATION
Control of physical factors in the human environment that could harm development, health, or survival.
In reference to services provided by CWSA and GWCL sanitation is limited to hygiene education and disposal of faecal matter as they affect water usage.

SINKING FUND
Money accumulated on a regular basis in a separate custodial account that is used to redeem debt securities or preferred stock issues. Also a sinking fund may be established to finance the anticipated future purchase of capital assets.

SMALL TOWN
A community that is not rural but is a small urban community, with population between 2,000 to 30,000 that has been mandated by the relevant authority (ies) to manage its own water and sanitation systems.

SPRING
Water emerging from beneath the surface of the ground otherwise than as a result of drilling or excavation operations.

STRATEGIC ENVIRONMENTAL ASSESSMENT
Systematic evaluation of the environmental effects of policies, plans and programmes.

PRINCIPLE OF SUBSIDIARITY
The management of water and sanitation services at the lowest appropriate level, with users involved in the planning and implementation of projects.

SURFACE WATER
Water that sits or flows above the earth, including lakes, oceans, rivers, streams, wetlands and in reservoirs constructed by man.

SUSTAINABILITY (OF SYSTEMS)
This refers to the continued use of water and sanitation services, including the maintenance, throughout the design life of the system, of structural and functional condition of installed facilities, preservation of prescribed quantity and quality of water, taste and colour, and reliable follow-up support (O&M) from service providers and beneficiaries.

SECTOR-WIDE APPPROACH
Sector-Wide Approach (SWAp) denotes processes followed for harmonizing sector policies, plans and programmes for developing and delivering water and sanitation employing common procedures for prioritizing and implementing projects including institutional arrangements and oversight responsibilities, funds flow and its management consistent with principles, policies, investment plans, strategies and instruments adopted or enacted by the Ministry of Water Resources, Works and Housing, sector agencies, and development partners, and endorsed by Government of Ghana.

WATER DEMAND
The quantity and quality of water consumers (including communities) will choose to consume at a given price (including valued resources such as time or labour given in exchange of service)

WATER RESOURCES
A general term encompassing the concepts of availability (the location, spatial distribution, or natural fluctuations of water); accessibility (given availability, whether consumers can have water or can afford water in adequate quantities); and quality (whether accessed water is free of contaminants and safe for consumption).

WATER AND SANITATION COMMITTEE

A committee established for planning and implementation oversight of water and sanitation systems constructed for a community.

WATER AND SANITATION DEVELOPMENT BOARD

A board established by bye-laws of a District Assembly for providing day-to-day management and oversight of a water supply system and sanitation services within a small town with responsibility for setting tariffs and collecting fees from water consumers and customers within its operational area.

WATER AS "SOCIAL AND ECONOMIC GOOD"

Water provides for meeting a number of societal objectives including improving health, poverty alleviation and employment generation. Water has also an economic value depending upon users and the use to which it is put as in domestic supplies, industry, agriculture, and hydro-power. There are also environmental benefits as in preserving wild-life, flora and fauna. For sustainable use (including meeting demands of future generations) all these dimensions of water-use need to be balanced.

WATER SUPPLY RELIABILITY

The degree of certainty with which supplies, in addition to its quantity and quality for specified uses. Reliability standards vary among use classes: for reasons of health and sanitation water supply reliability is set higher for domestic supplies than for other uses.

WATER TRANSPORTATION

The use of water for navigation relying on the buoyancy capability of water.

WATER USE

Taking advantage of water, either as a physical substance or as a water body, to meet any demand.

WETLANDS

Wetlands are seasonally or permanently waterlogged areas and generally include swamps, marshes, flood lands, estuaries, delta, mangroves, lagoons etc.

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