



**USAID**  
FROM THE AMERICAN PEOPLE

# LIBERIA WASH SECTOR ASSESSMENT DESK REVIEW

## WASH SECTOR STATUS AND TRENDS



JUNE 2014

This publication was produced for review by the United States Agency for International Development. It was prepared by Tetra Tech.

This report was prepared for the United States Agency for International Development (USAID) under Contract No. EPP-I-00-04-00019-00, Task Order 01/AID-OAA-TO-10-00021. This work is part of USAID's Quick Response Technical Assistance Task Order under the Integrated Water and Coastal Resources Management IQC II (Water II IQC).

**Tetra Tech Contact Information:**

Morris Israel, [Morris.Israel@tetrattech.com](mailto:Morris.Israel@tetrattech.com)  
David Favazza, [David.Favazza@tetrattech.com](mailto:David.Favazza@tetrattech.com)

Tetra Tech  
159 Bank Street, Suite 300  
Burlington, Vermont USA 05401  
Tel: 802-495-0282

COVER PHOTO: A woman returns home with water collected in the City of Sanniquellie, Liberia. (Photo by Thomas Keeffe, Tetra Tech)

All photos in this report are by Tetra Tech unless otherwise noted.

# LIBERIA WASH SECTOR ASSESSMENT DESK REVIEW

WASH SECTOR STATUS AND TRENDS

JUNE 2014

## **DISCLAIMER**

The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.



# CONTENTS

- Acronyms and Abbreviations ..... ii**
- 1.0 INTRODUCTION..... 1**
- 2.0 WASH SECTOR OVERVIEW ..... 3**
  - 2.1 RECENT SECTOR POLICIES, STUDIES AND PLANNING DOCUMENTS ..... 3
  - 2.2 CLIMATE AND WATER RESOURCES ..... 4
  - 2.3 WATER AND SANITATION SITUATION OVERVIEW ..... 5
  - 2.4 WATER AND SANITATION ACCESS DATA ..... 8
  - 2.5 INSTITUTIONAL FRAMEWORK ..... 11
  - 2.6 CAPACITY CONSTRAINTS ..... 19
  - 2.7 FINANCE ..... 20
- 3.0 DONOR ACTIVITIES ..... 23**
- 4.0 MONITORING AND LEARNING ..... 26**
- 5.0 PRIORITY AREAS ..... 28**
- 6.0 REFERENCES..... 33**

DRAFT

# ACRONYMS AND ABBREVIATIONS

AfDB	African Development Bank
AWF	African Water Facility
CBO	Community-Based Organization
CDA	County Development Agenda
CDF	County Development Fund
CHT	County Health Team
CLTS	Community Led Total Sanitation
DCMHyP	Directorate of Community Mobilization and Hygiene Promotion in MoHSW
DEOH	Division of Environmental and Occupational Health
DfID	Department for International Development
DGIS	Directorate-General for International Cooperation of The Netherlands
ECHO	Humanitarian Aid Department of the European Commission
EHELD	Excellence in Higher Education for Liberian Development
EMUS	Emergency Monrovia Urban Sanitation
EPA	Environmental Protection Agency (Liberia)
EWG	Engineering Working Group
GEMS	USAID Governance and Economic Management Support Program
GIS	Geographic Information System
GoAL WASH	Governance Advocacy and Leadership for Water, Sanitation and Hygiene
GoL	Government of Liberia
IIU	Infrastructure Implementation Unit
IWASH	USAID/Liberia Integrated Water, Sanitation, and Hygiene Project
IWRM	Integrated Water and Resources Management
JMP	Joint Monitoring Programme
LHS	Liberian Hydrological Service
LISGIS	Liberia Institute of Statistics and Geo-Information Services
L-MEP	Liberia Monitoring and Evaluation Project
LMWP	USAID/Liberia Municipal Water Project
LWSC	Liberia Water and Sewer Corporation
M&E	Monitoring and Evaluation
MCC	Monrovia City Corporation
MDGs	Millennium Development Goals
MIA	Ministry of Internal Affairs
MLME	Ministry of Land, Mines, and Energy
MoE	Liberia Ministry of Education
MoF	Liberia Ministry of Finance
MoHSW	Liberia Ministry of Health and Social Works
MoPEA	Liberia Ministry of Planning & Economic Affairs
MPW	Liberia Ministry of Public Works
MOU	Memorandum of Understanding
MWSSP	Monrovia Water Supply and Sanitation Rehabilitation Project
NGO	Non-governmental Organization

NHPC	National Housing and Population Census
NRWASHP	National Rural WASH Programme
NRWSSP	National Rural Water Supply and Sanitation programme
NWRSB	National Water Resources and Sanitation Board
NWSHPC	National Water, Sanitation and Hygiene Promotion Committee
WSSP	Water Supply and Sanitation Policy
O&M	Operation and Maintenance
ODF	Open Defecation Free
PPP	Public-Private Partnerships
PRS	Poverty Reduction Strategy
RBHS	USAID/Liberia Rebuilding Basic Health Services
RWSSB	Rural Water Supply and Sanitation Bureau
SIM	Sector Investment Model
SIP	Sector Investment Plan
SWA	Sanitation and Water for All
TWG	Transition Working Group
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
USD	United States Dollars
UWSSP	Urban Water Supply and Sanitation Project (AfDB funded)
WASH	Water, Sanitation and Hygiene
WHO	World Health Organization
WSP	Water and Sanitation Program, World Bank
WSSC	Water Supply and Sanitation Commission



# 1.0 INTRODUCTION

This Desk Review for Liberia was completed as part of the Water, Sanitation and Hygiene (WASH) Sector Status and Trends assessments being conducted under USAID's Quick Response Technical Assistance Task Order of the Integrated Water and Coastal Resources Management IQC II (Water II IQC). The Desk Review responds to Task 1 of the Work Order. (Task 2 is to conduct a WASH sustainability Assessment of a Mission project utilizing the Sustainability Index Tool (SIT) developed by Aguaconsult under the Rotary International-USAID Partnership).

The objective of the Desk Review is to document current conditions in the Liberia WASH sector to inform future USAID programming decisions. The Desk Review presents the findings of a broad landscape analysis of the WASH sector based primarily on secondary sources and addresses key aspects of the sector, including a review of the financial, institutional, environmental, technical and social considerations. It also identifies important investments in WASH by the host country government, USAID, other donors, NGOs, the private sector, and other stakeholders as appropriate, and identifies ongoing coordination, programming gaps, and opportunities for engagement with stakeholders for more strategic programming in each country.

The Desk Review follows the WASH Sector Status and Trends Assessment Framework developed as a template for the various desk reviews that will be carried out under this work order. The primary audience for this Desk Review is USAID/Liberia Mission.



# 2.0 WASH SECTOR OVERVIEW

## 2.1 RECENT SECTOR POLICIES, STUDIES AND PLANNING DOCUMENTS

Ongoing reform in Liberia's water, sanitation, and hygiene (WASH) sector is largely driven by national policies developed since 2007, including:

- **National Integrated Water Resources Management (IWRM) Policy (2007).** The IWRM Policy addresses overall water management issues within the context of goals for social and economic development.
- **Lift Liberia Poverty Reduction Strategy I (PRS I, 2008-2011).** PRS I aimed at transitioning Liberia from post-conflict emergency reconstruction to development and growth, including WASH improvements.
- **Water Supply and Sanitation (WSS) Policy (2009).** The WSS Policy outlines future institutional arrangements and sets policy with regard to WASH service provision.
- **Agenda for Transformation (AfT) Poverty Reduction Strategy II (PRS II, 2012-2017).** PRS II is intended to set Liberia on a path to becoming a middle income country by 2030.
- **The Liberia WASH Compact: Sanitation and Water for All (2011).** The WASH Compact was signed by the Liberian president in early 2012 and provides an overarching roadmap for Sector development based on government commitments and cross cutting issues.

Commitments set out in the Liberia WASH Compact and other policies were drivers for development of WASH sector studies and plans developed subsequently. A comprehensive list of available resources is provided in Section 6, many of which were used to prepare this desk review and can be consulted for more detail. Below are highlights of key national-level resources developed since 2011.

- **WASH-Liberia.org** – This website, managed by the National Water Sanitation and Hygiene Promotion Committee (NWSHPC), houses a comprehensive array of available information on the Liberia WASH Sector including stakeholders, events, government documents and policies, project information, reports, and data.
- **WaterPoint Atlas of Liberia (2011).** This World Bank Water and Sanitation Program (WSP) supported activity developed Liberia's first nation-wide catalog of existing water points and their condition and operational status.
- **Liberia Water, Sanitation and Hygiene (WASH) Sector Strategic Plan (2012-2017) (2012).** This plan details guidance regarding institutional responsibilities and strategies for implementation of the WASH Compact and sector policies, with focus on achievement of Millennium Development Goals.
- **Liberia WASH Sector Investment Plan 2012-2017 (2012).** This five-year investment plan estimates investment requirements and summarizes current planned investments and gaps to reach the targets set in the WASH Sector Strategic Plan.

- **WASH Sector Capacity Development Needs Assessment (2012) and Capacity Development Plan (2012-2017).** A WASH sector capacity needs assessment was undertaken by the Capacity Development Task Force of the National Water Sanitation and Hygiene Promotion Committee (NWSHPC) and subsequently formulated into a plan with costing and a monitoring, reporting and evaluation framework.
- **Liberia Municipal Water Project (LMWP) Desk Study and Situational Analysis (2012).** LMWP's early investigations included technical, institutional, and socioeconomic analysis at the national level and in its three target cities (Voinjama, Sanniquellie, and Robertsport).
- **Corporate Audit of the Liberia Water and Sewer Corporation (LWSC) (2012).** This comprehensive World Bank-funded independent audit of LWSC highlights critical areas for operational and management improvements to expand and improve service delivery and move toward commercial viability and sustainability.
- **WASH 1<sup>st</sup> Annual Joint Sector Review (JSR) Report (2013) and 2<sup>nd</sup> JSR Preliminary Documents (2014).** The JSR provided a forum for stakeholders to present and discuss progress made against sector goals as set forth in the WASH Sector Strategic Plan 2012-2017.
- **WASH Baseline Study (2013).** UNICEF and Oxfam conducted a study on WASH access and practices in 111 communities (62 rural villages and 49 urban communities) spanning seven counties to serve as baseline for upcoming DGIS (Netherlands) and DfID (U.K.) projects as part of the Unicef Programme of Cooperation with the Government of Liberia (Unicef Liberia Programme 2013-2017).
- **Liberia Water, Sanitation, and Hygiene (WASH) Sector Performance Report (SPR) (2014).** This first-of-its-kind report in Liberia documents progress toward WASH sector goals and was authored by staff from government and donor entities. The SPR represent a concerted effort to bring actors in the fragmented Liberia WASH sector together under a common reporting umbrella.
- **National Rural WASH Program (NRWASHP) Development Study (2014, Ongoing).** This African Development Bank (AfDB)-funded study is developing a National Rural WASH Program to support government investment decision-making. Drafts of the Situational Analysis of rural WASH and a Concept Note have been developed thus far.

## 2.2 CLIMATE AND WATER RESOURCES

Liberia has a tropical climate with two seasons. The wet season lasts from approximately May to October and the dry season runs from approximately November to April. Since 2008, Liberia has averaged roughly 6 to 8 meters of rainfall per year. Although the country is fortunate to have high amounts of rainfall, the distribution throughout the year is extremely uneven, including months in the dry season with little or no rainfall. This causes temporal fluctuations in surface and groundwater yield and quality.

There are six major river basins in Liberia. The St. Paul River is the second longest river, the source of the majority of water for Monrovia, and also includes the former Mt. Coffee hydro-electric plant which is now being rehabilitated. The longest river is the Cavalla, shared between Liberia and Cote D'Ivoire. The Mano River is shared between Liberia and Sierra Leone. Longitudinal flow data for Liberia's surface water supplies are very limited or non-existent since most stream gauges were destroyed during the civil conflict.

Groundwater is generally available throughout the country in amounts sufficient for rural water supply, which commonly employs dug wells and to a lesser extent, drilled boreholes. Water table depths can vary from less than a meter in shallow wells to 100 meters or more in boreholes. Reliable data on boreholes

and yields are scarce, but available information indicates that groundwater yields are not sufficient to support larger municipal supplies in many areas.

The Ministry of Lands, Mines & Energy (MLME) and the Liberia Hydrogeological Service (LHS) are responsible for management for water resources. The Ministry of Health & Social Welfare (MoHSW) is responsible for assessing drinking water quality.

