



**REPORT ON ENVIRONMENTAL SCAN OF WATER
SECTOR IN NORTHERN REGION**

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1.0 Background to study

Over the past decades a lot of investment has gone into the provision of rural water facilities particularly in developing countries including Ghana. Undoubtedly, this has improved access to rural water supply by many poor people. According to the WHO/UNICEF Joint Monitoring Program for Water Supply and Sanitation, access to improved water supply in Sub-Saharan Africa increased from 49% in 1990 to 60% in 2008. In Ghana, over the last two decades, access to improved drinking water by rural populations has increased from 37% in 1990 to 74% in 2008 (WHO/UNICEF, 2010). Current coverage for rural water supply is 61% and 46% for Northern Region and East Gonja district respectively.

In recent times, it has been observed that some of the water supply facilities that have been provided are not functioning as expected, while there are a few which are totally non-functional, others are performing below optimal levels. In Africa, it is estimated that at all times 30% of all handpumps are not working (RWSN, 2009). It has been projected that between 20% and 70% of installed hand pumps in Sub-Saharan Africa are not functioning (RWSN, 2007). This is not very different in Ghana, as it is estimated that 30% of water systems are not functioning (WASHCost Ghana Survey, 2010).

This state of affairs clearly poses many challenges to sustainable provision of rural water services and therefore the need to ensure that facilities provided remain functional throughout their design life and beyond producing water indefinitely becomes imperative.

Against this backdrop, the Sustainable Services at Scale (Triple-S) project is a multi-country learning initiative of the International Water and Sanitation Center (IRC), with the overall goal of improving sustainability of rural water services being implemented in Ghana. The aim is to support governments and stakeholders in the water sector to improve rural water service delivery through; bringing about greater harmonisation and increased sector capacity. Under phase one of the project, which is designed to create the necessary framework conditions for piloting Service Delivery Approach (SDA) in Ghana, significant achievements have been choked following its completion. This has therefore paved the way for the commencement of phase two which will focus on piloting SDA in three selected districts in three regions of which East Gonja in Northern Region is a pilot district.

In order to roll out phase two activities of the project, it is important to have a clear understanding of the water service delivery environment in the pilot district to inform the kind of activities to carry out to achieve the project outcomes. Against this backdrop, an

environmental scan was undertaken in the Northern Region to gain greater insight into the nature and scope of the water sector in the Region.

1.1 Objectives of the Study

The specific objectives of the study were to:

1. Identify key stakeholders in the water sector and opportunities for collaboration and synergies.
2. Document information on existing platforms for sharing important sector information, gaps, opportunities and interest in establishing effective learning alliances.
3. Document any existing approaches used by partners to monitor water services in the region.
4. Identify and gain understanding of current information and knowledge management systems and practices in the district.
5. Document achievements, challenges and lessons learnt from past and present water sector projects and programmes in the region that would enable SDA adoption.

1.2 Study Area

The Northern Region is situated between 8°-11° N latitude and 0°-3° W longitude and occupies an area of about 70,383 square kilometers accounting for 41% of total land mass of Ghana. It shares boundaries with the Upper East and the Upper West Regions to the north, the Brong Ahafo and the Volta Regions to the south, and two neighbouring countries, the Republic of Togo to the east, and La Cote d' Ivoire to the west. The region is drained by the Black and white Volta and their tributaries; Rivers Nasia and Daka. The population of the region is projected at 2,245,402 as at 2011 with about 63% having access to potable drinking water (CWSA-NR, 2011). Tamale is the administrative capital of Northern Region and lies about 175 km east of 1° longitude west and 9° latitude north. The Region has 20 districts including the East Gonja district.

The East Gonja District is one of the 20 districts of the Northern Region and is located at the South-eastern section of the Northern Region of Ghana. The district lies within Latitude 8°N and 9.29°N and Longitude 0.29E and 1.26°W. It shares boundaries with Yendi and Tamale

districts to the North, Central Gonja District to the West, Nanumba-North, Nanumba-South and Kpandai Districts to the East, and the Volta and Brong Ahafo Regions to the South. The total land area of the metropolis is 9,015 square kilometres, occupying about 15.3% of the landmass of the Northern Region.

