# Environmental and Social Management Framework (ESMF) for the Sustainable Rural Water and Sanitation Project-

## Additional Financing

## ADDENDUM REPORT
## Final

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## Table of Contents



### List of Figures

## List of Tables



## List of Plates

**List of Acronyms**

| | |
|---|---|
| CSF- | Community Safeguards Facilitator |
| CSIR- | Council for Scientific and Industrial Research |
| CWSA- | Community Water and Sanitation Agency |
| DA- | District Assembly |
| DEHU | District Environmental Health Unit |
| DEMC- | District Environmental Management Committee |
| DSO- | District Safeguard Officer |
| DWST- | District Water and Sanitation Team |
| EIA | Environmental Impact Assessment |
| EIS | Environmental Impact Statement |
| EPA- | Environmental Protection Agency |
| ESMF- | Environmental and Social Management Framework |
| GoG- | Government of Ghana |
| GIPC- | Ghana Investment Promotion Centre |
| GPRS- | Ghana Poverty Reduction Strategy |
| GWCL- | Ghana Water Company Limited |
| IDA- | International Development Agency |
| LI- | Legislative Instrument |
| PER | Preliminary Environmental Report |
| NCWSP | National Community Water and Sanitation Program |
| NDPC- | National Development Planning Commission |
| NGO- | Non- Governmental Organisation |
| RPF | Resettlement Policy Framework |
| RSO- | Regional Safeguard Officer |
| RWST- | Regional Water and Sanitation Team |
| SEA- | Strategic Environmental Assessment |
| WATSAN- | Water and Sanitation Committee |
| WRC- | Water Resources Commission |
| WRI- | Water Research Institute |
| WSDB- | Water and Sanitation Development Board |
| WSMT- | Water and Sanitation Management Team |

## Executive summary

### Introduction

The Community Water and Sanitation Agency (CWSA) is seeking additional funding from the International Development Agency (IDA) to support the continued implementation of the Sustainable Rural Water and Sanitation (SRWSP) to provide both water supply and sanitation facilities in rural communities and small towns in six (6) regions of Ghana.

The beneficiary regions comprise Brong-Ahafo, Central, Northern, Western, Upper East and Upper West Regions. It is expected that, the additional funds will successfully bring the SRWSP to closure in these same six regions.

### Proposed Project Development Objectives and Components

The objectives of the additional support as in the main Project, are to: (i) expand access to water and sanitation in rural and small town communities; and (ii) strengthen local capacity to manage rural and small town water and sanitation facilities and to ensure their sustainability. The specific objectives include:

- Provide safe drinking water to about 600,000 people across six target regions by constructing, boreholes and piped schemes.
- Create the enabling environment through the promotion of CLTS among the above water beneficiaries and financially and operationally assist with the development of their own improved toilet facilities so that people eschew open defecation.
- Effect behavioral change among the target population through sustained and effective campaigns on proper disposal of fecal waste, proper hand washing and other sound hygiene practices.
- Build capacity of national, regional, district and community level water and sanitation actors and practitioners for the implementation, supervision, monitoring and evaluation of sub projects.

The project components include: (i) Community Water & Sanitation Facilities; (ii) Institutional Strengthening; and (iii) Program Management.

### The purpose of the Addendum ESMF

This addendum document summarizes and incorporates lessons learnt from the implementation of the SRWSP safeguards to enhance the environmental and social performance under the additional financing. Generally, this ESMF provides an impact identification framework to enable screening of sub-projects and the institution of measures to address adverse environmental and social impacts. General guidelines for mitigation, monitoring and institutional measures to be taken during construction and operation of the sub- projects are given.

### Legal and administrative framework

The project is governed by the following legal and administrative provisions:

- Community Water and Sanitation Agency (CWSA Act 1998, Act 564);
- Water Resources Commission (WRC Act 1996, Act 522);
- Environmental Protection Agency (EPA Act 1994, Act 490);
- Ghana Water Company Limited (GWCL Act, 1993 Act 461); and
- Local Government Act, 1993 Act 462.

**Description of potential impacts**

The main impacts of the sub- projects viz. (1) community water supply, (2) sanitation facilities, and (3) small towns water supply, from construction to decommissioning are summarized as follows:

*Community water supply*

Borehole siting

- Exposed land surfaces from cleared vegetation may induce erosion from rain events;
- Badly managed work activity/ site within community to pose public safety risks;
- Conflicts with incompatible activities and land uses eg. Sanitary points, graveyards, etc;
- Use of local labour and therefore locals earn income; and
- Destruction of property- farm crops.

Borehole drilling and pump installation

- Natural contamination from excess Chloride, Iron, Manganese, Fluoride;
- Improper disposal of waste oils;
- Groundwater source becomes vulnerable to contamination during development of hole;
- Groundwater contamination from backfilling of unsuccessful holes;
- Erosion may be induced or enhanced by vegetation clearing;
- Hazards from handling heavy equipment, including noise, lifting heavy materials etc;
- Poor housekeeping leading to stagnant water as breeding grounds for insect vectors (causing malaria etc);
- Movement of heavy trucks and equipment and road safety; and
- Destruction of property- farm crops, structures etc.

Borehole operation and maintenance

- Inadequate provision and inappropriate method of wastewater disposal;
- Congregation of livestock near water point and risk of nitrate pollution from their droppings;
- Public health risks may arise from system failure for example, from openings on platforms which will leak water to contaminate groundwater source;
- Increase in wastewater generation hence water pools to breed insect vectors of disease eg. Mosquitoes;
- Inappropriate location close to sanitary sites;
- Natural contamination from Iron, Manganese, Fluoride etc in certain localities eg Fluoride in Upper East Region as a public health risk;
- The facility will occupy some space in the community. It may either be private or public land for which compensation may be required;
- Availability and accessibility of pump parts; and
- Depletion of groundwater resource.

Decommissioning

- Groundwater is vulnerable to pollution from backfill material, and during fishing of construction parts;
- Workers exposed to noise, lifting of heavy materials etc; and
- Movement of heavy trucks and equipment, traffic safety.

*Household and Institution Latrines (sanitation facilities)*

Construction

- Handling of cement and other dusty materials;
- Exposed land surfaces from cleared vegetation may induce erosion from rain events;
- Badly managed work activity/ site within community;
- Use of local labour and therefore income earning;
- Hazards from handling equipment, lifting heavy materials etc;
- Poor housekeeping leading to stagnant water as breeding grounds for insect vectors (causing malaria etc); and
- Movement of trucks and equipment and road safety.

Operation and Maintenance

- Public health risks may arise from system failure for example, from excessive visits, and high sludge build up requiring removal and disposal; and
- Badly managed facility hence odour problems.

*Small towns water supply*

Pipelines and Reservoir Construction

- Exposed land surfaces from cleared vegetation may induce erosion from rain events;
- Accidental spillage of fuel and lubricants;
- Badly managed work activity/ site within community;
- Conflicts with incompatible activities and land uses; and properties along the Right-of- Ways requiring compensation;
- Use of local labour and therefore income earning;
- Hazards from handling heavy equipment including noise, lifting heavy materials etc;
- Poor housekeeping leading to stagnant water as breeding grounds for insect vectors (causing malaria etc); and
- Movement of heavy trucks and equipment and road safety.

Operation and Maintenance

- Inadequate provision for, and inappropriate manner of wastewater disposal;
- Public health risks may arise from system failure for example, from pipe ruptures and pressure differences may lead to contamination of supply;
- Increase in wastewater generation and poor management leading pools to breed insect vectors of disease eg. Mosquitoes; and
- The facility will occupy some space in the community. It may either be private or public land for which compensation may be required.

Decommissioning

- Improper disposal of spoils, waste oils etc;
- Workers exposed to noise, lifting of heavy materials etc; and
- Movement of heavy trucks and equipment, traffic safety.

**Summary of major mitigation measures**

The cost of mitigation will be determined by the contractors and supervising engineers. The full list of mitigation measures are provided in the main body of the report. However, some examples of mitigation measures for some main impacts are mentioned below:

Wastewater management

- Make provisions for increased wastewater production in the planning and management of wastewater disposal facilities.
- Ensure satisfactory provisions for disposal of wastewater at both the water point and from households. All boreholes and standpipes will have concrete well pads with drainage channels to carry wastewater into soakaways at 7m from the borehole or standpipe. Soakaways must be functional and in areas of high water table, alternative means should be found e.g. horizontal filtering systems to nearest natural drains.
- Households will construct soakaway pits to dispose of wastewater.
- WATSANs to pass by- laws to govern household wastewater disposal.
- Re- use of wastewater for livestock watering especially in water scarce communities of the Northern and Upper Regions and for gardening in the southern parts of the country.

Siting conflicts

- Sanitation facilities located downhill of water points (>30m) and pits above groundwater table (>5m)

Public health concerns

- Regularly monitor groundwater quality for contamination (both natural and anthropogenic).
- Livestock watering points should be located downstream of water points.
- Timely implementation of repair and replacement works on pumps and other related parts of the system.
- Avoid siting of boreholes in and around sanitary facilities, such as latrines and drainage systems, and areas of increased pollution risks (e.g. waste dumps, cemeteries). All water points must be located upstream of sanitary and other polluting facilities (>30m upstream).
- Practice safe water handling to avoid contamination especially water stored for household use.
- Community involvement in leak detection through awareness creation effort.
- Ensure that sufficient pressure levels are maintained in pipelines at all times.
- Regularly monitor water quality at various points in the network for contamination.
- Regular disinfection of lines to maintain safe supply.
- Timely implementation of repair and replacement works on pipelines, pumps, water intakes, and other related parts of the system.
- Avoid water pipeline alignments in and around sanitary facilities, such as sewerage and drainage systems, and areas of increased pollution risks (e.g. waste dump, graveyards).

**Capacity building requirements**

The SRWSP has already built some capacity of the key institutions and individuals to successfully implement various safeguards requirements. For the additional financing, the capacity of the CWSA project staff (head office and regional) would be further enhanced to provide guidance, and ensure adequate environmental supervision of the sub- projects. Refresher training workshops will be organized for key stakeholders such as RWST, DWST/DAs, consultants/contractors and opinion leaders

from beneficiary communities on the provisions of the ESMF/RPF. All new stakeholders will need some orientation if they are to appreciate conditions which trigger environmental action.

It is proposed that environmental management issues are included in discussions at all Project review/ evaluation workshops to further sensitize stakeholders and to assess environmental progress especially with regard to the effectiveness of implementation of mitigation measures.

**Stakeholder engagement**

In preparing this report, all the CWSA regional directors including the Chief Executive and some regional safeguard officers met to collectively review the SRWSP safeguard activities and devise strategies to address possible challenges during the additional financing phase. The meeting concluded that:

- There must be adequate budget to facilitate safeguard implementation including hiring qualified consultants to prepare safeguard implementation documents particularly, ARAPs for implementation. RSOs should not be tasked to prepare safeguard documents but rather review and assist to implement/ monitor implementation;
- Safeguard officers to work in teams rather than centred on individuals. The RSOs and DSOs would provide the required leadership; and
- Further training for all involved in the project to appreciate safeguard issues and implementation requirements.

In addition, two key communities both in the Brong Ahafo Region namely Krobo in the Techiman North District and Akoma/ Brohoho in the Nkoranza South Municipal were interviewed/ consulted to update the ESMF. The region was strategically chosen because it is transitory both ecologically and culturally, and therefore to a large extent, is representative of all the other five project regions. The design and format for the community engagements were gender sensitive therefore women and men were interacted with separately. The overall impression of the SRWSP was very positive and the communities agreed that:

*The project has been immensely beneficial to the womenfolk in ways such as:*

- Easy access to clean potable water all year round for drinking, cooking etc
- Enhanced economic and social development in the community
- Provided employment opportunities; and
- Contributed to improved relationships with their spouses and therefore enhanced the quality of their marriages

*Given the opportunity, they would advise the women in any new community being introduced to the project to:*

- Fully participate in project meetings especially at the planning stages
- To be actively involved in all project committees
- Avoid national politics in the planning of the projects

**Some observations from the SRWSP safeguards Implementation**

The key SRWSP safeguards implementation challenges and some observations to guide the activities under the additional funding are described as follows:

- Regional safeguard focal persons have been appointed in all the six project regions by the CWSA, and likewise project districts. Many of these persons were officially engaged and therefore received formal notification of their appointment. At the community level, they were informally picked from their water and sanitation management teams.

- Over 1500 persons were trained on safeguard issues at the district and regional levels during the SRWSP and to lesser extent at community level during the project period. Training has been formal such as at national meetings, regional workshops as well as informal through project site meetings and inspections.
- Awareness of safeguard issues is high at all levels but commitments vary depending on leadership at the regional level which usually drives the process. The gap between safeguards awareness and implementation is widest in the regions where there has been inconsistency in the tenure of the RSOs. The same holds true for the districts where there have been frequent interruptions.
- Record keeping at the regions seems satisfactory but less satisfactory at the districts. Again this has a lot to do with the frequent movement of safeguard focal persons
- The districts have struggled to provide a complete list of project affected persons and properties and for that matter, prepare environmental reports as well as the ARAPs. The water consultants would have been most helpful but unfortunately there was very little man- time available in their budget for safeguard issues. The total time allocated to the environmental specialist on the consultant's team was only one man month for the 3 years plus project duration.
- The project did not experience major disruptive environmental and social challenges in all the regions to merit urgent interventions. The regional set up had enough capacity to solve all the challenges which evolved from the project such as on land acquisition and physical dangers posed by exposed trenches etc.
- The change in personnel at the district was a key implementation challenge. Similar situation occurred at the regional level also. Most times, the handing over process was not properly done leaving the incoming officer stranded.
- Generally, documentation has not been satisfactory. Even though there was so much safeguard activity and information, unfortunately these have not been adequately captured in reports. The project provided very simple reporting formats to assist safeguard officers to do so but was not fully used. This has been a serious safeguard implementation challenge.