Reliable data on water quality both from surface and groundwater sources are scarce. Studies such as those conducted by USAID's Liberia Municipal Water Project (LMWP) and others indicate widespread microbial contamination in existing shallow groundwater supplies, as well as limitations in the accuracy and technical capacity of local Liberian water quality testing laboratories. In addition to contamination from human waste due to poor sanitation practices, water sources are also subject to potential contamination from mining, logging, farming and other activities due to a lack of watershed management.

## 2.3 WATER AND SANITATION SITUATION OVERVIEW

The lack of access to adequate water and sanitation services for the majority of Liberians results in public health problems, stunted economic development, reduced quality of life and gender inequality. The majority of Liberia's population manually collect water from unimproved or partially protected sources such as shallow wells. Sanitation and hygiene remain inadequate due to a lack of latrines and management systems. Open defecation is the primary method of human waste disposal in rural areas as well as for many urban residents. Water quality from both unprotected and protected sources is commonly poor due to widespread bacteriological contamination.

The Liberian civil conflict (1989-2003) decimated the then existing infrastructure and human capital in the Liberian WASH sector. Education effectively stopped for a generation and many of Liberia's technically qualified citizens left the country.

During and since the end of the conflict, the Government of Liberia (GoL) and a number of donors have struggled to maintain and improve water supply and sanitation access. The bulk of these efforts have been through the provision of shallow wells with hand pumps<sup>1</sup> in both rural and urban areas, and more recently to support burgeoning institutional frameworks, management systems, re-establishment and rehabilitation of piped systems in urban areas and improved sanitation and hygiene.

Activities during the emergency period following the conflict were led by non-governmental organizations (NGOs) coordinated through GoL representatives including the Ministry of Public Works (MPW) and environmental health officers in County Health Teams (CHT).

Prior to the conflict, piped water systems existed in ten<sup>2</sup> of Liberia's 24 urban areas. The City of Monrovia was the only place with a sewerage system. The estimated number of household piped water



**Figure 2-1. Former Water Treatment Facility in Sanniquellie, Liberia**

<sup>1</sup> Although a variety of pump types exist, efforts are underway to standardize on one design, the Afridev.

<sup>2</sup> Monrovia, Buchanan, Kakata, Harper, Greenville, Gbarnga, Robertsport, Voinjama, Tubmanburg and Zwedru

connections throughout the country was estimated to be 27,000, with most being in Monrovia, which also reportedly had 6,000 sewer connections which covered about 25% of the city area. The ten piped water systems and one sewer system were all operated by the Liberia Water and Sewer Corporation (LWSC), which has statutory responsibility for the provision of piped water and sewerage services throughout Liberia. Operations outside of LWSC are referred to as Outstations. Although some citizens fondly recall the days before the conflict when cities had piped water, available information suggests they may have utilized inappropriate technology and been inefficiently operated. Estimated non-revenue water was very high prior to the conflict (upwards of 65%) and collection efficiency was below 50%.

With limited exceptions<sup>3</sup>, piped water is unavailable today outside Monrovia. The towns and cities that once had piped water schemes now rely on rural-type infrastructure including hand dug wells or boreholes. Other water sources also include direct surface water withdrawals, springs, rainwater harvesting (during rainy season), and water vendors who obtain water from one of the aforementioned sources. The shallow wells commonly in use throughout Liberia are subject to bacteriological contamination and many have limited or no yield during the dry season due to inadequate depth. There are no municipal wastewater collection systems operating outside Monrovia.

Liberia's population is approximately 4 million. Almost half of the population lives in urban areas including Monrovia, which represents nearly a third of the country's total population. Even in Monrovia, most of the city remains unserved by the piped water and wastewater collection system, including some densely populated central areas of the city such as Mamba Point (location of US Embassy prior to its recent relocation). The existing water infrastructure has not yet been restored to its pre-war capacity of 16 million gallons per day (mgd) and currently stands at around 4 mgd. Even prior to the conflict, 16 mgd was inadequate to serve the city's surging population. The gravity sections of the limited Monrovia sewerage system are now partially functioning, but no pump stations are operational and the number of sewer connections is drastically reduced compared to the pre-conflict period.

LWSC is financially insolvent, primarily due to crumbling infrastructure that cannot produce sufficient supplies, water tariffs set far below cost recovery rates, and low staff capacity. The organization does not have adequate and transparent internal by-laws, controls and procedures in place. It does not have its own official, written design standards and instead generally relies on donor standards, which can result in a lack of quality and equipment standardization. LWSC has weak technical and administrative capacity and is overstaffed. Accurate data on non-revenue water (NRW) in Monrovia is not available due to insufficient metering and data collection, but this figure is likely in excess of 50%.

The need for quick response by the GoL and donors during the emergency period following the conflict and the lack of structure to support local regulation resulted in conditions in which wells were installed without proper supervision, adherence to standards, documentation or inspection, and are of variable quality and functionality. The GoL now has requirements that address issues such as the static water level in the well when constructed (e.g., the 2010 Guidelines for Water and Sanitation Services in Liberia). However, these current standards do not appear to have been followed for the majority of wells installed during the initial post-conflict period. Similarly, the level of water quality protection afforded by proper well siting of existing wells varies greatly. Many wells lack sufficient setback distance from hazards such as latrines and graves, resulting in potential contamination.

The installation, oversight and regulation of hand pumps are the responsibility of the Ministry of Public Works (MPW). However, MPW lacks the organizational structure, capability and other resources to provide basic oversight and routine monitoring. County Health Teams (CHTs) periodically monitor water quality, but the work is conducted for the entire county and is not systematically recorded by location or parameter. Furthermore, the County Health Teams are often limited in their testing capabilities by a lack of adequate testing materials/mediums.

---

<sup>3</sup> Kakata and Zwedru piped systems have been partially rehabilitated.

A person from the community is commonly selected or has taken on the role of caretaker of the local hand pump and well. This generally informal position often includes various responsibilities such as repairing the well when needed, collecting fees to cover repairs, and controlling the hours of operation of the well. In most cases, no local supply of spare parts to repair broken hand pumps is readily available, resulting in pumps remaining unused or degrading to a permanent state of disrepair. Regular water quality sampling or water quantity measurement is generally not performed and most caretakers have no formal training to repair or operate the hand pumps or perform water quality testing. To address the limited supplies and the slow recharge rates during the dry season, caretakers commonly manage the hours of operation by chaining the well handle or locking the well gate. Hours of operation are also limited to prevent non-community members from using the well. Obtaining water from hand pumps is a source of conflict between residents in many areas and disputes often occur over their place in line, particularly during the dry season.

According to the 2013 WASH Sector Performance Report, sole responsibility for water collection lies with women and girls in 65% of households, compared to 13% of households where boys and men are solely responsible. In urban areas, women and girls are solely responsible in 46% of households, compared to only 23% of urban households where water is only collected by men and boys.

**Water Quality.** Drinking water quality standards exist in line with international norms, but are generally not monitored or enforced. The lack of protocols for laboratory analysis or guidance and regulations on sampling regimes and review greatly limits the utility of water quality standards. Water quality testing is done in a limited and often ad-hoc manner in both the rural and urban settings, primarily due to a lack of funding, supplies, training. Data is not readily available, and recent split sampling conducted by LMWP has shown that the results of existing Liberian laboratories are suspect. Watershed protection plans and related zoning by-laws generally do not exist in Liberia, putting existing water supplies at risk of contamination.

Other sources of water such as rainwater harvesting are utilized in the rainy season, though often in ad hoc arrangements. A strong market for water vending via handcarts and jerricans exists in some areas such as Monrovia. In Robertsport, approximately 20% of residents rely on vendors as their primary drinking water source.



**Figure 2-2. Roadway Conditions during Liberia's Rainy Season**

**Sanitation.** Although many residents in Liberia have latrines, organized wastewater or solid waste management systems are generally not in place and open defecation is prevalent in urban and rural areas throughout the country. Some fecal sludge is collected by vacuum trucks and disposed into lagoons and other water bodies. The lack of fecal sludge management and proper disposal is a serious health concern, particularly in underserved urban and peri-urban areas. Haphazard management of human waste permits wastewater to infiltrate and contaminate the shallow aquifer used to supply hand dug wells.

Community-Led Total Sanitation (CLTS) was first introduced in Liberia in 2009, but did not gain much traction until 2011. The National Technical

Coordinating Unit (NTCU) is responsible for CLTS implementation and is currently triggering communities all over the country in tandem with development partners. It is chaired by the MoHSW and co-chaired by the MPW. In late 2012, NTCU released Guidelines for CLTS Implementation in Liberia.

Most areas in Liberia lack the basic municipal infrastructure and service delivery experience necessary to support a fully functioning water supply system. Although capacity for well installation exists in Liberia,

there is a lack of experienced construction firms with more sophisticated water treatment and distribution system construction experience.

Electricity from a public grid is generally not available outside Monrovia, although plans are in place to re-establish generating capacity including the Mt. Coffee dam and connection to the West Africa Power Pool. Electrical power requirements are typically provided via diesel generators or sometimes solar power, but these energy sources are cost prohibitive for many Liberians.

Roadway access poses a significant challenge to WASH services outside of Monrovia, particularly during the rainy season when travel times are extended and roads are sometimes impassable, causing delays and increasing the cost of transporting chemicals, fuels and spare parts.

## 2.4 WATER AND SANITATION ACCESS DATA

Data on current levels of access to improved water and sanitation vary widely. During a presentation in June 2014, the National Rural WASH Programme presented recent water coverage statistics variation by source (Table 2-1). This data illustrated presents variations in rural water coverage from 35% to 56% and urban water coverage varying from 65% to 79%.

**Table 2-1. Rural-Urban Water Coverage Statistics by Source (NRWASHP)**

Source of Statistics	Reference Year	Rural Water Coverage (%)	Urban Water Supply Coverage (%)	National/Countrywide
NHPC	2008	42%	79%	61%
Water Point Atlas of Liberia	2011			40%
SSIP (2012-2017)	2011	56%	66%	61%
UNICEF/OXFAM WASH Baseline Study	2013	35%	65%	50%

NHPC = National Housing and Population Census

SSIP = WASH Sector Investment Plan

The WHO/UNICEF Joint Monitoring Programme also tracks WASH indicators for a variety of countries. The latest JMP data for Liberia is presented in Table 2-2 and Table 2-3, respectively.

**Table 2-2. JMP Drinking Water Coverage Estimates**

Liberia	Drinking water coverage estimates					
	Urban (%)		Rural (%)		Total (%)	
	1995	2012	1995	2012	1995	2012
<b>Piped onto premises</b>	5	6	1	1	3	4
<b>Other improved source</b>	69	81	46	62	56	71
<b>Other unimproved</b>	25	12	29	13	27	12
<b>Surface water</b>	1	1	24	24	14	13

Source: WHO/UNICEF JMP, 2014

**Table 2-3. JMP Sanitation Coverage Estimates**

Liberia	Sanitation coverage estimates					
	Urban (%)		Rural (%)		Total (%)	
	1995	2012	1995	2012	1995	2012
<b>Improved facilities</b>	26	28	3	6	13	17
<b>Shared facilities</b>	26	29	10	19	17	23
<b>Other unimproved</b>	30	17	18	8	23	13
<b>Open defecation</b>	18	26	69	67	47	47

Source: WHO/UNICEF JMP, 2014

The WASH Sector Strategic Plan 2012-17 provides a narrative summary of water service coverage levels based on different Liberia assessments as follows; see also Table 2-4.

“Data from the Joint Monitoring Programme, 2010 (based on 2008 data) estimates that access to improved water supply in rural and urban areas respectively were 51% and 79%, and access to improved sanitation in rural and urban areas were 16% and 50% (including shared latrines) and 4% and 16% (not including shared latrines). The Census, 2008, indicated that access to improved water supply in rural and urban areas were 42% and 79% respectively, and access to improved sanitation (including shared) in rural and urban areas were 17% and 53% respectively. The recent water point mapping, 2011, indicated that 25.3% of the total of 10,001 water points (urban and rural) were broken down, 11% were functional but with problems, 63.7% were functional but with some being seasonal and of these 50.8% were fully functional, in-use and not seasonal. Variations in coverage data have posed challenges for the sector. The Plan aims to strengthen the sector’s monitoring and data collection to reduce the variations between studies.”