The population of East Gonja is estimated at 127,304 as at 2011 which is predominantly rural. The main economic activity of the people is agriculture which employs over 80% of the population. Crops cultivated are mostly cereals and tubers. About 59,813 representing 46.98% of the total population have access to water in the district as at the end of 2011(CWSA-NR, 2011).

1.3 Scope of study

The study covered Tamale Metropolis and East Gonja in the Northern Region based on the fact that these were purposively selected in the Northern Ecological Zone as pilots for the Triple-S project in Ghana. The study was undertaken between July and August 2011.

2.0 Methodology

The study employed both primary and secondary data collection techniques. The primary data collection techniques used were key informant interviews using interview guides and Focus Group Discussions. The key informant interviews were used to collect information on the nature and scope of the water sector in the Region from key stakeholders who included: Heads of Local and International Non-Governmental Organisations (NGOs) operating in the Region and the pilot district, the Regional Director, Extension Services Specialists, Water and Sanitation Engineers, and Information Technology Specialist of the Northern Regional Office of Community Water and Sanitation Agency (CWSA), and Private Contractors. Others interviewed were the District Water and Sanitation Team Leader, District Planning Officer, and District Coordinating Director of the East Gonja District Assembly. This allowed respondents to express their views on water service delivery in the region.

Focus Group Discussions were held with key groups in the water sector including Northern Regional Water and Sanitation Team (RWST), top management of the East Gonja District Assembly, and the Steering Committee of the Interagency Coordinating Committee (ICC) to gain deeper insight into the water sector and to triangulate responses from key informant interviews.

The secondary data collection involved the review of relevant documents and literature on water service delivery in the region including quarterly and annual reports, District Monitoring and Evaluation System (DiMES) reports, District Medium Term Development Plan (MTDP), and District Water and Sanitation Plan (DWSP) obtained from the Northern Region office of CWSA and East Gonja district respectively.

3.0 Findings of the Study

3.1 Activities of key stakeholders in the water sector in Northern Region and opportunities for collaboration and synergies

This section presents the main findings of the study in Table 3.1. The study observed that majority of the stakeholders in the Northern Region water sector were bilateral and international organizations which raises concerns about the sustainability of their interventions when the projects and programmes they are implementing phase out.

A greater number of organizations were found to operate largely in the districts and peri-urban area of the Tamale Metropolis focusing on rural water supply through the construction of boreholes, hand dug wells with pumps and Small Town Water Systems.

The study further observed that there is a preponderance of organizations towards water infrastructure provision and formation and training of water service providers. In respect of monitoring of operations and maintenance of water facilities, very little seems to have been done by the organizations surveyed which put the sustainability of these facilities in jeopardy.

Table 1.0 Key stakeholders in the water sector and their major activities in the Northern Region

N o.	Name of Organization	Scope of Operations	Main Activities
1	Community Water and Sanitation Agency	Rural and Urban	Water & Sanitation facility delivery, Hygiene promotion, coordination, advocacy, monitoring and evaluation of capacity building, policy formulation development of innovative approaches
2	SIMLI AID	Rural	Water & Sanitation facility delivery
3	UNICEF	Rural	Water & Sanitation facility delivery, Hygiene promotion, advocacy, capacity building, development of innovative approaches
4	Catholic Relief Services(CRS)	Rural and Urban	Water & Sanitation facility delivery, Hygiene promotion, advocacy, capacity building, information dissemination in WASH
5	WaterAid Ghana	Rural and Urban	Water & Sanitation facility delivery, Hygiene promotion, advocacy, capacity building, research and knowledge management,