**Recommendations and Suggestions for compliance with ESMF**

- As was practiced in one of the regions, it is better to work in teams rather than individual RSOs and DSOs to be responsible for the entire safeguard implementation effort. Teamwork is vital to the success of safeguard implementation especially at the districts where staff turnover is high.
- Archiving of documents (especially Land acquisition, List of PAPs etc) must be taken seriously by districts. The RWSTs should ensure they also keep copies safely as back up.
- Going forward, the knowledge and momentum must be maintained, possibly in support of the upcoming projects. Environmental and social safeguards are an integral part of projects and further provide a measure of project success. A network of trained safeguard 'practitioners' must be kept and encouraged to ensure that projects follow best practice.
- Sufficient time must be allocated in project design for environmental specialists within engineering consultancy teams, to be able to fully participate in safeguard implementation activities.

# 1.0 INTRODUCTION

## 1.1 Background

The Government of Ghana is seeking support from the World Bank to continue with the implementation of the Sustainable Rural Water and Sanitation Project (SRWSP), which is managed by the Community Water and Sanitation Agency (CWSA). The SRWSP aims at providing safe water, improved sanitation and hygiene (WASH) services to rural communities and small towns.

The SRWSP is complementary to the National Community Water and Sanitation Programme (NCWSP) which is also consistent with Ghana's National Water Policy (NWP) that has three focal areas namely Water Resource Management, Urban Water Supply and Community Water and Sanitation (CWS). The guiding principles of the NWP includes among other things:

- The principle of fundamental right of all people without discrimination to safe and adequate water to meet basic human needs;
- The principle of meeting the social needs for water as a priority while recognizing the economic value of water and the goods and services it provides;
- The principle of improving equity and gender sensitivity;
- The principle of recognizing water as a finite and vulnerable resource, given its multiple uses;
- 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; and
- The principle of polluter pays to serve as disincentive to uncontrolled discharge of pollutants into the environment.

The water policy also makes specific provisions for safe water supply and sanitation to the populace, and in the rural areas it recognizes this as a cornerstone to the country's development. In this respect it re- affirms the need to:

- Strengthen and ensure sustainability of ongoing community management, operation and maintenance of facilities, in order to safeguard investment already made;
- Strengthen District Assemblies to assume a central role in supporting community management of facilities; and
- Increase the stake of and clearly define the role of the formal and informal private sector in the provision of water and sanitation for the rural populace and ensure the facilitatory role of government agencies.

Ghana's Water Vision for 2025 is to among other objectives, promote an environmentally sound development of all water resources in Ghana through an efficient and effective management system.

## 1.2 Purpose of the ESMF

An Environmental and Social Management Framework (ESMF) document was prepared and implemented under the SRWSP. This Addendum document includes lessons learnt from the implementation of the SRWSP ESMF and will ensure that all the sub project activities under the additional financing still abide by sound environmental and social management principles.

The purpose of the ESMF is to provide a general impact identification framework to assist communities screen sub- projects and institute measures to address adverse environmental and social impacts. Specific information on country- wide sub- project locations, land requirements, local communities, bio- physical features etc are not known at this stage of preparing the environmental report. General guidelines for mitigation, monitoring and institutional measures to be taken during construction and operation of the sub- projects are also provided.

## 2.0 BRIEF DESCRIPTION OF THE PROPOSED PROJECTS UNDER THE ADDITIONAL FINANCING

The Community Water and Sanitation Agency (CWSA) is seeking additional financing to supplement funding already obtained from the International Development Agency (IDA) to provide water and sanitation projects for over 600,000 beneficiaries in rural communities and small towns in six (6) regions. The Project was dubbed Sustainable Rural Water and Sanitation Project and supported the continued implementation of the National Community Water and Sanitation Program (NCWSP), which is managed by the Community Water and Sanitation Agency (CWSA).

The NCWSP aims at providing safe water, improved sanitation and hygiene (WASH) services to rural communities and small towns that will contribute to the capital cost and pay for the full operational and maintenance cost of these services. The main principles of the program are

- demand responsiveness;
- community ownership and management (COM);
- private sector provision of goods and services; and
- public sector facilitation.

The sub projects under this additional financing will be implemented in the same six (6) regions comprising the Brong-Ahafo, Central, Northern, Western, Upper East and Upper West Regions (see **Figure 1**) and will build upon the achievements of the SRWSP in these regions.

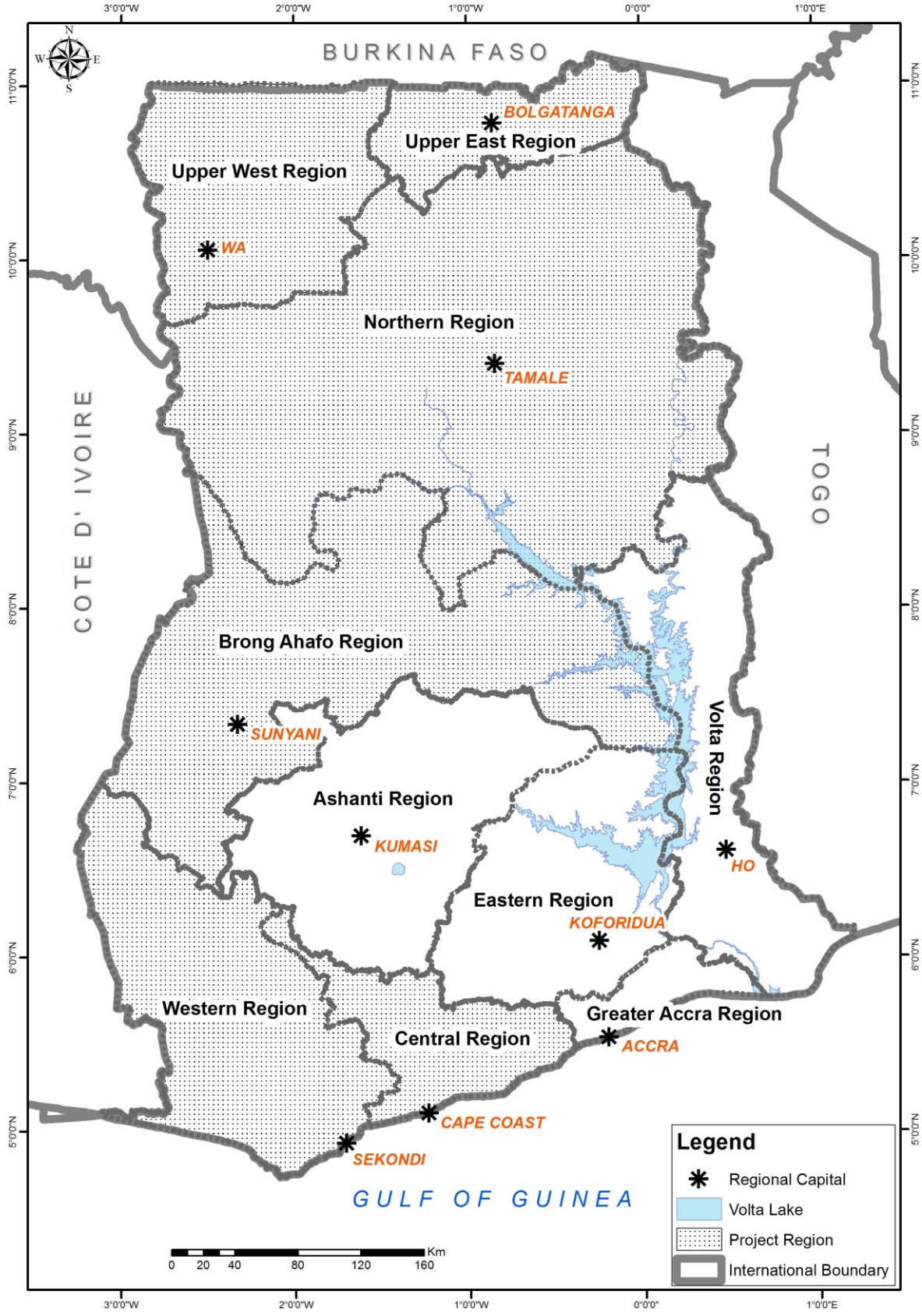


**Figure 1 Map of Ghana showing the Project Regions**

## 2.1 Proposed Project Development Objectives

The objectives of the project are to:

i. expand access to water and sanitation in rural and small town communities; and
ii. strengthen local capacity to manage rural and small town water and sanitation facilities and to ensure their sustainability.

The specific objectives include:

- Provide safe drinking water to about 600,000 people across six target regions by constructing, boreholes and piped schemes.
- Create the enabling environment through the promotion of CLTS among the above water beneficiaries and financially and operationally assist with the development of their own improved toilet facilities so that people eschew open defecation.
- Effect behavioral change among the target population through sustained and effective campaigns on proper disposal of fecal waste, proper hand washing and other sound hygiene practices.
- Build capacity of national, regional, district and community level water and sanitation actors and practitioners for the implementation, supervision, monitoring and evaluation of sub projects.

## 2.2 Project Components

The proposed project would have three main components and these are:

1. Rural and Small Town Water Supply;
2. Community Integrated Sanitation & Hygiene Promotion and Construction Support; and
3. Institutional Strengthening and Project Management.

### 2.2.1 Rural and Small Town Water Supply

This component which is 64.4% of project costs, would provide resources for the improvement of access to water supply services through the construction and rehabilitation of onsite and piped water supply systems in 5 types of context;

- *Provision of boreholes fitted with hand pump* for rural communities (i.e. communities with population not exceeding 1,200).
- *Provision of medium-sized systems based on mechanized boreholes to medium-sized small towns **(i.e.*** for communities with population between 1,200 and 5,000).
- *Provision of large sized systems based on mechanized borehole for* larger sized small towns (i.e. communities with population exceeding 5,000).
- *Rehabilitation* of good yielding broken down orphan boreholes in rural communities and small towns.
- *Rehabilitation* of non-optimal performing water supply systems in small towns transferred from the Ghana Water Company Limited (GWCL).

The project is yet to confirm the extent of sub- project activity in the respective beneficiary regions.

2.2.2 Community Integrated Sanitation & Hygiene Promotion and Construction Support

This component would provide resources to:

- Support communities within the Project Districts to reach Open defecation free status. The project will generate demand in households to invest in sanitation facilities through the promotion of the Community Led Total Sanitation (CLTS), and hygiene education. The component will provide output based hardware subsidies & facilitate access to credits via a revolving fund to households for the construction of on-site household latrines (equipped with urinal and hand washing facility) and support for the procurement of waste disposal cans, once the demand is created. The component will support financial assistance to communities reaching open defecation free.
- Support the construction of institutional latrines for schools and health facilities located within project area.
- Works supervision and assistance with promotion and education campaign

This component aims at accelerating the pace to the attainment of the MDGs for sanitation by targeting whole communities and small towns within the project area to reach open defecation free status. The project will build capacity of beneficiary DAs to replicate the promotion in other communities that may not directly benefit from the project and provide for the training of local masons in building adequate toilet facilities. Communities will be assisted to select from a range of model designs of latrines incorporating urinal and hand washing facilities. The target groups for this component are dwellers in rural communities and small towns and are mainly peasant farmers. The component will improve quality of life through the reduction of excreta-related diseases.

2.2.3 Institutional Strengthening and Project Management

This component will provide financing and resources under its sub-components, to support orientation, capacity building and technical assistance as well as logistics to streamline roles and strengthen capacities of key stakeholders in the water and sanitation sector for effective monitoring and supervision of the project. The orientation is considered critical to ensure that the local Government hierarchy consisting of the Ministry of Local Government and Rural Development {with its technical units, the Local Government Services (LGS), the Environmental Health and sanitation Directorate (EHSD), and the National Coordinating Office (NCO), the Regional Coordinating Councils (RCCs) and particularly the District Assemblies (with its technical units DWDs and the DWSTs) fully assume ownership of the project and improve coordinating relationship with CWSA.

Technical Assistance (TA)

This sub-component will provide related strengthening of these institutions and the WSDBs and WATSANs at the community level to maximize efficiency and effectiveness. Support will include workshops and clinics in monitoring, procurement, project management and reporting, contracting arrangements, supervision, financial management, environmental and

social Accountability, and tariff setting. The project will finance the establishment and/or strengthening of District Works Department in the target regions. Logistics will also be provided to facilitate effective supervision and M&E at the community level by supporting the Water and Sanitation Committees (WATSANs) and Water and Sanitation Development Boards (WSDBs). Support will also be provided to the private sector through capacity building clinics to consolidate training programs implemented under the STWSS for provision of goods and services.

Establishment of Sector Information System for Monitoring and Evaluation

This sub-component will provide support for the establishment of a robust Sector Information System to facilitate information sharing, coordination and enhance M&E roles among the water and sanitation actors. The system will provide information database on quality services, functionality of water supply and sanitation systems, collated investments (including that from GOG, donors, NGOs, and the private sector) on water and sanitation facilities and O&M funding requirements vis-à-vis tariff levels within communities. The financing will support the review, improvement and completion of the District Monitoring and Evaluation System (DiMES) for use in the DAs, CWSA, RCC and the WATSANs/WSDBs.

Project Coordination and Management

This sub-component will support the incremental costs incurred by CWSA to coordinate and facilitate the DAs in the implementation of the project as well as training and logistic needs of the agency's staff at the Head and Regional offices of CWSA. In particular, it will support coordination by CWSA's Regional offices of DAs and RCCs, and coordination by CWSA Head Office of Ministry of Local Government to ensure compliance with internal financial and procurement controls, banking arrangements and contract awarding and supervision processes. A reporting system will be established to ensure CWSA regional offices who are members of the RCCs report regularly to the RCCs and in particularly the Regional Minister to facilitate project implementation controls by the RCCs. CWSA will also be assisted to organize procurement, tariff setting and M&E clinics for the DAs, RCCs, and the WATSANs/WSDBs.

## 3.0 RELEVANT NATIONAL LEGAL, REGULATORY AND ADMINISTRATIVE FRAMEWORKS

The relevant institutions are given below and their respective legislative support and mandates are subsequently described:

- Community Water and Sanitation Agency (CWSA);
- Water Resources Commission (WRC);
- Environmental Protection Agency (EPA);
- Ghana Water Company Limited (GWCL); and
- Regional Coordinating Council, Municipal and District Assemblies under Local Government.