**Table 2-4. Overview of Current Water Supply and Sanitation Infrastructure - (from Table 21 of the WASH Sector Strategic Plan 2012-2017)**

Rural and Urban Water Supply	Urban Water Supply	Sanitation – Urban and Rural
<p><b>Number of water points:</b> 10,001</p> <p><b>Functionality:</b></p> <ul style="list-style-type: none"> <li>63.7% functional technically (6,371) – some have seasonal variations</li> <li>11% of which have some problems (1,098)</li> <li>25.3% are broken down (2,532)</li> <li>50.8% of the total number (5,080) are reported to provide enough water year round</li> </ul> <p><b>Reasons for breakdown:</b> Pump broken (50%) of which 3% is due to the U-seal; Apron damage (15.4%); Well damage (23%); Other (11.4%)</p> <p><b>Types of water points:</b></p> <ul style="list-style-type: none"> <li>Handpumps = 92.4%</li> <li>Protected spring/spring box = 0.3%</li> <li>Standpipe = 3.2%</li> <li>Other/unknown = 1.6%</li> <li>Water kiosk = 2.6%</li> </ul>	<p><b>1990:</b></p> <ul style="list-style-type: none"> <li>Ten cities had piped systems= Monrovia, Buchanan, Kakata, Harper Greenville, Gbarnga, Robertsport, Voinjama, Tubmanburgs, and Zwedru</li> <li>House connections = 27,000</li> <li>Sewer connections = 6,000</li> </ul> <p><b>2011:</b></p> <ul style="list-style-type: none"> <li>Water supplies of three cities rehabilitated: Monrovia, Kakata, and Zwedru</li> <li>House connections = under 5,000</li> <li>Sewer connections = 1,500</li> </ul> <p><b>Source of data:</b> LWSC</p> <p>The national surveys also provide some picture of the variation in water sources in urban areas but the figures fluctuate (possible due to differences in questions asked)</p> <ul style="list-style-type: none"> <li>House connections = from 3.6-7.6%</li> </ul>	<p><b>Access to improved sanitation:</b></p> <ul style="list-style-type: none"> <li>Urban = 53%</li> <li>Rural 17%</li> <li>Total = 35%</li> </ul> <p><b>Open defecation:</b> (no facility, bush, field)</p> <ul style="list-style-type: none"> <li>Urban = 29%</li> <li>Rural = 78%</li> <li>Total = 54%</li> </ul> <p><b>Types of facility:</b></p> <p><b>Flush toilet:</b></p> <ul style="list-style-type: none"> <li>Urban = 25%</li> <li>Rural = 2.7%</li> <li>Total = 14%</li> </ul> <p><b>Pit latrine with slab/covered latrine:</b></p> <ul style="list-style-type: none"> <li>Urban = 28%</li> <li>Rural = 14%</li> <li>Total = 21%</li> </ul>

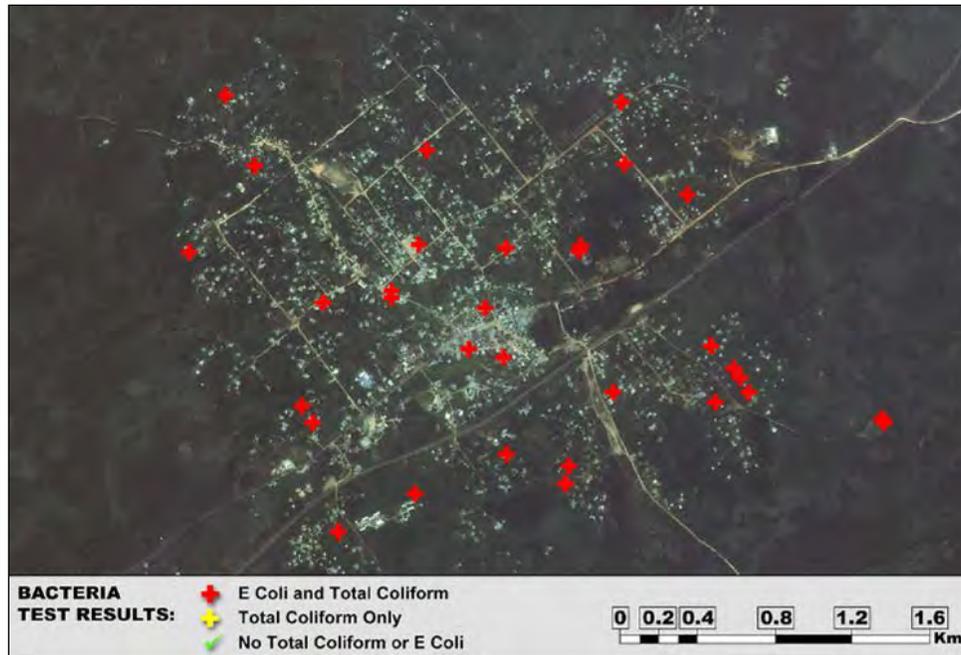
Rural and Urban Water Supply	Urban Water Supply	Sanitation – Urban and Rural
<p><b>Types of handpumps:</b>  Afridev = 80.1%  Consallen = 3.0%  India Mark = 5.3%  Kardia = 1.6%  Other/unknown = 0.1%  Footpump (Vergnet) = 2.0%</p> <p><b>Source of data:</b> Final Waterpoint Atlas, August 2011</p>	<ul style="list-style-type: none"> <li>• Public standpipes = from 11.6-20.9%</li> <li>• Unprotected groundwater = from 7-12.4%</li> <li>• Protected groundwater = from 18.2-64% (but when the 18.2% was noted, 45.3% of unknown was also noted, Census 2008)</li> <li>• Spring = from 0-0.4%</li> <li>• Surface water = from 0-2.2%</li> <li>• Rainwater (only asked once) 0.1%</li> <li>• Cart &amp; truck = 0-5.2%</li> <li>• Tanker = 1.5-10.8%</li> </ul> <p><b>Source of data:</b> LDHS, 2000 and 2007; Census, 2008</p>	<p><b>Pit latrine without slab/covered latrine:</b></p> <ul style="list-style-type: none"> <li>• Urban = 13%</li> <li>• Rural = 4%</li> <li>• Total = 8%</li> </ul> <p><b>Source of data:</b> Census, 2008</p>

Additional access data is included in other sources. According to the 2013 WASH Sector Performance Report (SPR), 64% of Liberian urban dwellers get their water from a protected dug well, while only 14.5% get their water from a piped system. The SPR notes that rural water access improved from 56% in 2007 to 66% in 2011, and that 65% of the rural population obtains their drinking water from protected wells. However, the proportion of people travelling for more than 30 minutes to fetch drinking water has increased from 7% to 18% during the same time period. A presentation at the 2014 JSR II reported that 66% of rural population uses improved drinking water, but that 23% are relying on surface water.

JSR further estimated that 35% of existing clinics and schools do not have adequate water and sanitation facilities. According to the Ministry of Education 2013 National Statistics booklet, access to latrines is approximately 66-67% in both primary and secondary schools, while access to is reportedly 45% in primary schools and 67% in secondary schools.

The First Annual Joint Sector Review (JSR) estimated that access to sanitation is 15% in rural areas, 57% in Monrovia and 43% in other urban areas. LWSC reported at the 2014 JSR that less than 14% of Monrovia is served by sewerage. Due to the loss of sanitation services in many urban areas during the civil crisis, open defecation rates have increased over the past decade from 18% to 26% (according to JMP data). According to the WASH Sector Strategic Plan 2012-2017, open defecation rates are 29% in urban areas and 78% in rural areas. While CLTS has been ongoing for multiple years, little evidence is available to show the impact it has had in country on reducing open-defecation until recently. According to the *Liberia WASH Sector Performance Report 2013*, 666 communities had been ‘triggered’ and of those 320 have achieved Open Defecation Free (ODF) status.

Water quality testing conducted by the Liberia Municipal Water Project (LMWP) in three secondary cities revealed that most wells had coliform bacteria present. For example, Figure 2-3 illustrates water quality test results from Sanniquellie where all samples tested positive for E. coli and Total Coliform, indicating the likely presence of fecal contamination. This includes wells that meet the JMP definition of “improved” water supply, which is based on design considerations and does not consider water quality testing. Similar results with microbial contamination have been found in other urban areas, notably Monrovia. In addition, LMWP found that many wells reportedly go dry during parts of the year. Therefore, figures reporting the percentage of access to “improved” water supplies in urban areas reliant on shallow groundwater are likely to significantly overestimate access to a safe, potable drinking water supply.



**Figure 2-3. LMWP Well Water Bacteriological Test Results in Sanniquellie, 2012**

Among the most useful recent data sets is the World Bank Water and Sanitation Program (WSP) inventory of existing wells and hand pumps completed in 2011 (known as the Liberia Waterpoint Atlas). The purpose of the survey was to inventory all existing wells in Liberia and make the information on location, condition and quality of these wells available to development projects throughout the country. Supervised by the MPW, geospatial data on over 10,000 water points was collected using a GPS-enabled mobile phone system. There was no previously existing comprehensive database of wells until this work was completed. Only 64% of water points were classified as fully functional. This number is reduced even further when issues of seasonality, perceived water quality, or overcrowding are considered, with some estimates citing less than 50% of water points functioning at a usable level. Among the 1,121 points that were constructed in the year 2010, 171 (15%) were already broken, and 122 (11%) reported a problem. Of those points constructed in 2004, more than a third (35.7%) are broken, and a further 11% are reporting problems. In addition to poor household coverage, the 2011 water point mapping initiative discovered that more than 1,700 schools do not have an improved water point. The Liberia Waterpoint Atlas report includes a number of recommendations, such as improving maintenance systems, standardizing hand pumps on Afridev, and strengthening coordination and decentralizing capacity.

## 2.5 INSTITUTIONAL FRAMEWORK

Liberia has taken unprecedented steps in the past decade to move toward decentralized planning and management of the water sector, including the development of clearer policy, institutional, regulatory, and legal frameworks. From the participatory County Development Agendas (CDAs) calling for the reconstruction of municipal water services to the approval of the Integrated Water Resources Management Policy and the Water Supply and Sanitation Policy, Liberia is developing momentum to enact lasting change in the sector. More recently, the sector has gained additional momentum toward eventually establishing a dedicated Ministry of Water Resources. Under the leadership of President Ellen Johnson Sirleaf, Liberia has prioritized water, sanitation and hygiene. WASH is an important piece of the Agenda for Transformation medium-term growth strategy and Liberia's development agenda sets a goal of access to adequate services for all by 2030.

As noted in Section 2.1, the water sector policy, legal, and regulatory framework is defined by recent sector-specific documents, notably:

- Integrated Water Resources Management (IWRM) Policy (2007)
- Water Supply and Sanitation (WSS) Policy (2009)
- Liberia WASH Compact, Sanitation and Water for All: A Global Framework for Action (2011)
- Water, Sanitation and Hygiene Sector Strategic Plan, 2012-2017 (2012)

However, despite recent movement toward a more unified and streamlined sector structure, the sector framework remains disjointed and complex with myriad overlapping responsibilities, weak governance, and low capacity. This has been recognized for a number of years including in the IWRM Policy:

“Water governance in Liberia has been fragmented between several agencies and there is no coordination across these agencies. The absence of a solid framework for water resources management is one of the reasons why significant water issues are occurring. Water quality is considered to be decreasing. The development of a framework for water resources management in Liberia is starting with this National Integrated Water Resources Management Policy.”

“Presently, there is no concrete comprehensive legal framework governing water resources in Liberia.”

More recently, this issue was again highlighted in the Liberia WASH Compact:

“The WASH sector has a fragmented governance structure with certain functions falling within the scope of a number of Ministries and Agencies. This has resulted in overlaps in some areas and gaps in others; a lack of coordination of planning, activities and stakeholders; a lack of clarity on budgets and funding.”

The WASH Compact is an overarching policy document for the water sector in Liberia. The GoL with support from the National Legislature joined the Sanitation and Water for All (SWA) global partnership – an international platform aimed at achieving universal and sustainable access to sanitation and drinking water. Following this event a partnership between GoL and SWA partners led to a joint mission in Liberia. The compact was developed from the recognition that progress was insufficient for Liberia to reach the Millennium Development Goals (MDGs) for water and sanitation, namely to halve the proportion of people without sustainable access to safe drinking water and basic sanitation by the year 2015. The GoL recently participated in the 3rd Sanitation and Water for All High level meeting in Washington D.C. in April 2014.

The Compact builds on several key WASH sector policies and regulations with the common credo that water and sanitation facilities must be accessible, affordable and available. The Compact outlines the commitment to meet the challenges of the WASH sector through a partnership between the government, the private sector, civil society, development partners and the media.

The compact was built on the alignment of the principles adopted by the SWA partnership with those of the National Water Supply and Sanitation Policy (NWSSP, 2009) as illustrated in Table 2-5.