			integrated water resource management, hygiene promotion
6	Water in Africa(W.A.T.E.R)	Rural	Water and sanitation facility delivery, rain water harvesting
7	World Vision Ghana	Rural and Small Towns Systems	Water and Sanitation Facility delivery, research and knowledge management, hygiene promotion, capacity building
8	Church of Christ Rural Water Development Project	Rural and Urban	Water facility delivery, handpump spare parts distribution, training of area pump mechanics and pump caretakers, sanitation and hygiene promotion
9	Northern Regional Poverty Reduction Programme(NORPRE P)	Rural and Small towns	Capacity building, hygiene promotion, water and sanitation facility delivery
10	Community Life Improvement Programme(CLIP)	Rural	Water and sanitation facility delivery, hygiene promotion, capacity building
11	Gub-Katimali Society	Rural	Water facility delivery, formation WATSAN Committee
12	Integrated Action for Community Development(INTAGR AD)	Rural and Small Towns	Hygiene promotion, Water and Sanitation facility delivery
13	New Energy	Rural, Small Town urban and peri-urban	Water & Sanitation facility delivery, Hygiene promotion, advocacy and policy influence, capacity building
14	Partners in Participatory Development(PAPAD EV)	Rural and Small towns	Capacity building and community animation
15	TIYUMTABA Integrated Development Association(TIDA)	Rural	Water & Sanitation facility delivery, Hygiene promotion, advocacy and policy influence, capacity building
16	Tuma Kavi	Rural and Small Towns	Water & Sanitation facility delivery, Hygiene promotion, capacity building
17	Living Water	Rural and Small	Water facility delivery, Hygiene promotion,

	Engineering Company Limited	towns	capacity building
18	Pragmatic Outcomes	Rural and Urban	Community animation and sensitization, participatory training/capacity development, participatory monitoring and evaluation, feasibility studies, hygiene and sanitation sensitization, baseline studies
19	ROTA Integrated Development Association	Rural and Urban	Water & Sanitation facility delivery, Hygiene promotion, advocacy and policy influence, capacity building and Integrated Water Resource Management
20	Tsongma Community Development Foundation(TICODEV)	Rural and Urban	Capacity building, advocacy, gender, research and knowledge management in the formation and training of water service providers
21	Watersites Limited	Rural and Small Towns	Research and water facility delivery
22	Rural Women's Initiative for Development and Empowerment (RUWIDE)	Rural	Hygiene promotion, WATSAN Group formation/Training, Town Hall Meetings
23	Juxtapose Integrated Development Association(JIDA)	Rural	Formation and training of Water and Sanitation Committees, hygiene and sanitation promotion
24	Association of Water and Sanitation Development Boards(AWSDBs)	Rural	Establishment and management of common reserve fund to support Water and Sanitation Development Boards(WSDBs) in distress, advocacy, Information management and sharing, capacity building for WSDBs
25	Netherlands Development Organisation(SNV)	Rural	Capacity building and advocacy support to local organizations and District Assemblies for improved programme implementation and management
26	Presbyterian Church of Ghana Water Project	Rural	Rainwater harvesting, Formation and training of Water and Sanitation Committees, hygiene and sanitation promotion
27	PENORUDAS	Rural	Water facility provision, capacity building, advocacy, WATSAN training

28	Independent Development Organisation	Rural	Water facility provision, capacity building
29	Afram Plains Development Organization(APDO)	Rural	Water facility provision, capacity building, Community Led Total Sanitation, advocacy, hygiene promotion

3.2 Major Projects implemented by partners in the sector

The water sector in the Northern Region is replete with many organizations implementing a gamut of interventions to improve access to water by the rural poor. Generally, these interventions have contributed to an increase in rural water supply in the Region.

Table 1.1 Major programmes ongoing/implemented in the sector and their implementing Partners

Name of project	Implementing/Donor Organisation	Scope
Ghana Rural Water Project	World Vision Ghana	Region wide
Northern Region Small Towns Water & Sanitation Project(NORST)	Canadian International Development Agency	Region wide
Northern Region Water and Sanitation Project (NORWASP)	Canadian International Development Agency	Region wide
Rural Water and Sanitation Project in the Northern Region	Agence Française de Développement	Region wide
Integrated Community Water and Sanitation Improvement Project (ICOWSIP)	Catholic Relief Service	Region wide
Global Water Initiative Project	Catholic Relief Service	Region wide
Northern Regional Poverty Reduction Programme(NORPREP)	International Fund for Agricultural Development	Region wide
Church of Christ Rural Water Development Project	Church of Christ	Region wide