Community Water and Sanitation Agency (CWSA Act 1998, Act 564)

The national water and sanitation programme was launched in 1994 and the Community Water and Sanitation Agency Act, Act 564 was promulgated by Parliament in 1998. The CWSA became an autonomous public institution responsible for the facilitation of safe water and related sanitation delivery to rural communities and small towns in Ghana.

Water Resources Commission (WRC Act 1996, Act 522)

The Act establishes and mandates the WRC as the sole body responsible for the regulation and management of water resources and for the coordination of any policy in relation to them. The WRC does this through the granting of water rights to potential users such as DAs, GWCL, CWSA, Communities and so on. The WRC also grants Drilling License to contractors engaged in borehole drilling activities. The WRC has developed a National Water Policy to give support to the use of environmental assessments to assist in the protection and conservation of water resources and encourages its application to all water usage. The Policy also promotes the rational allocation of water resources through Water Demand Management (WDM), which offers the possibility of improving the efficiency and sustainability of the use of water resources, taking into account economic, social, environmental, regional and national considerations.

WRC Drilling License and Groundwater Development Regulations, 2006 (LI 1827)

The Regulations instruct that no person shall construct a well for the abstraction, or monitoring of groundwater or for research if that person does not have a drilling licence granted in accordance with these Regulations. The drilling licence shall be obtained from the Commission on application. Where the drilling activity consists of not more than five wells, the drilling contractor shall within sixty days of the cessation of the construction activity, submit a complete copy of the well records to the Commission. Where the drilling activity consists of more than five wells, the drilling contractor shall within ninety days of the cessation of the construction activity, submit a complete copy of the well records to the Commission.
The well records shall be in relation to (a) wells which are successfully drilled, (b) dry wells, and (c) defective wells.

The well records shall be submitted together with *(a)* information on the development of the wells; *(b)* results of pumping tests conducted; *(c)* information on water quality; and *(d)* field test results.

Environmental Protection Agency Act 1994, (Act 490)

This Act establishes and mandates the EPA to seek and request information on any undertaking that in the opinion of the Agency can have adverse environmental effects and to instruct the proponent to take necessary measures to prevent the adverse impacts. The Environmental Assessment Regulations 1999, LI 1652 list activities for which an environmental assessment is mandatory. The Regulations describe the procedures to be followed to obtain permits for both existing and proposed undertakings through the conduct of environmental impact assessments and preparation of environmental management plans. The Environmental Assessment (Amendment) Regulations 2002, LI 1703 establishes the charges to be taken by the EPA for review and issuance of a Permit.

Ghana Water Company Limited (GWCL Act, 1993 Act 461)

The GWCL Act mandates the GWCL to provide, distribute and conserve the supply of water to urban settlements in Ghana for public, domestic and industrial purposes.

Local Government Act, 1993 Act 462

This Act establishes and regulates the local government system and gives authority to the RCC and the District Assembly to exercise political and administrative power in the Regions and District, provide guidance, give direction to, and supervise all other administrative authorities in the regions and district respectively. The Assembly is mandated to initiate programmes for the development of basic infrastructure and provide municipal works and services as well as be responsible for the development, improvement and management of human settlements and the environment in the district.

**Table 1 Summary of legal, regulatory and administrative framework**

| No | Institution | Act of Parliament | Mandate |
|---|---|---|---|
| 1. | Comm Water and Sanitation Agency | CWSA Act, 1998 Act 564 | Facilitate safe water and sanitation delivery to rural communities and small towns |
| 2. | Water Resources Commission | WRC Act, 1996 Act 522<br>LI 2006 (1827) | Regulate and manage the use of water resources of Ghana. Give license for drilling and development of groundwater |
| 3. | Environmental Protection Agency | EPA Act, 1994 Act 490<br>EAR 1999, LI 1652; EAR (Amendment) 2002, LI 1703 | Ensure compliance with laid down environmental procedures in the planning and execution of development projects |
| 4 | Ghana Water Company Limited | GWCL Act, 1993 Act 461 | Provide, distribute, and conserve water supply to urban Ghana. |
| 5 | District Assemblies | Local Government Act, 1993 Act 462 | Exercise political and administrative authority in the district and responsible for overall development |
| 6 | Regional Coordinating Council | Local Government Act, 1993 Act 462; Local Government Service Act, 2003 Act 656 | Exercise political and administrative authority in the region and responsible for overall development of the region |

## 4.0 CRITERIA FOR SCREENING SUB- PROJECTS

This document provides the framework for an environmentally sustainable development and implementation of the sub- projects for the additional financing under the Sustainable Rural Water and Sanitation Project, and is described as an Addendum Environmental and Social Management Framework (ESMF). The EPA will give approval for the small towns water supply sub-projects while the District Assembly through the District Environmental Health Unit will give approval for the sanitation sub-projects. Each small town water supply system will be permitted separately by the EPA.

The small town water supply sub-projects will therefore undergo environmental scrutiny at the Regional EPA level since District EPA Offices are yet to be established. The RWST, DAs, and communities should therefore (assisted by Technical Assistance) understand the permitting process as well as appreciate the importance of identifying and recognizing adverse impacts at the early stages of sub- project implementation.

The sanitation sub-project components will undergo environmental scrutiny at the district level. Selected sites for such sanitation projects will have to obtain clearance from the respective District Environmental Health Officers.

### 4.1 Description of potential impacts and their environmental significance

The sub- projects comprise borehole water supply, household and institutional latrines, and small town water supply schemes. The potential impacts from construction to decommissioning activities are described below. An indication of environmental significance is given in three main groups comprising:

- Minor (standard construction/ operational practices to address such impacts)
- Moderate (standard construction practices to take care of these impacts but mitigation measures may also be required)
- Major (alternatives required otherwise mitigation measures to be adopted with strict monitoring protocols)

The above classification used in the tables is largely subjective, and may be overruled by site specific considerations. The EPA description of environmentally sensitive/ critical areas within which a new development could have significant effect are also described in the **Annex 1** to provide further basis for the screening process. The potential impact of water source development for the small towns water supply projects that is boreholes, are assumed to be largely similar to the community issues and are therefore not repeated.

**Table 2 Potential impacts from community borehole water supply**

| | Potential Impact/ Issue | Environmental Significance |
|---|---|---|
| **Borehole siting** | | |
| Solid waste | Waste from bush clearing and removal of trees | Minor |
| Water pollution | Sediment laden runoff from exposed areas mainly due to vegetation clearing during siting;<br>Improper disposal of sanitary waste from work camps | Minor;<br>Minor |
| Soil erosion | Exposed land surfaces from cleared vegetation may induce erosion from rain events | Moderate |
| Loss of flora/ fauna | Due to the removal of vegetation | Minor |
| Public safety | Badly managed work activity/ site within community | Moderate |
| Land use | Conflicts with incompatible activities and land uses eg. Sanitary points. Burial grounds are scattered in communities in Upper Region posing additional siting challenge | Major |
| Socio- economic | Use of local labour and therefore income earning;<br>Destruction of property- farm crops, structures;<br>Community convenience vs Consultant's technical judgment for chosen site | Moderate;<br>Moderate;<br>Minor |
| **Borehole drilling and pump installation** | | |
| Air pollution | Dust emission from movement of heavy trucks and equipment | Minor |
| Water quality and pollution | Natural contamination from excess Chloride, Iron, Manganese, Fluoride;<br>Improper disposal of waste oils;<br>Improper disposal of sanitary waste from work camps;<br>Sediment laden runoff;<br>Groundwater source becomes vulnerable to contamination during development of hole.<br>Groundwater contamination from backfilling of unsuccessful holes | Moderate;<br>Moderate;<br>Minor;<br>Minor;<br>Major;<br>Moderate |
| Noise pollution | From the movement of heavy vehicles and use of heavy equipment | Minor |
| Soil erosion and contamination | Erosion may be induced or enhanced by vegetation clearing;<br>Accidental spillage of fuel and lubricants | Moderate;<br>Minor |
| Loss of flora/ fauna | From vegetation clearance | Minor |
| Raw material usage | PVC pipes, sand, stones from local and external sources (quarries etc) | Minor |
| Occupational health and safety | Hazards from handling heavy equipment, including noise, ergonometric stress, lifting heavy materials etc | Moderate |
| Public health and safety | Poor housekeeping leading to stagnant water as breeding grounds for insect vectors (causing malaria etc)<br>Movement of heavy trucks and equipment and road safety | Moderate;<br>Moderate |
| Nuisance and disturbance of community life | Visual intrusion by heavy trucks and equipment;<br>Disruption of social activities;<br>Destruction of property- farm crops, structures etc | Minor;<br>Minor;<br>Moderate |

| | | |
|---|---|---|
| **Borehole operation and maintenance** | | |
| Water pollution | Inadequate provision and inappropriate method of wastewater disposal | Major |
| | Congregation of livestock near water point and risk of nitrate pollution from their droppings | Moderate |
| Public nuisance and health risks | Public health risks may arise from system failure for example, from openings on platforms which will leak water to contaminate groundwater source;<br>Post source contamination eg during storage in households<br>Contamination from inappropriate pump parts eg Iron;<br>Increase in wastewater generation hence ponding to breed insect vectors of disease eg. Mosquitoes;<br>Inappropriate location close to sanitary sites;<br>Natural contamination from Iron, Manganese, Fluoride etc in certain localities eg Fluoride in Upper East Region | Moderate;<br>Major;<br>Minor;<br>Moderate;<br>Moderate;<br>Major |
| Occupational health and safety | Hazards from handling heavy equipment, including noise, ergonometric stress, lifting heavy materials etc | Minor |
| Land take | The facility will occupy some space in the community. It may either be private or public land for which compensation may be required | Moderate |
| Raw material usage | Availability of, and accessibility to pump parts;<br>Over- exploitation of water resource leading to depletion | Moderate;<br>Minor |
| Poor resource conservation practices | Depletion of groundwater resource | Moderate |
| **Borehole decommissioning** | | |
| Water pollution | Groundwater is vulnerable to pollution from backfill material, and during fishing of construction parts | Moderate |
| Air pollution | Movement of heavy trucks and machinery | Minor |
| Solid waste disposal | Pump parts to be suitably disposed of | Minor |
| Occupational health and safety | Workers exposed to noise, lifting of heavy materials etc | Moderate |
| Public health and safety | Movement of heavy trucks and equipment, traffic safety, | Moderate |

**Table 3 Potential impacts from provision of household or institutional latrines**

| | Potential Impact | Environmental Significance |
|---|---|---|
| **Latrine construction** | | |
| Air pollution | Handling of cement and other dusty materials | Minor |
| Solid waste | Waste from bush clearing and removal of trees | Minor |
| Water pollution | Sediment laden runoff from exposed areas mainly due to vegetation clearing during siting and construction;<br>Groundwater becomes vulnerable to contamination for areas with high water table;<br>Improper disposal of sanitary waste from workers | Minor;<br>Minor;<br>Minor |
| Soil erosion | Exposed land surfaces from cleared vegetation may induce erosion from rain events | Moderate |
| Loss of flora/ fauna | Due to the removal of vegetation | Minor |
| Public safety | Badly managed work activity/ site within community | Moderate |
| Land use | Conflicts with incompatible activities and land uses eg. Water points | Major |
| Socio- economic | Use of local labour and therefore income earning;<br>Community convenience vs consultant's technical judgement | Moderate;<br>Minor |
| Raw material usage | PVC pipes, sand, stones, bamboo, thatch from local and external sources (quarries etc) | Minor |
| Occupational health and safety | Hazards from handling equipment, ergonometric stress, lifting heavy materials etc | Moderate |
| Public health and safety | Poor housekeeping leading to stagnant water as breeding grounds for insect vectors (causing malaria etc)<br>Movement of trucks and equipment and road safety | Moderate;<br>Moderate |
| Nuisance and disturbance of community life | Visual intrusion by delivery trucks (sand, stones) and equipment<br>Disruption of social (or school) activities | Minor;<br>Minor |
| **Latrine operation and maintenance** | | |
| Water pollution | Depth of pit within or close to local water table will expose groundwater to faecal contamination. This may be exceptional but serious | Major |
| Public nuisance and health risks- eg. Odour , sludge | Public health risks may arise from system failure for example, from excessive visits, and high sludge build up requiring removal and disposal | Moderate |
| Occupational health and safety | Hazards from handling materials and equipment | Minor |
| **Latrine decommissioning** | | |
| Water pollution | Groundwater is vulnerable to pollution from – backfill material | Moderate |
| Air pollution | Movement of trucks and machinery | Minor |
| Solid waste disposal | Spoils (eg concrete) to be suitably disposed of | Minor |
| Occupational health and safety | Workers exposed to lifting of heavy materials etc; odour, risk of infection | Moderate |
| Public health and safety | Movement of heavy trucks and equipment, traffic safety | Moderate |

**Table 4 Potential impacts from small town water supply**

| | Potential Impact | Environmental Significance |
|---|---|---|
| **Laying of pipelines and reservoir construction** | | |
| Solid waste | Waste from bush clearing and removal of trees | Minor |
| Water pollution | Sediment laden runoff from exposed areas mainly due to vegetation clearing during construction;<br>Improper disposal of waste oils;<br>Improper disposal of sanitary waste from work camps | Minor |
| Soil erosion an contamination | Exposed land surfaces from cleared vegetation may induce erosion from rain events;<br>Accidental spillage of fuel and lubricants | Moderate;<br>Moderate |
| Loss of flora/ fauna | Due to the removal of vegetation | Minor |
| Public safety | Badly managed work activity/ site within community | Moderate |
| Land use and RoWs | Conflicts with incompatible activities and land uses; and properties along the Right-of- Ways requiring compensation | Moderate |
| Socio- economic | Use of local labour and therefore income earning;<br>Community convenience Vs consultant's technical judgement for facility location | Moderate;<br>Minor |
| Air pollution | Dust emission from movement of heavy trucks and equipment | Minor |
| Raw material usage | PVC pipes, sand, stones from local and external sources (quarries etc) | Minor |
| Occupational health and safety | Hazards from handling heavy equipment including noise, ergonometric stress, lifting heavy materials etc | Moderate |
| Public health and safety | Poor housekeeping leading stagnant water as breeding grounds for insect vectors (causing malaria etc)<br>Movement of heavy trucks and equipment and road safety | Moderate;<br>Moderate |
| Nuisance and disturbance of community life | Visual intrusion by heavy trucks and equipment<br>Disruption of social activities<br>Relocation of temporary structures- kiosks etc | Minor;<br>Minor;<br>Minor |
| **Pipelines and Reservoirs: Operation and maintenance** | | |
| Water pollution | Inadequate provision for, and inappropriate manner of wastewater disposal | Major |
| Public nuisance and health risks | Public health risks may arise from system failure for example, from pipe ruptures and pressure differences may lead to contamination of supply;<br>Increase in wastewater generation and poor management leading pools to breed insect vectors of disease eg. Mosquitoes<br>Poor post- source water handling leading to contamination | Moderate;<br>Moderate;<br>Moderate |
| Occupational health and safety | Hazards from handling equipment, lifting heavy materials etc | Same |
| Land take | The facility will occupy some space in the community. It may either be private or public land for which compensation may be required | Moderate |
| **Pipelines and Reservoirs: Decommissioning** | | |
| Water pollution | Improper disposal of spoils, waste oils etc | Moderate |
| Air pollution | Movement of heavy trucks and machinery | Minor |
| Solid waste disposal | Reservoir parts to be suitably disposed of. Pipelines may remain in ground | Minor |
| Occupational health and safety | Workers exposed to noise, lifting of heavy materials etc | Moderate |
| Public health and safety | Movement of heavy trucks and equipment, traffic safety, | Moderate |

## 5.0 GUIDELINES FOR MITIGATION

All significant adverse impacts are considered for mitigation. Specific measures have been suggested in this section when practicable. The mitigation options considered include project modification, provision of alternatives, and pollution control. In cases where the effectiveness of the mitigation is uncertain, monitoring programmes will be introduced.