The WASH Sector Strategic Plan 2012-2017 is perhaps the most comprehensive and useful single document available regarding the Liberia water sector and its existing and proposed institutional frameworks and operational responsibilities. It was developed through participatory processes with relevant sector actors and has evolved to encompass the objectives of the Poverty Reduction Strategy I (PRS I), MDGs and the agreements in the Liberia WASH Compact, and the objectives of the PRS II (2012-2017). The currently proposed national level sector organization is presented in Figure 2-4. The current GoL entities involved in the WASH sector are summarized in Table 2-6.

**Table 2-5: Alignment of SWA and NWSSP Policies**

<b>SWA Principles</b>	<b>NWSSP Principles</b>
Sanitation and water is a priority sector and underlies the achievement of the MDGs	The principle of access to WASH services to all people without discrimination is clearly underlined
Sanitation and water is a sector that requires political prioritization, institutional capacity building and investment	Political will is imperative for effective policy implementation. The policy sets out the institutional structure required and discusses the parameters for investment
Efforts should focus on targeting the un-served before improving services for the already served	The policy emphasizes the need for increased coverage as a priority over improved services
Accountability, mutually with donors and the country's own citizens is necessary to achieve sanitation and water for all	A critical component is the establishment of new governance entities with the mandate to address the lack of accountability in the sector
One national plan and planning process is necessary for sanitation and water, including detailed sector investment requirements, targets and capacity needs	The principle of coordinating water resources as IWRM for all usages.  The principle of a 5 year sector strategic plan as part of the PRS put an emphasis on the responsibility of individuals, communities, de-concentrated entities and Central government.

The Liberia WASH Strategic Plan summarizes the current institutional framework and proposed changes as follows:

“Institutions are instrumental in the implementation of a policy. Given the fragmented nature of the WASH sector in Liberia the need for a single entity to oversee the implementation of the policy is imperative. The Integrated Water Resources Management (IWRM) Policy formulated by the Government of Liberia guides the proposed changes with the establishment of a comprehensive water policy to reform and develop institutions and to put integrated water resources management into practice. It also sets the tone for putting an end to fragmentation in the WASH sector by establishing a single institutional structure to drive the WASH sector in Liberia. It is acknowledged that the long-term objective of the proposed institutional framework is the eventual establishment of a Ministry of Water Resources and Sanitation in the country. The proposed changes require the establishment of two new entities and the re-establishment / upgrading of three others:

- National Water Resources and Sanitation Board (NWRSB) – re-establishment
- Water Supply & Sanitation Commission (WSSC) – new
- National Water, Sanitation & Hygiene Promotion Committee (NWSHPC) – new
- Rural Water Supply and Sanitation Bureau (RWSSB) – upgraded within MPW
- Directorate of Community Mobilization and Hygiene Promotion (DCMHyP) – upgraded within the MoHSW”

The NWRSB will be responsible for providing oversight on WASH sector policy, strategy, planning, technical support and coordination. This Board will report to the President and the new NWSHPC will serve as secretariat for the Board. The Board will be responsible for the enforcement of standards, regulations and by-laws through its oversight of the Water Supply and Sanitation Commission (WSSC), which is currently being formulated as the primary regulatory body. The NWRSB will also have oversight function of LWSC, the RWSSB, and DCMHyP.

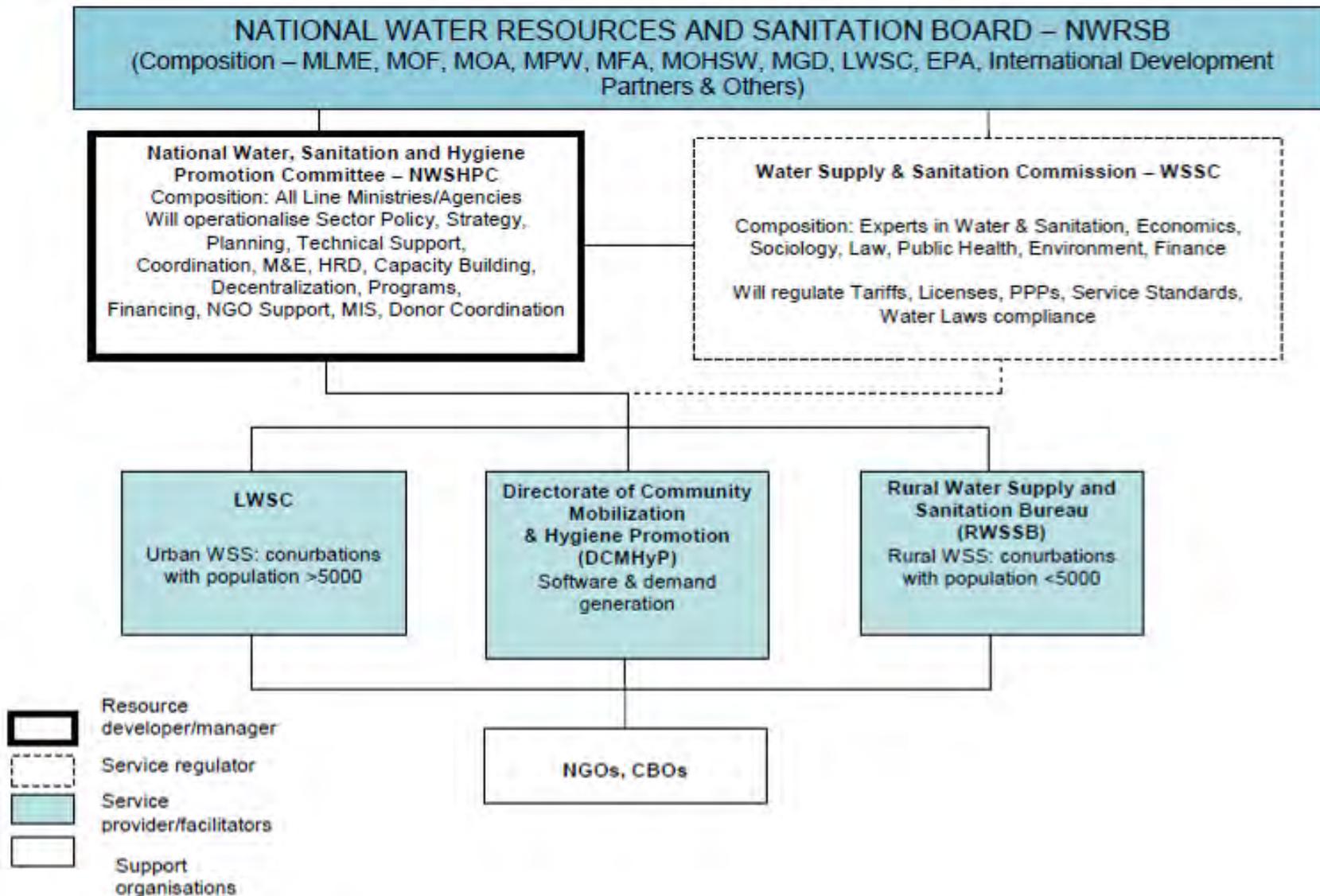


Figure 2-4: Institutional Framework for WASH Sector in Liberia

**Table 2-6: Government of Liberia National Level Entities involved in WASH Sector**

<b>WASH Sector Entity</b>	<b>Brief Summary of Role / Relevance</b>
<b>Policy, Planning, Financing &amp; Monitoring Agencies</b>	
National Water Resources and Sanitation Board (NWRSB)	Initially formed in 1980, but stopped operating and was recently re-established when the president announced new members of the NWRSB in 2014. The NWRSB will be responsible for providing oversight functions related to WASH sector policy, strategy, and planning and be the supervisory arm for the NWSHPC.
Ministry of Lands, Mines, and Energy (MLME) and Liberia Hydrologic Services (LHS) Bureau	MLME currently has overall responsibility for water resources management (including policy and regulatory functions), with LHS serving as the Secretariat. LHS is also the repository for technical information and data on Liberia water resources.
Ministry of Public Works (MPW)	MPW has an oversight role for all public infrastructure built in Liberia and must review design plans for above ground works prior to construction. MPW also is responsible for rural water supply such as hand pumps, which are currently a primary source in urban areas. The planned upgraded Rural Water Supply and Sanitation Bureau is located within this Ministry.
Ministry of Health and Social Welfare (MoHSW)	MoHSW has responsibility for sanitation and hygiene as well as setting of water quality and environmental health standards. The planned upgraded Directorate for Community Mobilization and Hygiene Promotion is located within this ministry
Ministry of Education (MoE)	Responsible for school health and hygiene hardware in the country's 4113 schools (private and public). Software falls under MoHSW.
The Ministry of Planning & Economic Affairs (MPEA)	Broader economic policies to develop the economy, including supporting regional development activities to further the PRS.
Ministry of Finance (MoF)	Mandated to collect revenue, engage in loan arrangements, disburse Government funds, and service the National Debt. State corporations like LWSC whose operations do not generate sufficient revenues are supported by the ministry to stay in business
<b>Facilitation and Regulatory Agencies</b>	
National Water, Sanitation and Hygiene Promotion Committee (NWSHPC)	NWSHPC was established in May 2011 as part of the evolving Liberia water sector institutional structure. NWSHPC is coordinating the various stakeholders and slated to have myriad responsibilities including development of sector policy and strategy. It is expected to serve as the operational arm of the National Water Resources and Sanitation Board (NWRSB) and work in parallel with the Water Supply & Sanitation Commission (WSSC), which will hold regulatory functions but is not yet established.
Environmental Protection Agency (EPA)	EPA is responsible for environmental regulations.
Engineering Association of Liberia (EAL); Liberian Association of Public Health Technicians (LAPHT)	Regulate WASH sector professionals ( Environmental Health Technicians and Engineers in Liberia)
Liberia Institute of Geo-Information Services (LISGIS)	LWSC is the primary repository of national geospatial and census data and has responsibility for review and approval of local survey work.
<b>Service Delivery Agencies</b>	
Liberia Water and Sewer Corporation (LWSC)	LWSC has responsibility for water service provision in county capitals and cities greater than 5,000 populations.

WASH Sector Entity	Brief Summary of Role / Relevance
Rural Water Supply and Sanitation Bureau (RWSSB)	Not yet established. Primary role of the RWSSB will be hardware delivery, provision of technical expertise and knowledge and building capacity in the rural WASH sector. It will be housed under the Ministry of Public Works.
Directorate of Community Mobilization & Hygiene Promotion (DCMHP)	Not yet established. This entity will provide dedicated software support to the RWSSB. It will be housed under the Ministry of Health and Social Welfare (MoHSW).
National and International NGOs (NGOs/INGOs)	Delivery of hardware and software activities, principally for the most vulnerable
Private Sector	In the long run, GoL expects to have private sector involvement in service provision, although the private sector is not well developed.

At the county level, government authorities are headed by a County Superintendent and have responsibility for the facilitation and oversight of WASH activities at the sub-national level. The structure of the county local authority can vary but always includes a County Health Team (CHT) including environmental health staff. An example of a CHT structure is provided in Figure 2-5. The county structure also includes a planning officer and an infrastructure engineer who often does not have WASH experience. The district level structures also include a District Development Committee and the county level structures report to the Ministry of Internal Affairs. The reality is that available capacity at the county and municipal level is extremely limited.



**Figure 2-5. County Health Team Structure**

The 2012 Liberia WASH Capacity Development Plan includes a graphical representation of institutional arrangements and relationships envisioned during the process of “decentralization” and “devolution”. These are reproduced as Figure 2-6 and Figure 2-7 below. The Plan notes that “the actual structures are likely to evolve over time but these form the basis for the assumptions made in the Capacity Development Plan as of 2012”.

It should be noted that statutory responsibility for piped water provision rests with LWSC, not municipalities, and LWSC plans to re-establish piped water systems in county capitals utilizing its former Outstation management approach, although reforms being developed by LWSC in collaboration with LMWP will bolster accountability and autonomy of Outstations. At present, devolution to municipalities for piped water services is likely to require legal modifications. Also, many of the actors listed on the following figures at the sub-national level are not currently in place, or have extremely limited capacity.