3.3 Key challenges to sustainable delivery of water services identified by programme/project implementers

The following were identified as major obstacles impeding sustainable delivery of water services by project implementers:

- The complexity and costly operationalisation of Community Ownership and Management
- Inadequate funding for District Water and Sanitation Teams (DWSTs)
- Limited capacity of DWSTs
- Limited role played by District Assemblies in regulating activities of NGOs in the district
- Lack of comprehensive data on functionality of water systems
- Weak coordination and harmonization of activities in the WASH sector
- Limited innovation and creativity in the sector driven by limited opportunities for learning and sharing of information and knowledge
- Lack of documentation of activities in the sector by partners
- Lack of post construction support to ensure continued functionality of facilities
- Frequent changes/dissolution of WSDBs and Water and Sanitation Committees.

3.4 Technologies in use for rural water delivery

A number of technologies have been employed for the provision of water facilities for small communities and towns. Major technologies include:

3.4.1 Small communities-Point sources

- Hand dug wells fitted with hand pumps
- Boreholes fitted Hand pumps
- Mechanised boreholes with limited distribution
- Rainwater harvesting

3.4.2 Small Towns-Pipes Schemes

- Ground water based pipes schemes
- Surface water with slow sand filtration piped schemes

3.5 Knowledge and information management

Knowledge and information management play a pivotal role in facilitating a culture of sharing valuable information, best practice and experiences which prevents re-invention of the wheel and maximizes resources and effort. A look at the water sector in the region reveals an absence of a structured, systematic and well organized system of capturing best practices and experiences for sharing with the wider community. Much of the information on the sector has not been captured nor shared, and the little available is held at individual organizational level making accessibility to the public difficult.

3.6 Approaches in water service delivery

The predominant approach in water service delivery in the Northern Region is the Community –Based Management (COM) approach which underlies the National Community Water and Sanitation Plan (NCWSP), and emphasizes effective community participation in planning, implementation and management of water facilities. This involves water committees that operate and maintain completed water facilities on day-to-day basis to ensure regular flow of water largely on voluntary basis. For point sources such as boreholes and hand dug wells, management is vested in Water and Sanitation (WATSAN) Committees supported by pump care takers in trust for the community and on behalf of the District Assembly. Similarly, Water and Sanitation Development Boards (WSDBs) are responsible for the day-to-day operation and management of piped schemes in small towns. Ultimate responsibility for water facilities rests with District Assemblies who are the service authorities.

3.6.1 Challenges with COM operationalisation

The following were the challenges observed to bedeviling the function of community based management:

- Weak community structures to maintain and operate water facilities
- Lack of motivation for WATSANs and WSDBs to operate and manage water facilities

- Operationalisation of Community Ownership and Management is time consuming and expensive
- High attrition rate of area Mechanics because of high demand for their services
- Inadequate capacity (both human and logistics) of CWSA to play its advisory role of supporting the effective implementation of COM
- Politicisation of the constitution of WATSAN Committees and WSDBs

3.7 Approaches in monitoring of water service delivery

The water sector in the region is characterized by numerous organisations with varied ways of monitoring and evaluating the functionality of water facilities. Many of these monitoring approaches are not structured, and often done on adhoc basis. This often results in the generation of different data on the performance of the same facilities. In an attempt to address this challenge, the CWSA introduced DiMES to harmonize data that is generated from the facilities by District Assemblies. But, DiMES has not been implemented widely in the country, particularly at the district level. DiMES is a tool developed by Community Water and Sanitation Agency for monitoring and evaluating water and sanitation facilities. This system facilitates the determination of level of water coverage from the facilities and infrastructure that are found on the ground. The DiMES also provides a means for planning for investments in these facilities and infrastructure for equitable development through a strategic investment planning model incorporated into the system. Additionally it provides means of managing the facilities and infrastructure for sustainability and efficiency.

The CWSA with support from United Nations International Children Emergency Fund (UNICEF) implemented the DiMES in 10 districts of the Northern Region including East Gonja aimed at institutionalizing it to improve information management at the district level on WASH. So far, computers have been provided and training and installations of software undertaken. However, very few districts have been able to populate the database with data largely due to lack of funds for DWSTs to gather information from facilities.