The mitigation measures are applied to significant impacts arising from construction, operation and maintenance, and decommissioning aspects of the various sub- projects. The contractor is responsible for determining the cost of mitigation and to include such cost as part of its total cost for executing the works. The CWSA is therefore required to include the mitigation measures as part of the Request for Proposal (RFP) or tender documents for contractors to enable them quote appropriately.

The mitigation measures which have considered previous implementation experiences are presented in the following tables:

**Table 5 Mitigation measures for community borehole water supply (moderate to major impacts)**

| **Sub-project: Borehole water supply (construction phase)** | |
|---|---|
| Type of impact | Description of mitigation measures |
| Water quality and pollution | • Temporary storage of sanitary and cleaning wastes in containers. Disposal should occur at waste dumps.<br>• No solid waste, fuels or oils should be discharged into water flows.<br>• Where works take place adjacent to a watercourse, temporary sediment barriers should be installed on slopes to prevent silt from entering the watercourse.<br>• Cuttings from drilling operations should be used for backfilling of unsuccessful holes and avoid use of foreign materials |
| Soil erosion | • Application of appropriate erosion-protection measures, in particular where it concerns works on slopes and in stream beddings.<br>• Drilling and other works should not be executed under aggressive weather conditions (rains, strong winds). |
| Public health problems | • Adequate sanitary facilities should be available for workers and open range defecation should not be countenanced.<br>• Contractors should use local labour as much as possible and where available. Imported workers should be provided with proper housing, including sanitary facilities.<br>• Labourers should adhere to basic rules with regard to protection of public health, including most importantly hygiene and disease (HIV) prevention.<br>• All land depressions and disturbed areas at work sites should be filled to avoid water ponding which could breed mosquitoes. |
| Safety of the public | • WATSANs will inform local communities early of the construction programme.<br>• Contractors will provide security barriers to ward off inquisitive persons and animals from work sites. |
| Visual intrusion | • Adequate organisation and maintenance of construction sites through good housekeeping.<br>• Restoration of construction sites directly upon completion of works. |
| Disturbance and interruption of commercial and social activities | • WATSANs to inform the affected communities early of the construction programme.<br>• Limit any temporary interference with private property (e.g. farms) in creating access for drilling rigs.<br>• Relocation (even temporarily) to be avoided as much as possible.<br>• Where private land or other property is affected, or where there is loss of income as a result of project activities, agree on compensation measures with affected persons prior to start of construction. Compensation will occur in accordance with the defined Resettlement Policy Framework.<br>• Interference with the access to and use and occupation of roads, footpaths should be minimized. |
| Land take | • Avoidance, as much as possible, the need for resettlement by considering other siting options<br>• Where resettlement is unavoidable, develop and implement appropriate plans in accordance with the Resettlement Policy Framework developed for the Project. |

| **Sub-project: Borehole water supply (construction phase)** | |
|---|---|
| Type of impact | Description of mitigation measures |
| Occupational health and safety | • The Contractor should protect his workers by ensuring the use of protective equipment |
| **Sub- project: Borehole water supply (Operation and Maintenance Phase)** | |
| **Type of impact** | **Description of mitigation measures** |
| Wastewater management | • Ensure satisfactory provisions for disposal of wastewater at both the water point and from households. All boreholes and standpipes will have concrete well pads with drainage channels to carry wastewater into soakaways at 7m from the borehole or standpipe. Soakaways must be functional and in areas of high water table, alternative means should be found e.g. horizontal filtering systems to nearest natural drains.<br>• Households will also construct soakaway pits (with adequate drainage provisions) to dispose of wastewater. The CWSA will provide specifications for effective soakaway pit construction.<br>• WATSANs to pass by- laws to govern household wastewater disposal<br>• Re- use of wastewater for livestock watering especially in water scarce communities of the Upper Regions and for gardening in the southern parts of the country |
| Nuisances and public health risks | • Ensure correct operation and maintenance of the hand pumps, including regular inspection and maintenance. Such measures as defined in the operation and maintenance manual for the Caretakers.<br>• Minimisation of pump repair response time through the provision of adequate equipment, development of emergency response procedures and adequate training of Caretakers and Area Mechanics.<br>• Community involvement in fault detection through awareness creation and a simple mechanism for reporting and recording of complaints.<br>• Regularly monitor groundwater quality for contamination (both natural and anthropogenic).<br>• Livestock watering points should be located downstream of water points<br>• Timely implementation of repair and replacement works on pumps and other related parts of the system.<br>• Avoid siting of boreholes in and around sanitary facilities, such as latrines and drainage systems, and areas of increased pollution risks (e.g. waste dumps, cemeteries). All water points must be located upstream of sanitary and other polluting facilities (>30m away)<br>• Practice safe water handling to avoid contamination especially water stored for household use |
| Depletion of groundwater resources | • Active collaboration with the WRC and EPA in watershed management programmes with the involvement of communities especially for fragile ecosystems of Upper Regions of Ghana.<br>• Project to install groundwater monitoring systems |

| Sub- project: Borehole water supply (Decommissioning) | |
|---|---|
| **Type of impact** | **Description of mitigation measures** |
| Water pollution | • Backfilling of holes with inert materials.<br>• No solid waste, fuels or oils should be discharged into water flows.<br>• Where works take place adjacent to a watercourse, temporary sediment barriers should be installed on slopes to prevent silt from entering the watercourse. |
| Safety of the public | • Adequate security barriers at work sites to ward off inquisitive persons and animals.<br>• Local communities informed of the construction programme through WATSANs. |
| Disturbance and interruption of commercial and social activities | • Affected communities informed of the programme through WATSANs.<br>• Limit any temporary interference with private property (e.g. farms).<br>• Relocation (even temporarily) should be avoided as much as possible. Where such is unavoidable, however, relocation should occur in accordance with the defined Resettlement Policy Framework.<br>• Interference with the access to and use and occupation of roads, footpaths and bridges should be minimized. |
| Occupational health and safety | • The Contractor should protect workers through the use of personal protection equipment and education.<br>• Basic rules with regard to protection of public health, including most importantly hygiene and disease (HIV) prevention. |

**Table 6 Mitigation measures for provision of household and institutional latrine facilities**

| Sub-project: Latrine facility (Construction) | |
|---|---|
| Type of impact | Description of mitigation measures |
| Air pollution | • Prevention of excessive dust emissions including cement dust by careful handling and working under moist conditions as much as possible.<br>• Collection and temporary storage of sanitary and cleaning wastes, as well as garbage, in containers. |
| Water pollution | • Temporary storage of sanitary and cleaning wastes in containers. Disposal should occur at waste dump.<br>• No solid waste, fuels or oils should be discharged into water flows. |
| Raw material use | • The project should preferably select raw materials that may be reused and/or recycled/recovered eg bamboo. |
| Public health problems | • Adequate sanitary facilities should be provided at construction sites and in camps and offices.<br>• Labourers should adhere to basic rules with regard to protection of public health, including most importantly hygiene and disease (HIV) prevention.<br>• Standing water on construction sites should be avoided through proper site maintenance |

| **Sub-project: Latrine facility (Construction)** | |
|---|---|
| Type of impact | Description of mitigation measures |
| Safety of the public | • Barriers to ward off inquisitive persons and animals.<br>• Construction works should not be executed under aggressive weather conditions (rains, strong winds). |
| Visual amenities | • Adequate organisation and maintenance of construction sites through good housekeeping.<br>• Restoration of construction sites directly upon completion of works. |
| Disturbance and interruption of commercial and social activities | • Informing the affected institutions early of the construction programme through WATSANs.<br>• Excavation works should not be executed under aggressive weather conditions (rains, strong winds)<br>• Interference with the access to and use and occupation of roads, footpaths should be minimized. |
| Occupational health and safety | • The Contractor should implement the basic form of specific health and safety measures such as the use of personal protection equipment, lifting of heavy weights etc |
| **Sub- project: Latrine facility (Operation and Maintenance)** | |
| **Type of impact** | **Description of mitigation measures** |
| Nuisances and public health risks | • Ensure correct operation and maintenance of the latrine facility, including regular inspection and maintenance.<br>• Minimisation of emergency repair response time through the development of emergency response procedures and training of artisans.<br>• Community involvement in odour detection through awareness creation and the opening of a complaint desk by WATSANs.<br>• Timely implementation of repair and replacement works on facility.<br>• Locate latrine 30m away and downhill of water point and pit should be 5m above water table<br>• Promote good hygienic practices like frequent hand washing especially after visiting toilet |
| Solid waste generation | • The Waste Management Unit of the DA will dislodge latrine pits when full and dispose contents appropriately<br>• Digested sludge removed should be appropriately disposed of e.g. burial or land application for agriculture |
| **Sub- project: Latrine (Decommissioning)** | |
| **Type of impact** | **Description of mitigation measures** |
| Water pollution | • Isolate faecal sludges (especially if undigested) from water bodies as much as possible to avoid contamination.<br>• No solid waste, fuels or oils should be discharged into water flows. |
| Public health problems | • Labourers should adhere to basic rules with regard to protection of public health, including most importantly hygiene and disease (HIV) prevention.<br>• Good housekeeping practices to avoid creating ponds for breeding of insect vectors. |
| Safety of the public | • Simple barriers to ward off inquisitive persons and animals.<br>• Works should not be executed under aggressive weather conditions (rains, strong winds). |
| | |

**Table 7 Mitigation measures for Small Town Water Supply**

| **Sub-project: Pipelines and Reservoirs (and surface water intake, if required)- Construction** | |
|---|---|
| Type of impact | Description of mitigation measures |
| Water pollution | • Temporary storage of sanitary and cleaning wastes in containers. Disposal should occur at waste dumps.<br>• No solid waste, fuels or oils should be discharged into water flows.<br>• Maintenance, fuelling and cleaning of vehicles and equipment within communities should be avoided, as much as possible.<br>• Where works take place adjacent to a watercourse, temporary sediment barriers should be installed on slopes to prevent silt from entering the watercourse. |
| Solid waste generation | • Excavated soils should be reused as much as possible as filling material. Excess soil should be disposed off appropriately. Topsoil should be removed and stored in separate piles and reinstated after refilling of trenches. |
| Soil erosion | • Application of appropriate erosion-protection measures, in particular where it concerns works on slopes and in stream beddings.<br>• Excavation works should not be executed under aggressive weather conditions (rains, strong winds).<br>• Topsoil should be removed and stored in separate piles and reinstated after refilling of trenches, to enable natural revegetation. |
| Impacts on flora and fauna | • The Contractor should limit the destruction of flora to the working area.<br>• Clearing and cutting of trees should only occur with the appropriate authority's consent, i.e. EPA |
| Public health problems from construction camps and sites, and imported labour | • Adequate sanitary facilities should be provided at construction sites and in camps and offices.<br>• The use of local labour for unskilled work should be promoted.<br>• Labourers should adhere to basic rules with regard to protection of public health, including most importantly hygiene and disease (HIV) prevention.<br>• Good housekeeping practices followed to avoid water ponding and breeding of insect vectors. |
| Safety of the public | • Adequate barriers to ward off inquisitive persons and animals (especially excavation works), in particular during the night, with clear marking of the safety border on the works perimeter.<br>• Informing the local communities early of the construction programme through Water Boards. |
| Visual amenities | • Adequate organisation and maintenance of construction sites through good housekeeping.<br>• Restoration of construction sites directly upon completion of works. |

| Sub-project: Pipelines and Reservoirs (and surface water intake, if required)- Construction | |
|---|---|
| Type of impact | Description of mitigation measures |
| Disturbance and interruption of commercial and social activities | • Informing the affected communities early of the construction programme through local Water Boards and other means.<br>• Limitation of any temporary interference with private property (e.g. pipeline crossings over private lands). The length of trenches at one time should be limited as much as possible.<br>• Relocation (even temporarily) should be avoided as much as possible. Where such is unavoidable, however, relocation should occur in accordance with the defined Resettlement Policy Framework.<br>• Where private land or other property is affected, or where there is loss of income as a result of project activities, agree on compensation measures with affected population prior to start of construction. Compensation will occur in accordance with the defined Resettlement Policy Framework.<br>• Information to neighbourhood of any (partial) blockage of roads, cutting for pipelaying.<br>• Where access roads are blocked, temporary access ways should be established.<br>• Excavation works should not be executed under aggressive weather conditions (rains, strong winds)<br>• Interference with the access to and use and occupation of roads, footpaths and bridges should be minimized. |
| Land take | • Avoidance, as much as possible, the need for resettlement through appropriate alignment of pipelines.<br>• Where resettlement is unavoidable, develop and implement appropriate plans in accordance with the CWSP II Resettlement Policy Framework. |
| Occupational health and safety | • To Contractor should follow health and safety measures in accordance with local regulations relating to personal protection, lifting heavy materials etc |