## Decentralisation stage I – Deconcentration

(tentative timeline 2012-2017)

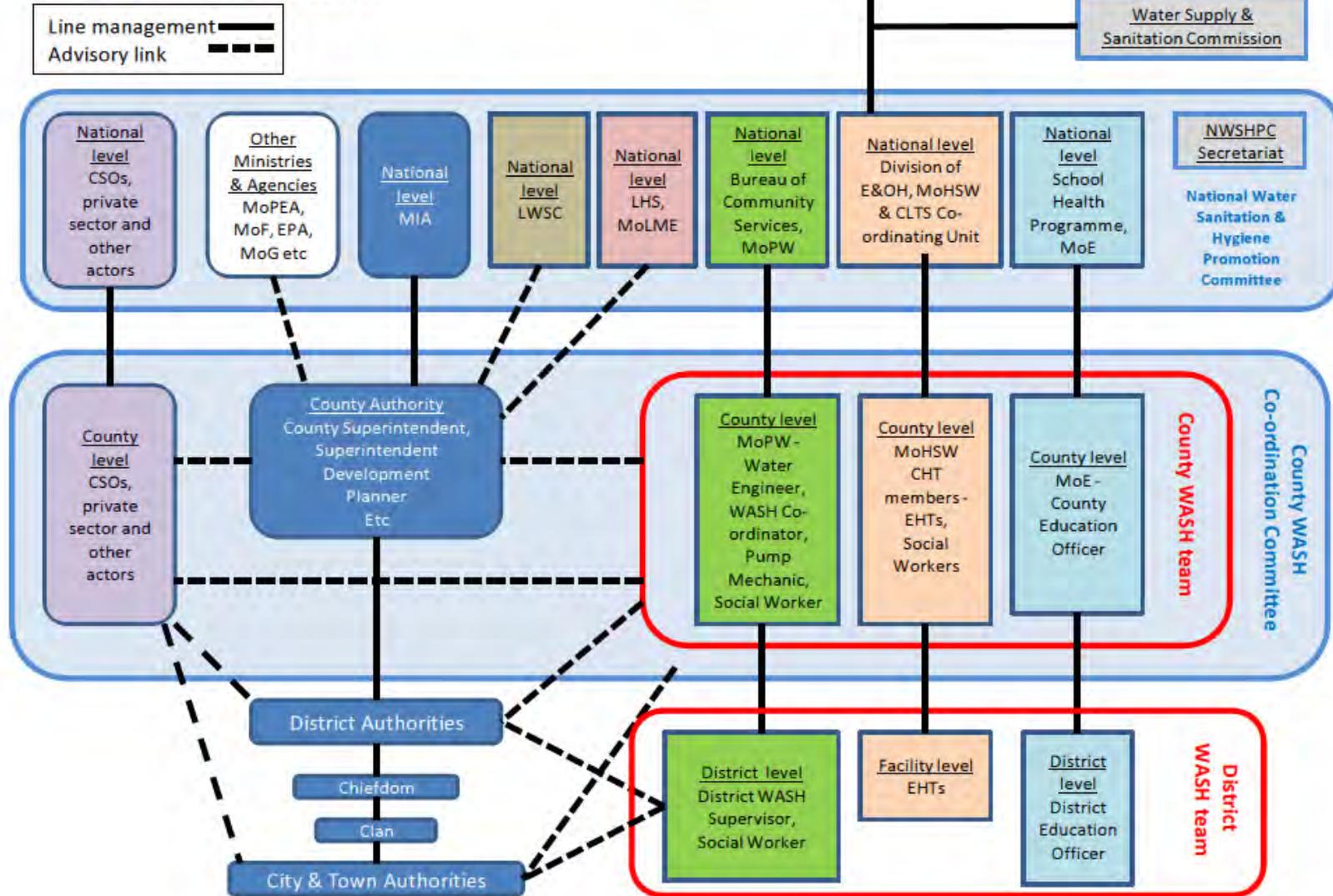


Figure 2-6. WASH Organizational Structure at “Decentralization” Phase as Presented in 2012 Liberia WASH Capacity Development Plan

## Decentralisation stage 2 – Devolution

(tentative timeline – changeover likely to happen 2017 forward)

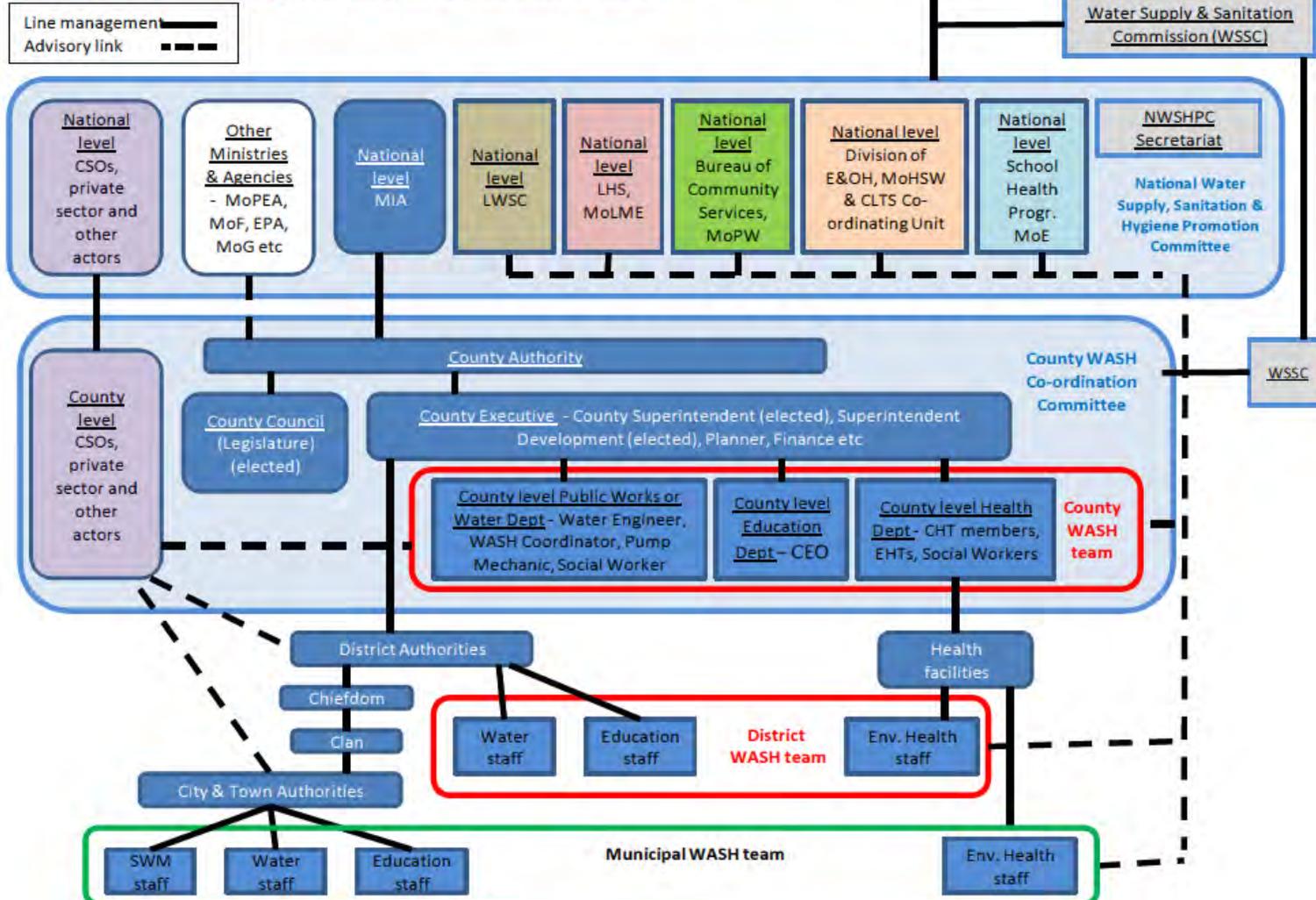


Figure 2-7. WASH Organizational Structure at “Devolution” Phase as Presented in 2012 Liberia WASH Capacity Development Plan

## 2.6 CAPACITY CONSTRAINTS

Weak capacity throughout the sector is arguably the greatest challenge to improved WASH services in Liberia.

In 2012, a WASH sector capacity development needs assessment was undertaken by a Capacity Development Task Force of the National Water Sanitation and Hygiene Promotion Committee (NWSHPC), based on the framework of the Liberia National Capacity Development Strategy and WASH Sector Strategic Plan, 2012-2017. The recommendations from the 2012 needs assessment were based on needs identified by the key WASH sector actors including the Ministry of Public Works (MPW), Ministry of Lands, Mines and Energy (MoLME), Ministry of Health and Social Welfare (MoHSW), Ministry of Education (MoE) and the Liberia Water and Sewer Corporation (LWSC) as well as other ministries and sector partners. This led to the development of the Liberia WASH Capacity Development Plan. The main focus of the resultant Capacity Development (CD) Plan is on building capacity for service delivery against the WASH Sector Strategic Plan, 2012-2017, which was developed to advance the Poverty Reduction Strategy II and Vision 2030.

Individual donor funded projects have conducted myriad capacity needs assessments for individual GoL entities in the WASH Sector and a variety of capacity development programs have been designed, completed or are currently underway which directly or indirectly support the WASH sector. These include programs funded by USAID (under LMWP, IWASH, RBHS, GEMS, EHELD, and others), AfDB (notably the Urban Water Supply and Sanitation Programme [UWSSP]), the World Bank (including the recent Corporate Audit of LWSC), the United Nations Development Programme (including the Governance Advocacy and Leadership for WASH [GoAL WASH] Project), and others. Broader cross governmental reforms and initiatives are also underway such as the Civil Service Reform Strategy. As noted in the Liberia WASH Capacity Development Plan, “capacity development to-date, although very positive, has however been somewhat piecemeal; the capacity development needs for the sector are still significant and multifaceted and significant resources will need to be identified and accessed.”

The Liberia WASH Capacity Needs Assessment and Capacity Development Plan cite examples of existing capacity assets including the GoL, Local Authorities, Liberian CSOs, education and training institutions, the media and in the private sector, though they are often working with limited resources and in difficult and logistically challenging circumstances. Examples of capacity challenges or gaps cited in the Plan span the gamut and include:

- inadequate staff numbers and technical capacity at national, county, district, and municipality levels, with limited funding for office equipment (particularly computers), logistics (including vehicles), and operation and maintenance;
- low salaries, late payments, and weak human resources and motivational systems; decentralization in its infancy with limited resources allocated to Local Authorities;
- weak educational systems and poor skills in science and mathematics, as well as a need for more Associate Degrees and technical and vocational education training (TVET);
- virtually no hydrogeological equipment available for sector use and concerns with regard to the quality of existing testing laboratories;
- no clear sector monitoring and evaluation framework with uniform indicators, benchmarks, and data sharing;
- weak procurement, financial management, planning and budgeting systems; and
- no clear strategic approach to the building of a strong private sector capacity for WASH sector implementation.

The Plan proposes a mix of methodologies such as: educational upgrades; development of sector-specific block training courses with on-going mentoring and practice; scholarships and internships; and development of processes and systems. Proposed interventions include increasing the number and competencies of staff and considering succession plans; improving institutional systems and processes for strengthened GoL leadership and effectiveness; and strengthening the enabling environment. A key recommendation is that funding should be sought to engage a dedicated WASH Sector Capacity Development Support Team to support a GoL-led coordination team for capacity development. Total budget of the Plan for 2012-2017 is estimated at USD 74 million which incorporates activities, operational costs of some key GoL entities at national and sub-national levels, and the cost of a number of pilot projects. All interventions in the Plan contribute to reducing long term support from external actors, but will require extensive funding to implement.

One area of concern relative to WASH sector advancement which is rarely cited in sector documents is that of corruption. Weak accountability measures, low salaries, and a lack of procurement transparency and clear procedures create situations where corruption can easily take hold, greatly reduce the effectiveness of WASH funding.

## 2.7 FINANCE

According to the WASH Sector Strategic Plan (2012-2017), GoL's own WASH investments average less than one quarter of a percent of the annual budget. According to the Liberia WASH Sector Performance report, "In 2012/13 1.2% of the government budget was allocated to WASH. For 2013/14 it is lower, at 0.4%". Given that water funding is distributed among myriad entities such as MPW and MoHSW, which do not have clear WASH budget line items, clearly defining national level WASH funding is problematic. Projections of funding needs and trends are detailed in the Liberia WASH Sector Investment Plan.