3.7.1 Challenges with DiMES implementation

Challenges identified with the performance of DiMES included:

- Low level of district personnel (DWSTs) capacity to handle the DiMES.
- Weak coordination between the district and contractors which leads to inaccurate information on facilities at the district level. When the District Assembly is not aware of an on-going construction. It becomes difficult to get information from a contractor when the work is finished.
- Inadequate funds for DWSTs to regularly collect data from facilities to update the DiMES.
- Lack of commitment by District Assemblies towards the implementation and management of DiMES.
- Inadequate logistics such as motorbikes, computers, printers and other accessories to enable DWSTs manage DiMES

3.8 Platforms for sharing information on the water sector

With a rapidly changing water sector, it is imperative that the sector is able to respond appropriately to these changing circumstances through learning, innovation and scale-up. However, the Northern Region and East Gonja district water sector is characterized by a weak culture of learning, information sharing and networking because of the absence of many strong networks for this endeavour particularly at the district. In the past several attempts have been made, and to continue to be made to establish platforms for learning and information sharing.

By far, the only noticeable platform existing and well recognized is the Interagency Coordinating Committee convened by the Guinea Worm Eradication Programme in collaboration with the Regional Coordinating Council. The Interagency Coordinating Committee was established some two years ago to address the scourge of Guinea Worm in the Northern Region through partnership, information and knowledge sharing, accountability and pooling of resources together. ICC has successfully executed that agenda by achieving a break in transmission of guinea worm in 2011. The ICC therefore represents a strong rally point for actors in the water sector in the region, and has thrived over the years on the basis of unalloyed commitment and exceptionable spirit of voluntarism of its members. The ICC can therefore serve as a good entry point for the promotion of learning and information sharing on the water sector in the region by Triple-S project.

4.0 Conclusion and Recommendations

The water sector in the Northern Region has come a long way and remains an important sector for ensuring that the Region meets the Millennium Development goal on water. Key actors in the sector have over the past decade provided a lot of water infrastructure including boreholes and small towns systems for rural communities to improve access to potable water. However, it is clear from the study that high cost of operationalising COM, absence of platforms for sharing important sector information, lack of monitoring and evaluation systems for tracking functionality of water facilities, and weak harmonisation and coordination of partner's efforts pose a great challenge to the sustainable management of rural water systems provided with huge funds.

The study also observed that majority of organizations working in the water sector of Northern Region are international and bilateral in nature and have focused most of their activities in the provision of water infrastructure with little or no funding going into post construction support to take care of support cost, minor maintenance and operations and capital maintenance cost among others.

From the fore-going analysis, if sustainability in water service delivery is to be realized in the Region, then: government should provide adequate funds for the full operationalisation of COM through the strengthening of water management structures at the community level; DiMES which aimed at harmonising data that is generated from the facilities by District Assemblies should be rolled out in all districts and implemented fully; ICC should be strengthened to serve as a learning alliance platform for experience sharing, documentation of best practices and sharing of sector information for all players in the water sector of the region; NGOs especially bilateral and international ones should be encouraged to adopt Life Cycle Cost Approach to planning and budgeting for the delivery of water services and strengthening District Assemblies to play their service authority role of ensuring compliance to standards in the water sector by organizations operating in the sector.

To ensure sustainability in rural water supply, players in the water sector of Northern region should focus more of their efforts and resources in promoting a culture of learning and information sharing, documenting best practices, providing post construction support for monitoring operations and maintenance of facilities, and shifting away from over-emphasis on new infrastructure to service provision to guarantee indefinite supply of water to rural communities.

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About Triple-S

Triple-S (Sustainable Services at Scale) is an initiative to promote 'water services that last' by encouraging a shift in approach to rural water supply—from one that focuses on implementing infrastructure projects to one that aims at delivering a reliable and lasting service.

The initiative is managed by IRC International Water and Sanitation Centre in the Netherlands in collaboration with agencies in different countries
In Ghana, Triple-S is hosted by the Community Water and Sanitation Agency (CWSA).