| Sub- project: Reservoirs and Pipelines (Operation and Maintenance) | |
|---|---|
| **Type of impact** | **Description of mitigation measures** |
| Nuisances and public health risks | • Ensure correct operation and maintenance of the installed pipelines, including regular inspection and maintenance.<br>• Community involvement in leak detection through awareness creation and the opening of a complaint desk with Water Boards.<br>• Ensure that sufficient pressure levels are maintained in pipelines at all times.<br>• Regularly monitor water quality at various points in the network for contamination.<br>• Regular disinfection of lines to maintain safe supply<br>• Timely implementation of repair and replacement works on pipelines, pumps, water intakes, and other related parts of the system.<br>• Allow any house-connections only to be made by certified plumbers. The work of these plumbers should be monitored by Water Boards.<br>• Avoid water pipeline alignments in and around sanitary facilities, such as sewerage and drainage systems, and areas of increased pollution risks (e.g. waste dump, graveyards).<br>• Make provisions for increased wastewater production in the planning and management of wastewater disposal facilities. |
| **Sub- project: Reservoir and Pipelines (Decommissioning)** | |
| **Type of impact** | **Description of mitigation measures** |
| Water pollution | • Temporary storage of sanitary and cleaning wastes in containers. Disposal should occur at waste dumps.<br>• No solid waste, fuels or oils should be discharged into water flows.<br>• Maintenance, fuelling and cleaning of vehicles and equipment within communities should be avoided, as much as possible.<br>• Where works take place adjacent to a watercourse, temporary sediment barriers should be installed on slopes to prevent silt from entering the watercourse. |
| Solid waste generation | • Excavated soils should be reused as much as possible as filling material. Excess soil should be disposed off at sites approved by the district. Topsoil should be removed and stored in separate piles and reinstated after refilling of trenches. |
| Soil erosion | • Application of appropriate erosion-protection measures, in particular where it concerns works on slopes and in stream beddings.<br>• Excavation works should not be executed under aggressive weather conditions (rains, strong winds).<br>• Topsoil should be removed and stored in separate piles and reinstated after refilling of trenches, to enable natural revegetation. |

| Sub- project: Reservoirs and Pipelines (Operation and Maintenance) | |
|---|---|
| **Type of impact** | **Description of mitigation measures** |
| Public health problems from construction camps and sites, and from imported labour | • Adequate sanitary facilities should be provided at construction sites and in camps and offices.<br>• The use of local labour for unskilled work should be promoted.<br>• Labourers should adhere to basic rules with regard to protection of public health, including most importantly hygiene and disease (HIV) prevention.<br>• Good housekeeping practices followed to avoid water ponding and breeding of insect vectors. |
| Safety of the public | • Adequate barriers to ward of inquisitive persons and animals (especially excavation works), in particular during the night, with clear marking of the safety border on the works perimeter.<br>• Informing the local communities early of the construction programme through Water Boards. |
| Disturbance and interruption of commercial and social activities | • Informing the affected communities early of the construction programme through local Water Boards and other means.<br>• Relocation (even temporarily) should be avoided as much as possible. Where such is unavoidable, however, relocation should occur in accordance with the defined Resettlement Policy Framework.<br>• Where private land or other property is affected, or where there is loss of income as a result of project activities, agree on compensation measures with affected population prior to start of construction. Compensation will occur in accordance with the defined Resettlement Policy Framework.<br>• Information to neighbourhood of any (partial) blockage of roads, even if for temporary loading/unloading activities.<br>• Where access roads are blocked, temporary access ways should be established.<br>• Excavation works should not be executed under aggressive weather conditions (rains, strong winds)<br>• Interference with the access to and use and occupation of roads, footpaths and bridges should be minimized. |
| Occupational health and safety | • To Contractor should follow health and safety measures in accordance with local regulations relating to personal protection, lifting heavy materials etc |

## 6.0 ASSESSMENT OF INSTITUTIONAL CAPACITY AND PROJECT APPROVAL NEEDS

The main institutions which will work together to ensure sound management of the environmental aspects of the sub- projects include the CWSA and its regional offices (RWST), the EPA and the District Assemblies together with the respective communities. The RCC has interest in projects undertaken by DAs and therefore the CWSA will keep the RCC updated or adequately informed on project implementation stages. The Water Resources Commission has interest in sustainable utilization of Ghana's water resources, and the CWSA will therefore collaborate with the Commission.

### 6.1 Institutional Requirements, Capacity and Needs

Community Water and Sanitation Agency

The CWSA is directly responsible for ensuring that the environmental requirements of the project are met. The ESMF provides the basis for environmental action. The CWSA provided advance payment for the environmental permit and processing fees for the SRWSP subprojects and will do same under the additional financing. The RWST will directly facilitate the acquisition of environmental permits for the small town water systems in all the project regions.

The Agency has integrated environmental issues into its programmes to ensure sustainable development. For example, the main environmental concerns in the SRWSP have been identified to be with regard to (1) groundwater exploitation, (2) construction activities, (3) wastewater disposal, and (4) excreta disposal. Mitigation measures were proposed for these impacts and implemented to different levels of success. These issues are still very relevant under this additional financing and it is proposed that to enhance action under this Project, the CWSA will maintain the appointment of the Safeguards Focal Persons at the Head office and its regional offices (RWST) to particularly monitor the environmental/social aspects of the Project. The Terms of Reference (ToR) for these safeguards officers are given in the **Annex 2**. They have received some training and some further training should be provided, where necessary. The RWST has the responsibility to oversee the sub- project approval process, and has to make sure that the proposals meet social, technical, financial, and environmental requirements. The initial environmental screening checklist to be used by the CWSA regional safeguards officers is provided in the **Annex 3.**

Environmental Protection Agency

The EPA is responsible for ensuring compliance with laid down EIA procedures in Ghana in accordance with the EPA Act 1994, Act 490. The EIA is recognized and applied in Ghana to development projects as well as other undertakings as an environmental permitting pre- requisite and a major environmental management tool. The EPA will support the project by exercising its permitting and monitoring powers. The permitting process as described under EIA procedures consist of the following steps:

*Registration*: Special forms for the purpose are available and the responsibility for registering the undertaking or development lies with the proponent. The responsibility for determining what constitutes an impact on the environment with respect to the development lies with the EPA.

*Screening*: With regard to the small towns water supply projects, the Regional EPA will carry out field inspection and provide a screening report to the Headoffice to aid in making decision on the appropriate level of assessment to be carried out. In making this decision at this stage consideration is given to (1) location, size and output of the development, (2) technology to be used, (3) concerns of the general public, (4) land use consideration, (5) other factors relevant to the development. The EPA will take a decision which could be one of these:

- Objection to the development
- No objection to the development, hence Permit is issued
- Preliminary environmental assessment required
- Environmental impact assessment required.

*Preliminary environmental assessment:* where the screening of the project identifies some limited significant impacts that require further explanation, the EPA may require a preliminary environmental assessment to be conducted and a preliminary environmental report provided in which adequate provision is made for mitigation and management measures for identified adverse impacts. With regard to the small towns water supply systems, the expected worse scenario is the provision of a preliminary environmental report.

*Scoping and Environmental Impact Statement*: whenever the screening of the initial registration or a subsequent Preliminary Environmental Report indicates that a significant adverse environmental impact may result from the development of the project, the proponent will be required to submit an Environmental Impact Statement (EIS). This will require a Scoping Report on fact finding evaluation of the proposed development and stakeholder consultations to determine stakeholders' concerns as well as the general public to be addressed in terms of reference for the EIA. A scoping report will have to be submitted to the Agency for review.

On approval of the Scoping Report which contains the terms of reference for the EIA by the EPA, the proponent may then proceed to prepare the detailed EIA study to prepare the environmental impact statement. In the event of strong public concerns, the EPA will hold a public hearing relating to the assessment. This level is not expected under this project or for any small towns water supply system.

In accordance with the permitting arrangements agreed with the EPA on the SRWSP subprojects, the small towns water supply sub- projects will require Registration. Any further action will be confirmed at the regional level when field officers have visited the proposed community sites to assess and confirm appropriateness. There are EPA regional offices in all the six project regions which are staffed and equipped to support the project. However, the Regional EPA sometimes face logistical constraints which may hinder quick field inspections and reporting.

<u>Water Resources Commission</u>

The functions of the WRC as established under Act 522 among other things are to

- Formulate and enforce policies in water resources conservation, development and management in the country;
- Coordinate the activities of the various agencies (public and private) in the development and conservation of water resources;
- Enforce, in collaboration with relevant agencies, measures to control water pollution;

- Be responsible for appraising water resources development project proposals, both public and private, before implementation.

The Water Resources Commission by section 35 of the Water Resources Commission Act, 1996 (Act 522) has developed regulations for the granting of drilling license and groundwater development in the country.

*Water drilling license:* The license requires that no person shall construct a well for the abstraction, or monitoring of groundwater or for research if that person does not have a drilling license granted in accordance with these Regulations and that the drilling license shall be obtained from the Commission on application. The application will be in a form specified as part of a schedule to the regulations.

*Construction of well:* A drilling contractor shall not construct or begin to construct a well without notice to the Commission of the intention to do so. The client shall notify the Commission of the intention to construct a well in instances where a major project is undertaken on behalf of an agency or organisation.

*Environmental protection requirements:* The environmental provisions include that a person shall not construct a well in a manner that leads to contamination or pollution of groundwater or aquifer. Thus, a drilling contractor shall in order to avoid contamination of groundwater ensure that

- a well fitted with hand pump is sited at a minimum distance of thirty metres from the known source of real or potential contamination,
- a mechanised well is sited at a minimum distance of one hundred metres from the known source of real or potential contamination,
- shallow water whether contaminated or situated in, the overburden or rock is completely sealed off,
- the minimum requirement for the sanitary seal of two metres of concrete grouting below the ground surface is satisfied,
- well casing of not less than 0.5 metres above the ground or the floor of the finished pump house or pump pit is maintained if other measures are not taken to prevent direct inflow of surface water into the well,
- immediately after the construction of the well, the top of the casing is closed with a tight closing or top head,
- the well is properly sealed with a well head,
- the platform for a hand pump or the floor in the pumphouse is constructed in a manner that does not permit water to return to the well,
- the joints of casing segments are watertight, and
- other works and activities that the Commission directs for the prevention of contamination and protection of the environment are carried out.

*Well records:* A drilling contractor shall keep records of the progress of work which will include

- location and landmark of the activity site,
- the Global Positioning System co-ordinates of the activity,

- geological log certified and signed by a qualified hydrogeologist or geologist or geological technician,
- the quantity of water first obtained and the depth,
- the quantity of water obtained at reaching final depth of the well,
- the size and position of casing and screen,
- the duration and final yield at the close of the well development,
- the completion date for drilling, and
- the identification number of the well which shall be consistent with the national well numbering system.

*Submission of well records:* Where the drilling activity consists of not more than five wells, the drilling contractor shall within sixty days of the cessation of the construction activity, submit a complete copy of the well records to the Commission. Where the drilling activity consists of more than five wells, the drilling contractor shall within ninety days of the cessation of the construction activity, submit a complete copy of the well records to the Commission. The records will comprise wells which are successfully drilled, dry wells, and defective wells.

The well records shall be submitted together with information on the development of the wells; results of pumping tests conducted; information on water quality, and field test results.

District Assemblies

The DAs are responsible for the overall development of the district and its functions include: to prepare and submit development plans and budgets to superior institutions for approval and implementation. The DAs work through their District Water and Sanitation Teams (DWST) to establish water and sanitation programmes and promote the project in eligible communities. The DWST which consists of selected staff from the decentralized units under the district comprises:

- A Technician/Engineer;
- Environmental Health Officer (EHO); and
- Community Development Officer (CDO).

The districts will present the same officers used under the SWRSP or if not available, appoint one of these officers to be the District Safeguard Officer (DSO). They will however work as a team so that the EHO will among other things facilitate and ensure that approvals or clearance are obtained for sanitation sub-projects and also ensure that appropriate mitigation measures proposed for sanitation sub-projects are implemented. The CDO will among other things ensure that the social safeguard components are addressed in line with the RPF/ESMF. The Technician/Engineer will ensure that the environmental safeguard components are addressed in line with the ESMF. The DWST should be provided with the necessary training especially with regard to the ESMF/RPF. The Terms of Reference for the DSO as well as the Community Facilitators is given in Annex 2.

Capacity building requirements

Under the SRWSP, many training programmes were carried out for district officers including DSOs. The capacity building requirements under the additional financing will mostly be in the form of

refresher training workshops and on the job training. A refresher training workshop on the ESMF/RPF will be organized for the following key stakeholders:

- RWST;
- DWST & DEMC;
- Beneficiary community (Selected members from WATSAN/Water Board); and
- Project consultants and contractors.

Staff movements at the district level is quite high including official transfers, and officers to be newly appointed as District Safeguard Officers will necessarily be given orientation and training.

The capacity of project staff at the CWSA will be enhanced to provide guidance, and ensure adequate overall environmental supervision of the sub- projects. **Table 8** identifies specific training needs of institutions/structures involved in the implementation of the ESMF. The training cost for key stakeholders involved in the implementation of the Project using a local consultant will be between GHC50,000-GHC80,000.