Generally speaking, the WASH sector is grossly underfunded in comparison to other sectors. Recent annual allocations to LWSC were USD 200,000 in 2006-2007, USD 785,000 in 2008-2009, and USD 524,025 in 2009 -2010. The Division of Environmental and Occupation Health (DEOH) within the MoHSW is responsible for water quality assurance, hygiene awareness and coordination of sector planning and coordination, but operates on a national budget of around USD 25,000. The Community Services Section of MPW, which has responsibility for rural WASH operated on annual budgets of less than USD 85,000 in 2008-2009. The MoHSW and MPW budgets are only administrative budgets and there has not been a distinct budget line in either Ministry for WASH programming. By comparison, according to the WASH Sector Strategic Plan, for the 2008-9 financial year, the WASH sector had a budget of USD 0.9 million, whereas other sectors, including education, health, public infrastructure, and agriculture all had budgets in excess of USD 4 million. Total GoL and development partner contributions to the sector still only represent a fraction of the estimated requirements in the PRS I and Sector Investment Plan.

A call for dedicated water funding has been made with increasing frequency. Most recently, in June 2014 the LWSC Chairman of the Board publically called on the Liberian Senate to prioritize WASH in the national budget. LWSC's request highlighted critical Monrovia distribution system upgrades and studies needed to re-established piped water systems in additional urban areas.

Given the present financial situation in the WASH sector, donor aid remains crucial. The WASH Sector Strategic Plan (2012-2017) reported six active donors in WASH including, the African Development Bank (USD 40 million up to 2013), World Bank (USD 8 million for WASH), the European Commission (USD 10.0 million), USAID (USD 10.5 million for five years up to 2015) and others. The UK's DfID (USD 5.0 million) is also a significant donor but its funds are channeled through other donors/NGOs. A consortium of international NGOs led by Oxfam provides institutional capacity building and increasing

access to safe water and sanitation for close to one million people. The Consortium’s funding of USD 18.8 million dollars makes a huge contribution to the total resource envelope for the PRS.

The African Development Bank (AfDB) is the largest WASH sector donor, representing nearly 40% of total aid in the sector. It has a joint assistance strategy with the World Bank and coordinates with the European Commission. The AfDB draws on funding from the African Water Facility (AWF) and DfID.

With some exceptions, most WASH sector aid is project based, as opposed to pooled funding and for direct budget support. Generally speaking, GoL would like to increase utilization of budget support as a way of capacity building as well as strategic positioning of government institutional reforms. AfDB is a major contributor of budget support for Liberia, including directly funding staff salaries of LWSC.

Developed through a consultative process, the Sector Investment Plan (SIP) quantifies WASH sector targets by providing information on investment requirements, current plans and gaps to reach the Sector Strategic Plan, 2012-2017 targets. Reaching goals of access for all will require large investments and decisive action on many fronts. The SIP estimates that USD \$400m is needed to achieve WASH sector targets for 2017, of which:

- 52% will be needed to reach targets in urban areas (including \$96m in Monrovia);
- 18% is required for WASH services in rural areas;
- 12% is needed for services in schools, clinics and public areas; and
- 18% will be required for sector capacity development.

As illustrated in Figure 2-8 and Figure 2-9, WASH funding needs far exceed current donor commitments, so an increasing amount of required funds will need to come from user payments in urban areas. According to the SIP, this is possible if tariffs are substantially increased along with operational efficiencies. Among the most significant challenges cited in the SIP are human and institutional gaps at all levels, and unclear institutional roles and responsibilities for service provision.

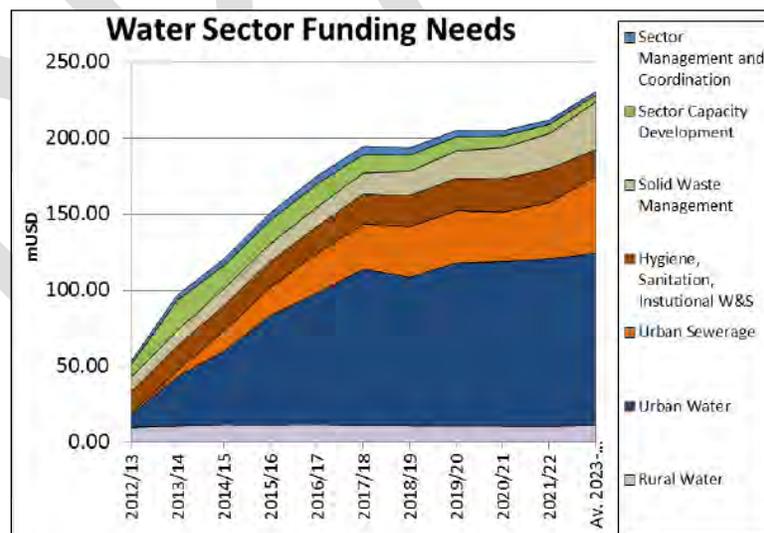


Figure 2-8. Water Sector Funding Needs Presented in WASH Sector Investment Plan (2012-2017)

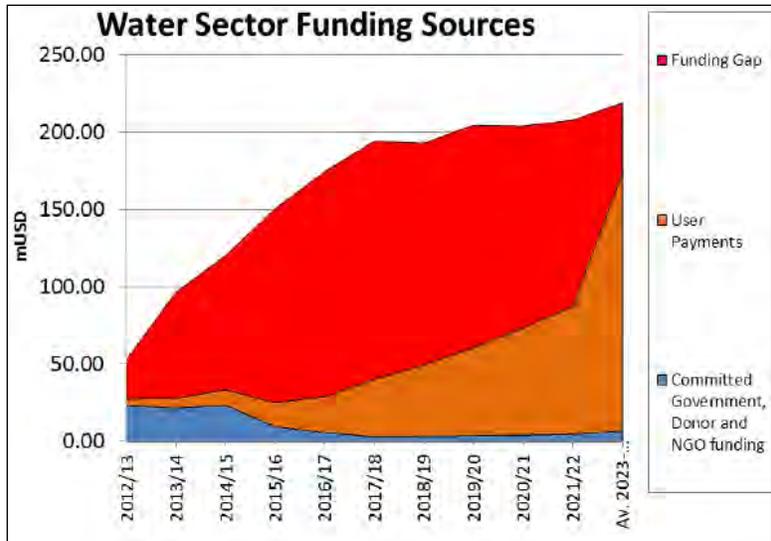


Figure 2-9. Water Sector Funding Sources Presented in WASH Sector Investment Plan (2012-2017)

# 3.0 DONOR ACTIVITIES

The Liberia WASH sector has numerous active donors and implementers. The largest single bilateral or multilateral is the African Development Bank, followed by WSP, USAID, DfID and UNDP. Table 3-1 lists the primary multilateral, bilateral and private donors active in the Liberia WASH sector, while Table 3-2 highlights key ongoing and planned donor-funded activities. Additional information on implementers and projects are available on the National Water, Sanitation and Hygiene Promotion Committee (NWSHPC) website (WASH-Liberia.org), as well as in the Liberia WASH Sector Performance Report (SPR) and WASH Sector Investment Plan (SIP). Annex 3 and 4 of the SIP include an exhaustive list of partners, including geographic focus, and additional project details including budgets as reported to the Aid Management Unit of the Ministry of Finance.

The NWSHPC is responsible for coordinating sector implementers. Regular monthly WASH sector coordination meetings are held in Monrovia, including the WASH Coordination Meeting at MPW organized by the NWSHPC, and the CLTS Coordination Meeting organized by the National Technical Coordinating Unit (NTCU) for CLTS. The new annual WASH Joint Sector Reviews and WASH Sector Performance Report offer additional means for coordination. In addition, individual programs and GoL entities have their own coordination mechanisms. For example, the USAID LMWP project regularly coordinates with the AfDB UWSSP project which has a very similar scope but operates in different cities.

**Table 3-1: Principal Donors and NGO Implementers in Liberia with WASH Portfolios**

Organization	Support Overview
African Development Bank (AfDB)	Largest donor in the Liberia water sector, AfDB supports a variety of urban and rural infrastructure, capacity building, and institutional development efforts.
Liberia CSO WASH Working Group	The WASH Working Group is made up of six Liberian non-governmental organizations (NGOs) which are advocating for better financing for the sector and an improvement to the policy environment in Liberia.
Liberia WASH Consortium	A group of five International NGOs (Action Contre La Faim, Concern, Oxfam GB, Solidarités and Tearfund) funded by the UK Department for International Development (DfID), the Humanitarian Aid department of the European Commission (ECHO) and Irish Aid, in order to improve access to WASH in selected communities (mostly rural) and improve institutional strength. The Consortium also advocates for policies and financing that benefit vulnerable communities. Other donors such as DGIS (Netherlands) are also funders of WASH projects via NGOs and other actors, but not all donors report to the Aid Management Unit of the Ministry of Finance.
Private Donors	Numerous private donors have been involved in the WASH sector in Liberia including Coca-Cola Foundation, Inc., (Basic drinking water supply), The Howard G. Buffett Foundation (WASH and livelihoods) The Rees-Jones Foundation (Basic drinking water supply) The San Francisco Foundation (River basins development), the Santa Barbara Foundation (Basic drinking water supply) and others.
Swiss Agency for Development and Cooperation (SDC)	SDC conducted a municipal water feasibility study in Voinjama, where it subsequently built a hospital with its own water supply system.
United Kingdom Department for International Development (DfID)	Primarily works through a number of grantees and other local actors in providing equitable and sustainable access to improved water and sanitation services

<b>Organization</b>	<b>Support Overview</b>
United Nations Development Programme (UNDP) and UNICEF	The UN has provided leadership in the WASH sector including high level support to the sector reform process, sector analysis, and advisory support and capacity building services. Its work has included the GoAL WASH program and recent work such as a bottleneck analysis of sustainable service delivery. The UN is also a direct funder of NGOs and GoL.
US Agency for International Development (USAID) / Liberia	USAID has an extensive portfolio in Liberia spanning health, energy, environment, agriculture and other sectors. Its WASH-specific projects include the Liberia Municipal Water Project (LMWP), the Integrated WASH Project (IWASH), and the forthcoming Advancing Community-Based Services for Health (ACBSH) Activity which includes a WASH component.
WaterAid	International non-governmental organization (INGO) involved in capacity building and sector advocacy and coordination.
World Bank Water and Sanitation Program (WSP)	Examples of WSP work in the sector include the Liberia WaterPoint mapping study, funding the Infrastructure Implementation Unit within MPW, the recent Corporate Audit of LWSC, and a current Output Based Aid Study for expansion of water distribution within Monrovia. Program design is reportedly underway for feasibility studies to re-establish piped water supplies in additional urban areas. WSP also provides advisory services to LWSC on utility management, water sector PPP and other areas.

**Table 3-2: Illustrative Ongoing and Budgeted WASH Programs**

<b>Program</b>	<b>Brief Description</b>
AfDB <b>Urban Water Supply and Sanitation Project (UWSSP) II</b>	Includes re-establishment and rehabilitation of water and sanitation systems in Buchanan, Kakata, and Zwedru, and Monrovia (including rehabilitation at White Plains, sewer rehabilitation, and latrine construction). The program includes various capacity building inputs. And follows the previous Monrovia Water Supply and Sanitation Rehabilitation Project (MWSSRP).
AfDB <b>Monrovia Water: Supply and Sanitation Rehabilitation Project (MWSSRP)</b>	Emergency rehabilitation of the White Plains Water Treatment System to 25% of original capacity. The project is substantially completed.
AfDB <b>National Rural WASH Programme Development Study (NRWASHP)</b>	This study is developing a comprehensive National Rural WASH Program to support government investment decision-making. Drafts of the Situational Analysis of rural WASH and of the Concept Note have been developed.
AfDB <b>Water Sector Reform Study</b>	Details to be added.
AFW (AfDB) <b>Fostering Innovative Sanitation and Hygiene (FISH)</b>	Grant to Monrovia City Corporation (MCC) designed to increase access to safe, sustainable and affordable sanitation services in Monrovia. It is focused on improved facilities for handling the sludge from septic tanks and improved communal sanitation facilities for about 6,000 persons.
DfID/UNICEF <b>Sanitation and Water for All Programme in Liberia</b>	Details to be added.

Program	Brief Description
DGIS  <b>Accelerating Sanitation and Water for All: Achieving Water Supply and Sanitation MDG targets in Liberia.</b>	Details to be added.
EU/OXFAM  <b>Improving sanitation and hygiene in urban and peri-urban Monrovia</b>	Details to be added.
Irish Aid  <b>WASH: Equitable and sustainable access to improved WASH services in underserved communities</b>	Details to be added.
UNDP  <b>Governance Advocacy and Leadership for WASH (GoAL WASH)</b>	GoAL WASH provided high level support to the sector reform process including supporting the mandate of NWRSB to establish an operational, effectively staffed and resourced NWSHPC and WSSC. GoAL WASH supported capacity building through a Senior Technical Advisor in the MLME.
USAID/Liberia  <b>USAID programs complementing WASH Sector</b>	In addition to the USAID/Liberia programs indicated above, other USAID programs contribute to advancement in the WASH Sector such as Excellence in Higher Education for Liberian Development (EHELD), Rebuilding Basic Health Services (RBHS), Governance and Economic Management Support Program (GEMS), Liberia Energy Sector Support Project (LEESP) plus other health, environment, governance, and economic development programs.
USAID/Liberia  <b>Liberia Municipal Water Project</b>	LMWP is supporting the Liberia Water and Sewer Corporation to establish improved water supply access in Voinjama, Sanniquellie, and Robertsport with infrastructure managed by locally-based entities capable of financially and technically sustaining the service. The program has a focus on institutional arrangements and capacity building, in addition to infrastructure planning and design.
USAID/Liberia  <b>Integrated Water, Sanitation, and Hygiene Project (IWASH)</b>	IWASH is implementing rural water supply and sanitation activities in Nimba and Lofa counties, including hand pumps, point of use treatment, CLTS, public awareness/outreach, and other activities.
USAID/Liberia  <b>Advancing Community-Based Services for Health Activity</b> <i>[Not Yet Awarded]</i>	The ACBSH Cooperative Agreement will build upon and expand USAID/Liberia's efforts to support community-based delivery of health and social welfare services, including WASH, and increase utilization through communications and support of community institutions. This program is not yet awarded.
WB WSP  <b>Emergency Monrovia Urban Sanitation Project (EMUS)</b>	Details to be added.
WB WSP  <b>Scoping Study for Improving Access to the Piped Water Supply in Monrovia's Low-Income Households Using an Output-Based Aid (OBA) Approach</b>	Ongoing study to assess the feasibility of implementing an OBA approach to expand access to piped water supply to low-income households in Monrovia.

# 4.0 MONITORING AND LEARNING

The most significant developments in recent years with regard to monitoring and learning are the establishment of the National Water Sanitation and Hygiene Promotion Committee (NWSHPC) and its regular coordinating and monitoring functions. In just the past two years, the Sector has also begun annual WASH Joint Sector Reviews and this past year issued its first WASH Sector Performance report. These efforts have resulted in increased information sharing and coordination among actors in the sector, particularly donors.

The Government of Liberia released the first WASH Sector Performance report in April 2014, allowing stakeholders to review performance of the WASH sector in depth for the first time. The report captured issues ranging from policy planning and coordination to service delivery and served as the basis of discussion at the Second Annual WASH Joint Sector Review (JSR) held in May 2014.

The NWSHPC with support from its secretariat organized the 2nd annual WASH Joint Sector Review. A draft report has been developed that identifies proposed activities to be undertaken within the next financial year. The objective of the JSR is to identify and agree on sector priorities by reviewing the progress against key strategic plans and reflecting on sector performance. The output will be a presentation on the undertakings for Financial Year 2014/15.

Despite increased national level coordination, GoL institutional capacity for monitoring and regulation remain weak or non-existent in most cases. Organizations such as LWSC have not yet adopted the standard benchmarking of utility performance, which would enable measurement of progress toward increased and improved service and comparison across Outstations. The Ministry of Public Works has very limited capacity to monitor the performance of existing wells and other WASH infrastructure under its purview. LWSC standard specifications for piped water systems do not exist and standards for well construction are limited and generally not enforced. Organizations such as the Liberia Environmental Protection Agency (EPA) and the Liberia Hydrologic Service (LHS) (part of the Ministry of Lands, Mines, and Energy) are underfunded and do not have the capacity to carry out their mandates to provide valuable monitoring and data to the sector. Existing water quality laboratories do not have the requisite funding, training, and capacity required to produce reliable results.

The 2013 WASH Sector Performance Report notes that:

“There are many different dimensions of sustainability that can help or hinder the achievement of the WASH goals set out in the Sector Strategic Plan, and other documents. With the support of UNICEF, a process of “Bottleneck Analysis” was started in 2013 to understand better these factors that are blocking the path to progress. The initial results show that the situation is generally more challenging for sanitation than for water supply. The main constraints identified for sanitation were: lack of institutional leadership, unhelpful social norms (particularly in rural areas), non-existent supply chains and ways of delivering services. For both water and sanitation, many bottlenecks can be found at the County and District level where more financial and human resources are needed to deliver, monitor and regulate WASH services effectively.”

The primary areas of concern in delivering sustainable services were at the sub-national level, for both regional and district government agencies. The results from the “Bottleneck Analysis” are reproduced in Table 4-1.

**Table 4-1. UNICEF Bottleneck Analysis Results**

(Ratings: 0-1: Very Low (V.Low); 2-3: Low; 4-6: Medium; 7-8: High; 9-10: Very High)

Enabling Factor	Level	Rural	Urban	Inst.	Rural	Urban	Inst-
Policy	National	8	8	8	8	9	3
Targets	National	8	8	8	3	3	3
	County & District	1	1	1	3	5	2
Social Norms	National	4	5	6	1	4	4
	County & District	3	4	5	1	2	2
	Community	2	3	4	1	2	2
Institutional Leadership	National	6	5	7	1	1	1
	County & District	3	4	5	1	1	1
Coordination	National				6	7	5
Investment planning	National				6	9	5
Service Monitoring - water point functionality	National	0	0	0			
	County & District	5	3	4			
Service Monitoring - water quality	National	2	3	4			
	County & District	4	1	2			
Service Monitoring - sanitation & ODF status	National				1	1	1
	County & District				1	1	1
Service Monitoring - hygiene	National				1	1	1
	County & District				1	1	1
Supply chain & services	National	2	7	5	0	1	0
	County & District	2	7	5	0	1	0
Local participation	Community	2	7	5	2	1	2
Service maintenance mechanisms	Community	7	2	2	0	0	0
Affordable financing	Community	5	3	4	0	3	1
Inclusiveness	Community	8	3	2	4	2	3
Private sector involvement	All	3	8	5	1	4	3
Technology - water point functionality	All	8	5	6			
Technology - water quality	All	5	4	4			
Technology - sanitation & hygiene	All				6	4	4
Quality of work	All	5	3	4	1	1	1
Mean average rating	All	4.23	4.27	4.36	2.13	2.78	2.00
Mean average rating	National	4.29	5.14	5.43	3.00	3.86	2.57
Mean average rating	County & District	3.00	3.33	3.67	1.17	1.83	1.17
Mean average rating	Community	4.80	3.60	3.40	1.40	1.60	1.60
Mean average rating	All	Med	Med	Med	Low	Low	Low
Mean average rating	National	Med	Med	Med	Low	Low	Low
Mean average rating	County & District	Low	Low	Low	V.Low	V.Low	V.Low
Mean average rating	Community	Med	Low	Low	V.Low	V.Low	V.Low

# 5.0 PRIORITY AREAS

The Liberia WASH sector historically has been characterized by a wide array of actors operating independently. However, in the past few years, this chaotic situation has become increasingly organized and harmonized through entities like the NWSHPC and through policy and planning documents such as the WASH Capacity Development Plan and WASH Sector Investment Plan. The increased coordination among donors and program implementers is begin to result in set of increasingly consistent recommendations and priority areas for the sector, as provided below.

The **Sanitation and Water For All (SWA) 2014 Progress Update on Commitments from the High Level Meeting** highlights the challenges remaining to achieve its commitments (Table 5-1). The ‘Progress’ categories included in the reports are: Completed; Almost Completed; Good Progress; Slow Progress; Major Barriers; and No Data.

**Table 5-1: Progress on Liberia’s 2012 SWA Commitments**

Commitments	2013 Progress	2014 Progress
<b>Allocate a minimum of 0.5% of GDP to sanitation and hygiene through the eThekwini Declaration</b>	<b>Slow Progress</b>	<b>Major Barriers</b>
<p><b>Milestones of Progress:</b> 0.014 percent of GDP (2012) was allocated to sanitation and hygiene in Public Sector Investment. Program (PSIP) of the Government</p> <p><b>Steps Remaining to Fully Achieve:</b> Allocate funds to MPW ‘Rural Water Supply and Hygiene’ PSIP budget line; Within the MoHSW PSIP, create and allocate funds to budget lines for water quality surveillance, sanitation, and hygiene promotion for communities and health facilities; Within the MoHSW PSIP create and allocate funds to budget lines for WASH in schools; With the LWSC PSIP, creation and allocation fund to the budget line for urban sewerage.</p>		
<b>Create clear and distinct budget lines for water, sanitation and hygiene within the National Budget of Liberia</b>	<b>Slow Progress</b>	<b>Slow Progress</b>
<p><b>Milestones of Progress:</b> MCC, LWSC, and MPW have distinct WASH budget lines in the National Budget of the Government of the Republic of Liberia FY 2013- 2014.</p> <p><b>Steps Remaining to Fully Achieve:</b> Within the MoHSW create clear and distinct PSIP budget lines for water quality surveillance, sanitation, and hygiene promotion for communities and also for health facilities; Within the MoE create clear and distinct budget lines for WASH in schools; Within the LWSC create clear and distinct budget lines for urban sewerage; All within sections of the 2014-15 National Budget of the Government of Republic of Liberia.</p>		
<b>Implement Water Supply and Sanitation Policy (WSSP) to ensure a functioning National Water Resources and Sanitation Board</b>	<b>Slow Progress</b>	<b>Almost Completed</b>
<p><b>Milestones of Progress:</b> The Executive Order was re-drafted by the task force established on WASH governance. The final version of the Executive Order was presented by the Assistant Minister of Public Works to the Office of the President. The Executive Order is currently being reviewed by the Legal Advisor to the President.</p> <p><b>Steps Remaining to Fully Achieve:</b> Appoint and announce the Board. <i>[Completed in April 2014]</i></p>		
<b>Continue to respond to future Global Analysis and Assessment of Sanitation and Drinking Water (GLAAS) surveys</b>	<b>Almost Completed</b>	<b>Almost Completed</b>
<p><b>Milestones of Progress:</b> 2013 GLAAS Data submitted to WHO for Final Compilation.</p> <p><b>Steps Remaining to Fully Achieve:</b> 2013 GLASS process is complete in Liberia.</p>		

Commitments	2013 Progress	2014 Progress
Develop a monitoring and evaluation system for the WASH sector	Good Progress	Slow Progress
<p><b>Milestones of Progress:</b> Progress has been made in sector quarterly activity reporting, aligned with the Sector Strategic Plan; and the adoption of AKVO FLOW, a software package linking smart-phone/tablets to a database, accessible through an on-line dashboard.</p> <p><b>Steps Remaining to Fully Achieve:</b> MoHSW to revise WASH-related data in HMIS to include CLTS and water-quality related indicators, and WASH in health facilities indicators; MoE to revise WASH questions in school questionnaire of national school census; Develop and operationalize mechanisms to routinely verify and analyze sector activity reporting; Agree on and operationalize higher level indicators and reporting systems that will allow sector performance to be monitored and evaluated.</p>		
Implement Rural Water Supply and Sanitation Bureau and Directorate for Community Mobilization and Hygiene Promotion		Major Barriers
<p><b>Milestones of Progress:</b> The commitment is captured in the Sector Strategic Plan and in the Annual work plan and deliverables of the NWSHPC Secretariat.</p> <p><b>Steps Remaining to Fully Achieve:</b> MPW and MoHSW need to develop planning including initiating internal reforms, and developing budget proposal and justifications with submission to the Legislature, for budgetary hearing at the House; The NWRS Board, when formed, to advocate for proposed changes to the institutional framework within MPW and MoHSW.</p>		

The Liberia **WASH Sector Strategic Plan 2012-2017** includes a summary of what it perceives to be main challenges from an institutional context in Annex C.1.7, excerpts of which are included below.

- **Fragmented responsibilities:** The responsibilities for WASH fall across several Ministries and agencies. Whilst most of the responsibilities are understood, the cross-Ministry responsibilities lead to fragmented planning, budgeting, implementation, M&E and reporting.
- **No disaggregated budgets for WASH:** None of the key Ministries have disaggregated budgets for WASH programs. For several years the MPW and MoHSW teams working on WASH only received the administrative budget to cover salaries but no program budgets. There is therefore also no clear reporting on expenditure and no joint reporting.
- **Capacity challenges:** In addition to fragmented responsibilities, the sector also suffers from capacity constraints in terms of trained manpower, mobility, equipment and finances. There are capacity gaps in all levels (national, county and district).