**Table 8 Specific training needs**

| Institution/Structure | Identified specific training needs |
|---|---|
| CWSA | Ability to identify and incorporate mitigation measures provided in ESMF during preparation of RFP for contractors |
| | Ability to identify and incorporate environmental/social reporting requirements during preparation of RFP for consultants |
| | Ability to provide oversight supervision and monitoring to ensure compliance with ESMF |
| RWST/DWST/DWSDB | Ability to complete EPA Form EA1 and the Initial Environmental Screening Checklist |
| RWST | Ability to review environmental/social reports (Progress reports) from consultants |
| RWST/DA-DEMC | Ability to review environmental/social components of quarterly reports from DWST |
| | Ability to monitor and supervise work of DWST at the district level. |
| RWST/DA-DEMC/DWST/DWSDB | Ability to interpret and ensure implementation of EPA permit conditions during operation of facility |
| Consultant | Ability to capture and report on environmental/social issues outlined in ESMF and undertaken or otherwise by contractor when reporting on the project to the client including preparation of management plans |
| CWSA/RWST/DWST/DA-DEMC/DWSDB | Ability to understand and appreciate the contents of the ESMF document as a working document for the project. |

Awareness creation

All stakeholders will need some further orientation if they are to appreciate conditions which trigger environmental action. It is proposed that environmental management issues are included:

- in all monthly project site meetings; and
- in discussions at all Project review/ evaluation workshops to further sensitise stakeholders.

The discussions will assist to assess environmental progress especially with regard to the effectiveness of implementation of mitigation measures.

The SRWSP recognized the need to promote knowledge on environmental issues at the community level by appointing Community Safeguard Facilitators (CSF). This approach through the TAs, is expected to assist community members to identify their existing beliefs and practices, provide them with information and assist them to analyse the environmental consequences of installing new water points and sanitation facilities. The terms of Reference for the CSFs is given in the **Annex 2.**

## 6.2 Project Approval Requirements and Issues

The environmental approvals required for the potential sub-projects are presented below.

**Table 9 Project approval requirements**

| No. | Sub-project component | Source and type of approval | Requirements | Comments |
|---|---|---|---|---|
| 1 | Individual borehole water supply | DAs /Site approval | 1. Field inspection of selected sites by Environmental Health Officers (EHO) within the district<br>2. EHO to sign appropriate form confirming approval of site | The EHO of the DWST can provide the site approval required |
| 2 | Sanitation/latrine systems | DAs /Site approval | 1. Field inspection of selected sites by EHO<br>2. Approval in a form of letter or endorsed form | At least a Senior Environmental Health Officer is recommended. |
| 3 | Small towns water supply systems | EPA/Environmental Permit | 1. Purchase and completion of EPA Form EA1 for project registration (see **Annex 3** for sample).<br>2. Submission of completed Form EA1 at the Regional EPA Office<br>3. Field inspection of community/project sites by Regional EPA Staff<br>4. Preparation of screening report by Regional EPA to EPA Headoffice in Accra<br>5. Payment of processing & permit fees at Headoffice<br>6. Provision of permit | Forms EA1 can be obtained from the Regional EPA offices.<br><br>Depending on field conditions, EPA may request an environmental report (PER) after evaluation of screening report. |
| *4* | *Borehole drilling* | *WRC/Drilling License* | *The contractor to be engaged should be licensed by WRC* | |

## 7.0 ENVIRONMENTAL MANAGEMENT PLAN

The local environmental regulations require the District to be the key proponent for the sub-projects particularly the small town water systems. The RSO will initiate environmental screening of the sub-projects and completion of the EPA Form EA1 in consultation with the DSO and the communities. The environmental screening checklist provided in the **Annex 3** and the sample EPA registration form provided in **Annex 4** provides guidance to the RSO/ DSO for the conduct of this exercise.

The mitigation measures described in the earlier sections of this report will assist to solve the potential environmental and social challenges that the execution of the sub- projects may pose. The responsibility for the implementation of the prescribed actions will be discussed earlier in the project and assigned by the RSOs and DSOs to the relevant agencies and individuals.

It is expected that the RWST will train the DWST to evaluate proposals and the incorporation of mitigation measures to address adverse impacts. In situations, where mitigation measures are difficult to find, the RWST will provide guidance with the support of the Regional EPA.

To ensure full use of facilities, the TAs will help the WSMT/ DWST draft bylaws and rules which will cover issues like accessing and protecting the water facilities, preventing inadequate wastewater disposal, and encouraging household members to build and use latrines. The DWST will monitor the effectiveness of implemented mitigation measures within the communities and advise RWST accordingly.

Some monitoring indicators to assess the effectiveness of the institutional arrangement, and also mitigation measures implemented are suggested in the table below.

**Table 10 Monitoring indicators**

| # | Impact/ Issue | Monitoring Indicators |
|---|---|---|
| 0.0 | Registration process | • Number of proposals successfully compiled by DA and submitted to the EPA;<br>• Number of sub- projects registered by the EPA;<br>• Length of time between submission and registration by EPA |
| Water Supply | | |
| 1.0 | Health risks | • Water quality data from regular groundwater sampling and analysis;<br>• Number of water treatment facilities installed as against number of reported cases of excess natural contaminants in borehole water;<br>• Number of reported malaria cases esp. during dry months;<br>• Number of reported pipe ruptures |
| 2.0 | Wastewater disposal | • Availability of bylaws and regulations instituted by WATSAN;<br>• Number of education and awareness creation sessions with communities;<br>• Number of households with appropriate disposal facilities;<br>• Number of households without appropriate disposal facility |
| 3.0 | Resource protection/ availability | • Groundwater monitoring system in place;<br>• Groundwater level and quality data; |

| | | |
|---|---|---|
| | | • Watershed management plans in place;<br>• Number of training sessions by TAs with communities on watershed management;<br>• Number of trees planted and natured to grow. |
| 4.0 | Reliability of facility provided | • Bank statements (to reflect healthy balance)<br>• Time taken to repair faults;<br>• Number of area mechanics;<br>• Number of women involved in project management, esp bookkeeping;<br>• Number of community meetings and proportion of women attendees; |
| Sanitation facilities | | |
| 1.0 | Health risks | • Number of reported odour complaints;<br>• Frequency of sludge removal;<br>• Availability/ number of emptying trucks for sludge removal;<br>• Disposal facility for faecal sludges |

## 8.0 STAKEHOLDER CONSULTATIONS

### 8.1 Meeting with CWSA to update ESMF

Due to time constraints, it was not possible to tour all the project regions individually to seek information to prepare this report. Rather all the CWSA regional directors met on the 11th May 2017 in Kumasi to collectively review safeguard activities during the previous phase and devise strategies to address possible challenges in the upcoming phase. The list of directors including the CWSA Chief Executive Officer and some regional safeguard officers who attended the meeting is provided below:

**Table 11: Head office and Regional CWSA officials met to discuss safeguards**

| No | Name | Region and Position | Contact |
|---|---|---|---|
| 1. | Konadu Owusu | Head office, Project Engineer | 0266778566 |
| 2. | Henry Asangbah | Central Region, Engineer | 0208119119 |
| 3. | Gustav Osiakwan | Central Region, Engineer | 0244849257 |
| 4. | Kwesi Brown | Upper East Region, Director | 0244895364 |
| 5. | Mike Adjei | Western Region, Director | 0244754863 |
| 6. | Theodora Adomako- Adjei | Head office, Extension Services | 0244819040 |
| 7. | Ahmed Ewura | Brong Ahafo Region, Director | 0244713170 |
| 8. | Sampson Atakora | Head office, Engineer | 0244297578 |
| 9. | Ato Quansah | Upper West Region, Safeguard Officer | 0244989094 |
| 10. | Melvin Tagoe | Upper West Region, Ag Director | 0243334583 |
| 11. | Joseph Jonah | Northern Region, Engineer | 0208118271 |
| 12. | Henry Johnson | Western Region, Engineer | 0244481539 |
| 13. | Emmanuel Adii | Upper East Region, Safeguard Officer | 0244845879 |
| 14. | Siabe Worlanyo | Head office, Chief Executive | - |
| 15. | Seth Larmie | Safeguard consultant | 0244378265 |

Highlights of the comments/discussions in reviewing safeguard activities under the SRWSP included the following:

- There was no defined budget for safeguard activities in the SRWSP and this hindered progress tremendously as regional officers were forced to play the role of safeguard consultants to prepare environmental and social management reports, including ARAPs;
- This was first real experience in safeguard implementation and lessons have been learnt for better environmental performance in the coming phase;
- Safeguard capacity has not been up to desired levels but certainly improving
- Some very good strategies were formulated to execute safeguards midway of the project which if followed in the upcoming phase will guarantee some success
- Retirement and transfers of regional safeguard officer jeopardized progress
- Water consultants had very little time and other resources to carry out safeguard activities. Only one man month was allowed in project design for the 3 year period

- Some key activities and reporting (eg. preparation of ARAP) were begun very late in the project. The responsibility was given to RSOs who had very little or no experience to produce such specialised reports;
- Some communities misinterpreted voluntary donation of land for this project which they compared with other water projects where government paid compensation, for example projects being executed by the Ghana Water Company
- There was poor filing/documentation of reports which prepared during safeguard execution

The meeting concluded that, going forward the following issues must be considered urgently:

- Provision of adequate budget for safeguard implementation including hiring qualified consultants to prepare safeguard implementation documents for example, ARAPs;
- Safeguard officers to work in teams rather than centred on individuals; and
- Further training for all involved in the project to appreciate safeguard issues and implementation requirements.

**Plate 1: Meeting with CWSA Directors and other officials**

## 8.2 Meeting with Communities to update ESMF

Two key communities both in the Brong Ahafo Region namely:

- Krobo in the Techiman North District, and
- Akoma/ Brohoho in the Nkoranza South Municipal

were consulted to update the ESMF. The region was carefully chosen because it is transitory both ecologically and culturally, and therefore to some extent quite representative of all the other five project regions.

The design and format for the meetings were gender sensitive therefore women and men were interacted with separately, and they provided answers to such questions as the following:

- Current experience with the use of the provided water and sanitation facility
- Challenges faced as a community through the entire phases of planning to operation and maintenance of the provided water and sanitation facilities

- What could be done differently to improve project outcome at the community level, especially for women?
- Involvement of women in project activities and how important has their contribution been towards the success of the project?
- Any special considerations required for vulnerable persons in future projects

The highlights of the discussions and comments are presented below:

Meeting with Women at Krobo community

- Not really intimidated by men during meetings and would have freely expressed views if men were present
- Six (6) out of the 15 members of the WSMT are women
- Women participated in all the project meetings and ensured their concerns were brought up for discussion
- Household levies as agreed were paid by heads which were mostly men. Women heads of households were not given any special concessions but paid same amount
- Some women were affected by the routing of pipelines when the frontage of their shops and other businesses were trenched and in some cases reinstatement has been very poor
- No woman in the community was involved in giving out land for the project
- They assisted the workers who came on site with food and sometimes helped with accommodation though they paid for the latter
- There may have been some amoral relationships between some community women and the workers but no known cases of babies resulting from these
- Women did not contribute to the labour force since this was seen as the preserve of the men of the community to dig trenches etc

*The project has been immensely beneficial to the womenfolk in ways such as:*

- Easy access to clean potable water all year round for drinking, cooking etc
- Enhanced economic and social development in the community
- Provided employment opportunities, food vending etc
- Contributing to better relationships with their partners and children since there is much more family free time.

*Given the opportunity, they would advise the women in any new community being introduced to the project to:*

- Fully participate in project meetings especially at the planning stages
- To be actively involved in all project committees
- Avoid national politics in the planning of the projects

Meeting with Men at Krobo

The water facility has been in use for the past one year

*They have supported the project by:*

- Paying household levy of Ghc20. Most households have paid their contribution but others have not for variety of reasons. In any case, those who have not may be discriminated against when time comes for the extension of the system to households

- Community donated land for the project and this was ably managed by the community chief. All those whose lands were taken up by the project were compensated with land at other locations by the chief.
- The community provided space freely to the contractor to store materials
- The community provided casual labour for the project. About 50 young men were involved over a period of about 2 weeks
- The community has sacrificed time and effort to form committees and has been holding regular meetings to manage the facilities

*Their advice to any new community coming on board is as follows:*

- Opinion leaders to be actively involved in education and awareness creation programmes for community members especially with regard to household contributions for the project
- No politics to be tolerated in project planning and execution
- Provide motivation for workers who come to the community (food and easy access to accommodation) to do a good job
- Community to be actively involved in the supervision and monitoring of the contractors on site

*Any conflict situations arising from the project*

- On the contrary, generally there has been peace and harmony in the community with the introduction of the project
- Isolated instances when some members go to the standpipes and may wish to for example fetch by cups for drinking but not allowed by vendors
- No noticeable increase in the incidence of malaria from stagnant water or any other water related diseases. Hygiene and sanitation issues are taken seriously.
- Major challenge is the cost of electricity. Appealing to the CWSA to request VRA to consider charging them domestic rather commercial rates.

*Role of women in project*

- The women have been very active and fully involved in the project from the beginning
- The women participated in all meetings. In a typical community meeting, 60 to 70% attendance by women
- In the WSMT, treasurer, sanitation and representative from the Chief are women
- The men will continue to make cash available to pay for water required by households
- The men will continue to encourage the women to be actively involved in meetings and be part of the decision making process.

**Table 12:: List of Women present at community meeting at Krobo**

| No. | Name | Position | Contact |
|---|---|---|---|
| 1. | Patricia Akwabea | Water user, trader | 0205501236 |
| 2. | Martha Agyeiwaa | WSMT, Treasurer | 0241171404 |
| 3. | Comfort Gyamea | Water user, farmer | 0248198252 |
| 4. | Lucy Antwi | WSMT, member | 0541810913 |
| 5. | Faustina Boatemaa | Water user, bar keeper | 0241171404 |
| 6. | Christiana Amoaa | WSMT, member | 0547516445 |
| 7. | Elizabeth Pimaa | Water user, farmer | 0245872595 |
| 8. | Lucy Boinea | Water user, Seamstress | 0247410564 |
| 9. | Dufailu Tawakaltu | Operational staff, Accounts officer | 0203030520 |
| 10. | Josephine Takyiwaa | Water user, Hairdresser | 0549804169 |
| 11. | Hawa Gyame | Water user, Trader | 0506766417 |
| 12. | Evans Nketiah | DWST | 0209001033 |
| 13. | George Amartei | Regional CWSA, ESS | 0244764434 |

**Plate 2: Meeting with Women at Krobo**

**Table 13:: List of Men present at community meeting at Krobo**

| No. | Name | Position | Contact |
|---|---|---|---|
| 1. | Samuel Kodom | WSMT, member | 0248120592 |
| 2. | David Takyia | WSMT, member | 0502006666 |
| 3. | Evans Aduo | WSMT, chairman | 0542283106 |
| 4. | Stephen Effa | WSMT, secretary | 0543985445 |
| 5. | Moses Amoah Assah | WSMT, member | 0209109876 |
| 6. | Issifu Mohammed | Technical coordinator | 0263346700 |
| 7. | Adams Sumaila | Water user, student | 0540793616 |
| 8. | Haruna Yussif | Water user, aluminium installer | 0247832988 |
| 9. | Ocansey Ishmael | Water user, tiller | 0554801383 |
| 10. | Joseph Owusu | Revenue collector | 0545414863 |
| 11. | Evans Nketiah | DWST | 0209001033 |
| 12. | George Amartei | Regional CWSA, ESS | 0244764434 |

**Plate 3: Meeting with Men at Krobo**

Meeting with Women at Akuma/ Brahoho community

The consultant met with selected group of women from the twin towns of Akuma and Brahoho. The discussions confirmed various issues including:

- The role of the women have centred on sanitation and cleaning of water points
- They are indeed grateful that they do not travel long distances to fetch water any more
- The water facility has enhanced development in the communities
- The project has led to more quality time with their families including their husbands
- Many relatives have returned home since life is much more bearable
- School enrolment has increased substantially
- Aware of health risks associated with wastewater and stagnant water and communal work every 2 weeks to ensure clean environment
- There are numerous widows in the community but do not face any disadvantages because of strong societal and family ties. Old and sick persons are well catered for by relatives
- The men have been very supportive and always received their encouragement to attend meetings and be active participants
- They are looking forward to the start of household connections and are willing to give all support to make it happen soon

**Table 14:: List of Women present at community meeting at Akuma/ Brahoho**

| No. | Name | Position | Contact |
|---|---|---|---|
| 1. | Martha Korowa | Vendor | - |
| 2. | Afia Ataa | WSMT, member | 0541070993 |
| 3. | Esther Asieduwaa | WSMT, hygiene & sanitation | 0249457173 |
| 4. | Dora Tawiah | WSMT, treasurer | 0547792880 |
| 5. | Joyce Sakyiwaa | Water user | 0241087071 |
| 6. | Mary Opoku- Agyemang | Opinion leader | 0247426082 |
| 7. | Belinda Obeng | Vendor | 0246765830 |

| | | | |
|---|---|---|---|
| 8. | Theresa Eghan | Vendor | 0543093386 |
| 9. | Patricia Saah | Vendor | - |
| 10. | Juliet Takyiwaa | Vendor | 0544217094 |
| 11. | Hagar Twunwaa | Opinion leader | 0248832552 |
| 12. | George Amartei | Regional CWSA, ESS | 0244764434 |

**Plate 4: Group of Women consulted at Akuma/ Brahoho**

Meeting with Men at Akuma/ Brahoho community

The water system has been in operation for about 6 months

The men confirmed that:

- Women are the main users of the water facilities
- Women are the Vendors, mostly. Fourteen (14) out of the 16 vendors are women. There has never been any complaint about the safety of monies collected by women vendors
- Women are particularly alert to hygienic conditions around the stand pipes and are cleaning regularly
- Vulnerable persons including people with disability are offered opportunities including being vendors
- Regular education of community on wise use of water to avoid wastage especially by women who are also prominent on the WSMT. The sanitation representative on the WSMT is a woman and leads communal cleaning activities
- Few operational and maintenance issues with the water system is with regard to leakage and this is ably managed by the technical operators. Both technical operators are male including accounts officer and revenue collector
- Initially, there were 8 women members of the WSMT. Unfortunately, this has whittled down to only 3 since others have not been so active
- Numerous widows in the community. No immediate plans to give them special attention. May consider allowing them access to some few free buckets of water daily
- Cultural and traditional ties are strong and caters adequately for vulnerable in the community

*What to do better next time*

- Early collection of household levies. Female heads of households to continue to pay same amount
- Women are happy to pay as sign of equality and prestige
- Women fairly treated in the project as they have been involved in all aspects from planning to execution
- Women encouraged to attend all meetings and report problems

*Zoning of community areas*

- Grievances are reported to zonal leaders
- Out of seven (7) zonal leaders, five are women

**Table 15: List of Men present at community meeting at Akuma/ Brahoho**

| No. | Name | Position | Contact |
|---|---|---|---|
| 1. | Nana Adonteng Poku | WSMT, chairman | 0245035425 |
| 2. | Badu Forfie | WSMt, member | 0546604890 |
| 3. | James Obeng | WSMT, member | 0243388441 |
| 4. | Bright Baffour | WSMT, member | 0249119089 |
| 5. | Nana Appiah | Opinion leader | 0240793200 |
| 6. | Asare Bediako | WSMT, member | 0245035253 |
| 7. | Edward Sakyi | Vendor | 0241678713 |
| 8. | Napolean Sakyi | WSMT, member | 0556074544 |
| 9. | Kwaku Badu | Vendor | 0245381497 |
| 10. | Joseph Atta- Opoku | ESMt, secretary | 0245741726 |
| 11. | Opoku Banne | Vendor | 0246383990 |
| 12. | George Amartei | Regional CWSA, ESS | 0244764434 |


**Plate 5: Group of Men consulted at Akuma/ Brahoho**

## 9.0 CHALLENGES AND LESSONS LEARNT FROM THE SRWSP PROJECT

The key challenges and observations with regard to THE SRWSP safeguards implementation may be described as follows:

- Safeguard persons have been appointed in all the six project regions and likewise project districts. Many of these persons were officially engaged and therefore received formal notification of their appointment. At the community level, they were informally picked from their water management teams.
- Over 1500 persons were trained on safeguard issues at the district and regional levels and to lesser extent at community level during the project period. Training has been formal such as at national meetings, regional workshops as well as informal through project site meetings and inspections.
- Awareness of safeguard issues is high at all levels but commitments vary depending on leadership at the regional level which usually drives the process. The gap between safeguards awareness and implementation is widest in the regions where there has been inconsistency in the tenure of the RSOs. The same holds true for the districts where there have been frequent interruptions.
- Record keeping at the region seems satisfactory but less satisfactory at the districts. Again this has a lot to do with the frequent movement of safeguard persons
- Land has been properly acquired for project facilities in the regions. The Acquisition forms have usually been properly signed by land owners, traditional authorities and district assembly. The archiving of these documents by district authorities seems problematic.
- There does not seem to be any evidence of forceful acquisition of any individual's property for the project to breach resettlement- related principles. Though some level of community pressure may have been brought to bear on land owners, they were usually offered compensation in kind (another property elsewhere of comparable value or easier (sometimes free) access to facilities after construction)
- The districts have struggled to provide a complete list of project affected persons and properties and for that matter, prepare the ARAPs. The water consultants would have been most helpful but unfortunately there was very little man- time available in their budget for safeguard issues. The total time allocated to the environmental specialist on the consultant's team was only one man month for the 3 years plus project duration.
- The project did not experience major disruptive environmental and social challenges in all the regions to merit urgent interventions. The regional set up had enough capacity to solve all the challenges which evolved from the project such as on land acquisition and physical dangers posed by exposed trenches etc.
- The change in personnel at the district was a key implementation challenge. Similar situation occurred at the regional level also. Most times, the handing over process was not properly done leaving the incoming officer stranded.
- Generally, documentation has not been satisfactory. Even though there was so much safeguard activity and information, unfortunately these have not been adequately captured in reports. The project provided very simple reporting formats to assist safeguard officers to do so but was not fully used. This has been a serious safeguard implementation challenge.

## 10.0 RECOMMENDATIONS AND SUGGESTIONS FOR COMPLIANCE WITH ESMF

The following general and regional specific recommendations are offered to ensure a more successful SRWSP under the additional financing:

### 10.1 General recommendations

- As was practiced in one of the regions, it is better to work in teams rather than individual RSOs and DSOs to be responsible for the entire safeguard implementation effort. Teamwork is vital to the success of safeguard implementation especially at the districts where staff turnover is high.
- Archiving of documents (especially Land acquisition, List of PAPs etc) must be taken seriously by districts. The RWSTs should ensure they also keep copies safely as back up.
- Going forward, the knowledge and momentum must be maintained, possibly in support of the upcoming projects. Environmental and social safeguards are an integral part of projects and further provide a measure of project success. A network of trained safeguard 'practitioners' must be kept and encouraged to ensure that projects follow best practice.
- Sufficient time must be allocated in project design for environmental specialists within consultancy teams, to be able to fully participate in safeguard implementation activities.

### 10.2 Specific Regional actions and recommendations

Central Region

There has been a conscious effort and commitment in the Region to implement safeguards. However, their progress was affected by the sudden transfer of the RSO. To successfully close the current phase of the SRWSP and ensure readiness for the additional financing, the region must:

- open separate files for each district which will contain all district information including official letters from the districts confirming the nomination and availability of DSOs rather than one file containing information from all the participating districts.
- set up separate files to contain all training reports and minutes of meetings for easy reference.
- complete the ARAP for the remaining districts as early as possible.
- implement a suitable filing system which will compile all project documents including correspondences. The Environmental permits for the small town systems have been issued to the CWSA instead of the respective District Assemblies and must be reversed. Also, the original copies of the documents should be lodged at the Assembly who own the facilities, and
- retrospectively capture grievances and document how the problems were solved using the prescribed grievance redress forms. It is expected that these incidences are also captured in the ARAP.

Western Region

The awareness of safeguard issues at the region and district levels are strong. Nevertheless, there seems to be a wide gap between this awareness and implementation activities due to personnel constraints and to some extent logistical support. The newly appointed RSO has to put in considerable effort to successfully implement safeguard actions. Meanwhile, the region must:

- confirm that all the DSOs are currently at post and their respective CSFs are still active.
- Documentation on past training experiences up to date and fully compiled and stored properly.
- make documents readily accessible by producing copies for CSFs and setting up their own libraries in addition to documents kept by desk officers.
- have one on one meetings with DSOs through district visits and also on social platforms and urgently provide required leadership and direction.
- request DSOs through CSFs to provide all such information using the reporting format prepared by the consultant for the project, and
- follow up and obtain reports using prescribed formats prepared for the project.

Northern Region

The change in personnel at the region slowed down the implementation considerably. However, with time, some good progress has been made even though some few districts are yet to contribute substantially to the regional effort. It is important that, the region:

- ensures that all district safeguard appointments have been formalised and copies of appointment letters and other records kept at the Region.
- makes special effort to rope in all districts despite the difficulties and ensure they are all abreast with project safeguard issues.
- prepares reports to describe all safeguard actions using the prescribed and agreed format provided for the purpose.
- devises a workable filing system to ensure easy storage and retrieval of documents. This is one of the ways of ensuring continuity in the face of the frequent staff movements, especially at the districts, and
- properly captures all such issues in the DSOs reports and submit to the region even if it has to be done retrospectively. The RSO must compile these and further identify interesting case studies to showcase the safeguard procedures followed to mitigate environmental and social challenges faced in the region.

Upper East region

The region has made good progress in implementing safeguards but not enough attention paid to assist CSFs and to get them to contribute more fully to the process.

The Region must:

- update their list of DSOs and CSFs and also ensure that the position of the RSO is formalised.
- properly document all training programmes they have participated in, as well as those they have organized in the region and at the districts.
- follow up and to ensure that the new DSOs especially, also have had access to safeguard documents.
- work with the districts to produce safeguard reports, even if retrospectively.
- devise a better filing system to ensure proper storage and easy retrieval of all documents.
- document the challenges through the DSO reports and provide interesting regional case studies.

Brong Ahafo Region

The region has suffered greatly from the exit of the RSO midway through the project. Otherwise, all regional/ district stakeholders have received sufficient training to implement the safeguards. There has been good interaction with the regional EPA which has also willingly supported training programmes. The new RSO seems quite capable of continuing the process successfully with some good support from the Regional office.

The Region must:

- write to districts to confirm nomination and appointment of DSOs and to encourage the DSOs to in turn, confirm the list of CSFs.
- ensure availability of all safeguard documents at the project districts. The updated list of DSOs should be compiled and properly stored at the region.
- share safeguard reporting formats with the DSOs and encourage them to produce quarterly reports, even if retrospectively.
- follow up at the EPA on Permits, and also work urgently with the DSOs to ensure land acquisition process completed successfully. The region should complete its ARAPs.

Upper West Region

The region has an excellent safeguard implementation record and may provide useful lessons for all the other regions to learn from. The Region must further:

- ensure formal appointment of the RSO immediately. Also, in view of possible changes and transfers of staff at the districts, the RSO will follow up to confirm any such changes for official documentation.
- improve the complaints notes used by CSFs into formal Grievance redress statements.
- the revised template for Grievance Reporting be used to capture all known grievances.

## 11.0 REFERENCES

Government of Ghana (2004) Environmental and Social Management Framework, Ghana Community Based Rural Development Project. Ghana

CWSA (2004) Environmental and Social Management Framework/Strategic Environmental Assessment-Final Report, CWSPII Phase 2, Ghana

CWSA (2003) Environmental and Social Management Plan, AfDB Rural Water and Sanitation Programme (RWSP), Ghana

CWSA (2008) Workshop Report, Implementation of Environmental and Social Safeguards for the Small Towns Water Supply and Sanitation Project (ESMF/SEA and RPF of the CWSP II Phase 2), Mr. S. Larmie & Mr. E. K. Acquah, February 2008

CWSA (2010) Environmental and Social Management Framework for the Sustainable Rural Water and Sanitation Project, Accra

CWSA (2010) Resettlement Policy Framework for the Sustainable Rural Water and Sanitation Project, Accra

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GWCL (2004) Environmental Impact Assessment, Ghana Water Sector Restructuring Project, AY&A consult- Haskoning, Accra

NDPC/ EPA (2002) Strategic Environmental Assessment of the Ghana Poverty Reduction Strategy. Handbook for District Development Plan Sustainability Appraisals.

Ministry of Works and Housing (2000) Project Operational Manual for the CWSP 2. IDA/ GoG/ DA/ Communities. Credit No. 3282 GH.

# ANNEXES

Annex 1 Environmentally Sensitive/ Critical Areas

Annex 2 Terms of Reference (ToR) for Safeguard Officers

Annex 3 Environmental Screening Checklist for Sub- Projects

Annex 3 EPA Form EA1 (for small towns water supply project registration)

**ANNEX 1 ENVIRONMENTALLY SENSITIVE/ CRITICAL AREAS**

**NB:** *Projects sited in these areas could have significant effects on the environment and the EPA could require a more stringent environmental assessment*

All areas declared by law as national parks, watershed reserves, forest reserves, wildlife reserves and sanctuaries including sacred groves

Areas with potential tourist value

Areas which constitute the habitat of any endangered or threatened species of indigenous wildlife (flora and fauna)

Areas of unique historic, religious, cultural, archeological, scientific or educational interest

Areas which provide space, food, and materials for people practicing a traditional style of life

Areas prone to disaster (geological hazards, floods, rainstorms, earthquakes, landslides, volcanic activity etc)

Areas prone to bushfires

Areas classified as prime agricultural areas

Recharge areas of aquifers

Water bodies characterized by one or any combination of the following conditions:
Tapped for domestic purposes
Within controlled/ protected areas
Which support wildlife and fishery activities

Mangrove areas characterized by one or any combination of the following conditions:
With primary pristine and dense growth
Adjoining mouth of major river system
Near or adjacent to traditional fishing grounds
Which acts as natural buffers against shore erosion, strong winds and storm floods

Estuaries and lagoons

Other coastal areas of ecological, fisheries or tourism importance or which are subject to dynamic change

Wetlands

Rivers

Areas of high population density

# ANNEX 2

## ToR for safeguard focal persons

**Safeguards Implementation Strategy**

**Introduction**

The Sustainable Rural Water and Sanitation Project (SRWSP) has an overall objective to expand access to, and ensure sustainable water supply and sanitation services in rural and small town communities in six regions in Ghana. The project triggered 2 of the 10 World Bank safeguards policies for which the required instruments; a Resettlement Policy Framework (RPF) and an Environmental and Social Management Framework (ESMF) have been prepared. These 2 policies are the Involuntary Resettlement (OP 4.12) and the Environmental Assessment (OP 4.01). These two policies are to ensure better outcomes for the project from a social and environmental perspective. Copies of the 2 safeguards frameworks can be obtained from CWSA.

**Mechanism for Implementing Safeguards**

There shall be a three tier structure from the national to the community level. Each level will have an officer with specific responsibilities. The responsibilities and relationships among the three officers are mutually inclusive and synergistic. This is to facilitate ownership and mainstreaming of safeguards as integral part of project implementation. The positions identified are as follows:

***Project Safeguards Coordinator (PSC)***: This person shall either be a staff member of CWSA or a consultant hired to coordinate the implementation of both environmental and social safeguards issues in the project. The PSC should be conversant with the World Bank safeguards policies, the instruments and their application. Particular attention will be on the two safeguards policies triggered by the project. His/her level of understanding should be adequate to facilitate training and other capacity related activities on safeguards.

***District Safeguards Officer (DSO):*** This person can be any of the team members involved in the implementation of the project at the district level. The District Environmental Health Officer or the Community Development Officer will be commendable candidates for this position due to the relative similarities of their specific technical roles. With or without any knowledge on World Bank safeguards issues, the selected officer will benefit from capacity building on safeguards to be facilitated or organized by the PSC. This will enable the officer understand his terms of reference, operate within them as expected and in fact increase capacity at district level on safeguards.

***Community Safeguards Facilitator (CSF):*** The responsible representative ( male or female) shall be a member of the Watsan or Water Board capable of participating in capacity building workshops and able to relate to community leaders and opinion leaders on land issues in particular and interface with the District safeguards officer with regard to safeguards requirements. His or her respective role as per the TOR below will be discussed and explained in simple and familiar language.

## The Terms of Reference (TORs) for Safeguards Officers

The outlined terms of reference are consistent with the content of Environmental measures outlined in Projects Implementation Manual of the National Community Water and Sanitation Program (2008).

***Project Safeguards Coordinator- CWSA responsibility for Safeguards***

1. He shall be the main contact person with overall responsibility for action and reporting on Safeguards for the project.
2. Ensure distribution of all safeguards documents to the respective participating districts and other relevant stakeholders.
3. Responsible for training or facilitating training other project staff in World Bank safeguards policies/GOG environmental and resettlement policies especially those triggered by the project.
4. Ensure that all environmental and social safeguards issues are incorporated into Bid and specification documents for all sub project type.
5. Ensure that the Project Safeguards Officer (PSO) and Community Safeguard Facilitators (CSF) understand their role and carry out their activities as per their TOR.
6. Review and clear all safeguards reports submitted by the Projects Safeguards Officers (PSO) as input to project safeguards report.

***District Safeguards Officer (DSO)-Districts Responsibility for Safeguards***

1. Work with the Project Safeguards Coordinator to ensure that all environmental and social safeguards issues are incorporated into Bid and specifications documents for all sub project types.
2. Ensure that the Contractor has designated one of his workers to be responsible for safeguards including environmental, health and safety (EHS) issues and as specified in contractual agreements.
3. Ensure that safeguards issues are included as part of the training at District level and contractors invited to participate.
4. Shall draft safeguards report based on collated documents and reports from Community Safeguards Officers as part of usual District reporting on the project.
5. Shall be the first point of contact for CSF in case of any challenging issues on project-related safeguards - land, environmental, safety and health and draw the Safeguards Coordinator's attention in case of lack of resolution
6. Collaborate with relevant authorities (chiefs and elders) and other community members and facilitate the acquisition of land for subprojects and implementation of any other safeguards related activity.
7. Ensure that all documentation on land released for sub-projects are acquired and properly endorsed.
8. Perform any other related activities that may be assigned by the Project Safeguards Officer to whom s/he will report.

***Community Safeguards Facilitator (CSF)-Community Responsibility for Safeguards***

1. Shall be responsible for the day-to-day contact with Contractor and other relevant players on safeguards implementation issues
2. Shall follow up on any identified safeguards concerns like land acquisition and environmental issues and any others worth exploring.
3. Work with Contractor to ensure implementation of safeguards requirement as specified in contract documents and report on safeguards issues as discussed at regular site meetings.

## ANNEX 3: Screening checklist for Environmental and Social Issues

| 1. Project Information: Name and Contact Details: | | | |
|---|---|---|---|
| **Project Name** | Location: (region/district/village) | | |
| | If other, explain: | | |
| **District Focal Point** | | | |
| **Name of reviewer:** | | **Date of screening:** | |

| Subproject Details: Attach location map (longitude – latitude coordinates (GPS reading) if available): | |
|---|---|
| Type of activity:<br>*What will be done, who will do it, what are the objectives and outcomes* | |
| Estimated Cost: | |
| Proposed Date of Commencement of Work:<br><br>Expected Completion of Work | |
| Technical Drawing/Specifications Reviewed: | Yes/No – refer to Application Portfolio |

| 2. Physical Data: | Comments |
|---|---|
| Subproject Site area in ha | |
| Extension of or changes to existing land use | |
| Any existing property to transfer to subproject | |
| Any plans for construction, movement of earth, changes in land cover | |

| 3. Preliminary Environmental Information: | Yes/No | Refer to Process Framework | Comments |
|---|---|---|---|
| Is there adjacent/nearby critical natural habitat? | | | |
| Is there activity close to Forest Reserve? | | | |
| What is the land currently being used for? (e.g. agriculture, gardening, etc) | | | List the key resources. |
| Will the proposed activities have any impact on any ecosystem services, biodiversity issues or natural habitats? | | | |

| | | | |
|---|---|---|---|
| Will there be restrictions or loss of access to using natural resources in any traditional areas including medicinal plants or those of economic value for livelihoods? | | ✓ | |
| Will there be water resource impacts? | | | |
| Will there be soil impacts? | | | |
| Any cultural heritage/sacred sites in project area? | | ✓ | |

| **4. Preliminary Social and Land Information:** | **Yes/No** | **Refer to Process Framework** | **Comments** |
|---|---|---|---|
| Has there been litigation or complaints of any environmental nature directed against the proponent or subproject? | | ✓ | |
| Will the subproject require the acquisition of land? | | | |
| What is the status of the land holding (customary, lease, community lands, etc)? | | ✓ | |
| Are there outstanding land disputes? | | ✓ | |
| Has there been proper consultation with stakeholders? | | ✓ | |
| Is there a grievance process identified for PAPs and is this easily accessible to these groups/individuals? | | ✓ | |
| Will there be any changes to livelihoods? | | ✓ | |
| What are the main issues associated with community benefits? | | ✓ | |
| Will any restoration or compensation be required with affected persons? | | ✓ | |

## 5. Impact identification and classification:

When considering the location of a subproject, rate the sensitivity of the proposed site in the following table according to the given criteria. Higher ratings do not necessarily mean that a site is unsuitable. They indicate a real risk of causing undesirable adverse environmental and social effects, and that more substantial environmental and/or social planning may be required to adequately avoid, mitigate or manage potential effects. The following table should be used as a reference.

| **Issues** | **Site Sensitivity** | | | **Rating (L,M,H)** |
|---|---|---|---|---|
| | **Low** | **Medium** | **High** | |
| **Natural habitats** | No natural habitats present of any kind | No critical natural habitats; other natural habitats occur | Critical natural habitats present; within declared protected areas | **If High Refer to Annex 3.1 and Contact Regional EPA** |
| **Water quality and water resource availability and use** | Water flows exceed any existing demand; low intensity of water use; potential water use conflicts expected to be low; no potential water quality issues | Medium intensity of water use; multiple water users; water quality issues are important | Intensive water use; multiple water users; potential for conflicts is high; water quality issues are important | |

| | | | | |
|---|---|---|---|---|
| **Natural hazards vulnerability, floods, soil stability/ erosion** | Flat terrain; no potential stability/ erosion problems; no known flood risks | Medium slopes; some erosion potential; medium risks from floods | Mountainous terrain; steep slopes; unstable soils; high erosion potential; flood risks | |
| **Land and Land use Tenure** | No conflicts, disagreements around use of land, tenant farmer rights and location of admitted farms and farmers transparent | Process of land regularization and rights to natural resources being worked out with clear communication and grievance process in place | Land conflicts historically unresolved, admitted farmers being evicted, tenant farmers loosing rights and no transparency or grievance redress available | **If Medium or High Refer to Process Framework** |

| **6. E & S assessment comments based on site visit:** |
|---|
| Summary Observations |

**Determination of environmental category based on findings of the screening: A ____B ____C ____**

☐ Requires an EIA
☐ Requires preparation of additional E&S information
☐ Does not require further environmental or social due diligence

**Prepared by:** Date:

# ANNEX 4

# EPA REGISTRATION FORM, FORM EA1

# ENVIRONMENTAL PROTECTION AGENCY, GHANA

## ENVIRONMENTAL ASSESSMENT REGISTRATION FORM

**(To be completed in Duplicate)**

**FEE: ⊄50,000**

**Serial No.**

## FORM EA1

## PROPONENT:

Address for correspondence:

Contact person: Position:

Phone No.: Fax No.:

Email:

| ASSESSMENT NO: | | FILE NO: | |
|---|---|---|---|

Environmental Protection Agency
P.O. Box M 326
Accra, Ghana

Tel: 664697/8, 664223, 662465
Fax: 662690
Email: support@epagghana.org
Web-site: www.epa.gov.gh

*This form shall be submitted to the relevant EPA Regional Office. It is important that you read carefully the guide for completing the form before starting.

**1. PROPOSED UNDERTAKEN/DEVELOPMENT**

Title of proposal (General Classification of undertaking)

Description of Proposal (nature of undertaking, unit processes [flow diagram], raw materials, list of chemicals (source, types and quantities), storage facilities, wastes/ by-products (solid, liquid and gaseous)

Scope of Proposal (size of labour force, equipment and machinery, installed/production capacity, product type, area covered by facility/proposal, market)

**2. PROPOSED SITE**

Location (attach a site plan/map)

Plot/House No. Street/Area Name

Town District/Region

Major Landmarks (if any)

Current zoning

Distance to nearest residential and/or other facilities

Adjacent land uses (existing & proposed)

Site description (immediate activities should be described)

## 3. INFRASTRUCTURE AND UTILITIES

Structures (buildings and other facilities proposed or existing on site)

Access to water (source, quantity)

Access to power (type, source & quantity)

Drainage provision in the project area

Nearness to water body

Access to project site:

Other major utilities proposed or existing on site(e.g. sewerage, etc)

## 4. ENVIRONMENTAL IMPACTS

Potential environmental effects of proposed undertaking (Both constructional and operational phases)

**5. OTHER ENVIRONMENTAL ISSUES**

Potential significant risks and hazards associated with the proposal (including occupational health and safety). State briefly relevant environmental studies already done and attach copies as appropriate.

**6. CONSULTATIONS**

Views of immediate adjourning neighbours and relevant stakeholders (provide evidence of consultation)

**7. MANAGEMENT OF IMPACTS AND ENVIRONMENTAL ENHANCEMENT MEASURES**

**ATTACHMENTS**

Tick appropriate boxes below indicating that the following required documents have been attached:

- ☐ Authentic site plan (signed by a licensed surveyor and certified by Survey Dept.)
- ☐ Block plan of the site
- ☐ Photographs of the site
- ☐ Fire report from the Ghana National Fire Service
- ☐ Zoning letter from Town & Country Planning Department

**DECLARATION:**

*I, ……, hereby declare that the information provided on this form is true to the best of my knowledge and shall provide any additional information that shall come to my notice in the course of processing this application. I also declare that information provided is true.*

Signature Date

* Use additional sheets where spaces provided in 3, 4 and 5 are inadequate.