The WASH Sector Strategic Plan also outlines the following Strategic Objectives to 2017:

- **Strategic Objective 1:** Establish and strengthen institutional capacity to manage, expand and sustain Liberia's WASH services
- **Strategic Objective 2:** Increase equitable access to environmentally friendly and sustainable water and sanitation services and promote hygiene behavior change at scale
- **Strategic Objective 3:** Establish information management systems and strengthen monitoring, data collection, communication and sector engagement
- **Strategic Objective 4:** Improve sector financing and financing mechanisms

The **Sector Investment Plan** includes recommendations for a number of new projects in the urban and rural sectors (details are included in the SIP) including:

#### Urban

- **Programme Management Consultancy** - covering the water and sanitation projects that are to be undertaken in Monrovia, ensuring coordination and preparing the outline designs for the new

projects: water distribution extension project; dug well improvement project; water supply expansion project and also covering the sewerage and on-site sanitation activities.

- **Monrovia Water Distribution Project** – covering full rehabilitation of the existing distribution system and extension of the system to cover 77% of Greater Monrovia as well as a comprehensive leakage reduction program and installation of new consumer connections.
- **Monrovia Well Protection Project** – covering improvements to 1032 existing communal wells to improve the water quality serving 250,000 people and hygiene promotion to ensure potable water from private wells.
- **Monrovia Water Supply Expansion Project** – covering the design of the extension of the Monrovia piped water supply system to meet the needs of Greater Monrovia in 2022 by doubling the capacity of the White Plains production to 118,000 m<sup>3</sup> /d.
- **Sanitation Master Plan for Monrovia** - needed urgently; the work could be done by the current Management Consultants to avoid time consuming separate procurement processes and for the master plan study to lead directly to formulation and implementation of investment programs.
- **Fiamah Sewage Treatment Plant** has a scope of constructing a new sewerage treatment plant at Fiamah with a capacity of 23,000 m<sup>3</sup> /d to serve the rehabilitated existing sewer system. This can only start once the master plan has confirmed that a sewerage treatment plant at Fiamah is appropriate, but planning and securing funding for the projects should start as soon as possible.
- **Monrovia On-Site Sanitation Project** - the improvements to the central sewerage system and treatment plant will improve the environmental conditions in Monrovia, but since the households using flush toilets, either connected to the working parts of the sewerage system (discharging mainly untreated to the surface drains and wetlands) or connected to septic tanks, are already considered as covered in the statistics, the improvements to the sewerage system will not in itself contribute to reaching the coverage targets.
- **Monrovia Sewerage and Treatment Expansion Project** - For the purpose of the SIP the extension assumes that the existing system which drains to Fiamah cannot be extended due to limitations of the Fiamah site area. Three new satellite systems will be constructed as proposed in the Sector Strategic Plan and the design of those are included in the 5 year plan.
- **Cities Sanitation and Hygiene Project** - is proposed to start as soon as possible to supplement the AfDB-funded project in Kakata, Zwedru and Buchanan and to provide sanitation in the LMWP cities and others. The sanitation and hygiene project would be implemented by the Municipalities in close cooperation with the MoHSW and the WASH implementation Teams in the Counties. The methodology, promotional techniques and the use of private sector sanitation centers would be similar to the approach described for the CLTS program in rural areas.

## Rural

Given the delays in the start of the comprehensive AfDB-funded NRWASHP, the SIP recommends the following pilot activities to provide information for its design.

- Pilot county capacity building program
- Development of private sector capacity for hand drilling of shallow wells
- Development of guidelines for implementation of spring catchments
- Capacity building program for hand dug well construction
- Tendering of drilling contract for 50 boreholes

The **WASH services sustainability bottleneck analysis workshop** held in December 2013 developed the following are key recommended activities to focus on to remove the major bottlenecks in sustaining drinking water point and sanitation and hygiene services:

## **Drinking water points**

1. Support communities, counties and districts to develop water supply plans that address water point sustainability;
2. Raise awareness on the WASH sustainability framework and facilitate participation at all levels with specific roles and responsibilities
3. Monitor water quality regularly at national and sub-national levels including households and also monitor water point and water system functionality periodically
4. Sign compacts at all sub-national levels – county; district and community to allocate responsibility for sustainability

## **Sanitation and hygiene**

1. Support communities, counties and districts to develop sanitation and hygiene plans for sanitation and hygiene sustainability that include schools and health facilities;
2. Raise awareness and build capacity of national and local leaders to be supportive and provide enabling environment to sustain sanitation and hygiene services;
3. Develop guidelines and standards for sanitation and hygiene sustainability in schools and health facilities covering;
4. Revise WASH component of School Census to reflect indicators for improved WASH facilities in line with Joint Monitoring Programme (JMP) and national surveys and establish baseline on status of WASH facilities in schools;
5. Promote CLTS, build capacity of all sector stakeholders in CLTS; and scale up CLTS implementation nationwide
6. Put in place monitoring systems to regularly measure sanitation functionality and community Open Defecation Free (ODF) status with adequate funds and trained personnel at national, county/district and community levels
7. Support availability of sanitation products and services through sanitation marketing with private sector involvement and develop appropriate and cost effective sanitation options

Recommendations from the 2014 **NRWASHP Development Study Inception Report** included the following Major Focus Areas:

- Capacity gap in human resources, logistics and financial resources
- Major policy issues including the population threshold for rural water supply; capital cost contribution; and water supply technology limitations
- Gender and equity
- Sustainability, especially around O&M including different cost recovery mechanisms (audits, water tariff setting, revenue collection, financial records keeping, funds management and utilization as well as accountability systems)
- Performance of the Capital Cost Contribution (CCC) policy
- Standardization of hand pumps and viable hand pump spare parts supply chain
- Improved technologies
- Private sector participation
- Sector financing focusing on Medium-Term Expenditure Framework (MTEF) and proposed Pool Fund
- Sector governance in line with national strategies, such as the Agenda for Transformation, and plans, including the forthcoming National M&E Plan
- Progress of the SIP and Capacity Development Plan
- Water quality coordination and monitoring
- Sector coordination of various stakeholders

The **second Annual WASH Joint Sector Review (JSR)** was held in Monrovia on May 1-2, 2014. The event resulted in a set of draft recommended actions for the next financial year, organized around sector strategic objectives (Table 5-2).

**Table 5-2. Issues Raised during the May 2014 Joint Sector Review**

Thematic Area	Issues Arising at the JSR (recommendations, Breakout, Plenary Audience)
Governance, Capacity and Coordination	<ul style="list-style-type: none"> <li>• All 15 counties have regular WASH coordination meetings which are reported on at the next JSR</li> <li>• National Water and Sanitation Board established and meeting; terms of reference finalised.</li> <li>• Increase the visibility of WASH at MPW and create the national bureau for rural WASH</li> <li>• Hold regional meetings to explain the Board's purpose to county leadership</li> <li>• Decentralize WASH implementation, financing and governance to sub-national levels</li> <li>• Revise LWSC mandate that was approved in 1973</li> <li>• Revisit and enforce public health and safety laws coupled with massive awareness</li> <li>• Develop process-driven WQ guidelines including roles of different stakeholders; county focal points; test fees; timeframes; and reporting lines (MoHSW, MLME, EPA)</li> <li>• Select technical line ministry with highest mandate for WASH as focal point (Vice Chair) for coordinating and reporting on WASH activities in Liberia</li> </ul>
Finance	<ul style="list-style-type: none"> <li>• Government Funding for existing WASH Budget Lines increased [also SWA commitment]</li> <li>• Clear and distinct budget lines for WASH in all WASH Ministries &amp; Agencies (within 3 years) [SWA]</li> <li>• Financial aspects of WASH policy reviewed (e.g. user fees, cost recovery)</li> <li>• Support WASH ministries and agencies to submit implementable WASH projects to the Project Management Office at the Ministry of Finance (MOF) using tools that already exist, such as the SIP, to plan priority projects for both urban and rural areas</li> <li>• Prioritize preparatory work for infrastructure investment through necessary feasibility studies</li> <li>• Devote a minimum of 5% of County and Social Development Funds to utilize as cost recovery for sustainability and devote user fees to operation, maintenance, monitoring and evaluation</li> <li>• Increase funds, including from community and county development funds, for WASH in schools and health clinics (MOE, MoHSW)</li> </ul>
Service Delivery	<ul style="list-style-type: none"> <li>• Rural WASH Technical Guidelines reviewed, updated &amp; expanded (with validation) disseminate them fully – (could be linked to new funding via WASH Consortium)</li> <li>• Equity issues are properly addressed and guidelines utilised in major Rural WASH projects</li> <li>• Present and clearly lay out issues of rural and urban water and sanitation facilities &amp; hygiene promotion separately in the SPR</li> <li>• Revise rural water guidelines to reflect the participation of local dwellers and authorities and WASH representatives</li> <li>• Improve efficiency of bill collection under LWSC</li> <li>• Use GIS maps that show SWM coverage</li> <li>• Focus on school WASH clubs and health education so children are taking lead in spreading messages (MOE)</li> </ul>
Monitoring	<ul style="list-style-type: none"> <li>• Sector Strategic Operation Matrix reviewed &amp; re-prioritised so that it is more realistic.</li> <li>• Next SPR aligned with Govt Fiscal Year &amp; reports on progress with respect to recommendations &amp; considers feedback on 2013 report from counties, donors, CSOs, agencies &amp; ministries</li> <li>• Next JSR in Oct or Nov 2015, with "<i>commitments for action</i>" signed by GoL, donors &amp; NGOs/CSOs.</li> <li>• Add evaluation component to developing Monitoring &amp; Evaluation (M&amp;E) plan so lessons are learned from existing programs</li> <li>• Conduct a nationwide survey on sanitation and hygiene to act as a baseline for planning</li> <li>• Explain clearly how health WASH facilities should be monitored and reported to national system by NWSHPC (MoHSW)</li> <li>• Develop WQ database that can be accessed by all (MoHSW)</li> </ul>

# 6.0 REFERENCES

## **Institutional: Government of Liberia Laws, Guidelines, Policies and Framework Documents**

Republic of Liberia National Technical Coordinating Unit (NTCU) for Community-Led Total Sanitation (CLTS). Guidelines for CLTS Implementation in Liberia. December 2012.

Republic of Liberia. An Act Creating the Public Procurement and Concessions Commission. Approved September 21, 2005. Published by Authority, Government Printing Office Ministry of Foreign Affairs, Monrovia, Liberia.

Republic of Liberia. An Act to Amend the Public Authorities Law to Create the Liberia Water and Sewer Corporation. Approved January 30, 1973. Published by Authority, Government Printing Office Ministry of Foreign Affairs, Monrovia, Liberia. April 10, 1973.

Republic of Liberia. Liberia WASH Compact, Sanitation and Water for All: A Global Framework for Action. May 2011.

Republic of Liberia. National Environmental and Occupational Health Policy: A Guide to Action for Addressing the Environmental and Occupational Health Challenges Facing Liberia. August 2010.

Republic of Liberia. National Integrated Water Resources Management (IWRM) Policy. November 2007 (approved 2009) and revised 2010-2011 (cover date unchanged).

Republic of Liberia. Republic of Liberia and Government of Sierra Leone High Level Ministerial WASH Exchange Visit – Outcome Document. March, 2012.

Republic of Liberia. Speech given by Liberia Minister of Public Works Samuel Kofi Woods at 4<sup>th</sup> Annual Africa Water Week, Cairo, Egypt on May 15, 2012.

Republic of Liberia. The Guidelines for Water and Sanitation Services in Liberia. October 2010.

Republic of Liberia. Water Supply and Sanitation (WSS) Policy. April 2009.

Republic of Liberia. Water Supply, Sanitation and Hygiene (WASH) Sector Strategic Plan for Liberia, 2012-2017. May 2011. [Also accompanying ‘Action Plan’ Gantt Chart, ‘Investment Costing’ Spreadsheet, and ‘Operating Matrix’].

Republic of Liberia. An Act Creating the Public Procurement and Concessions Commission. Approved September 21, 2005.

## **WASH Sector-Specific Evaluations, Studies, and Technical Information**

ADE. Development of a Legal Framework for the Water Sector in Liberia, Phase 1 Legal Challenges. October 2004.

African Development Bank (AfDB). Feasibility Study Report, Monrovia Expansion & Rehabilitation of Three County Capitals Water Supply & Sanitation Project (Final Draft), Volume 1 (Technical), Volume 3 (Design Criteria), August 2009. Prepared by NCL Engineering Services Ltd.

African Development Bank (AfDB). National Rural Water Sanitation & Hygiene Program (NRWASHP) Development Study Briefer: Study Overview. June 2014. Prepared by Egis Eau (France) in association with Trend Group (Ghana) and Cape Resources, Inc. (Liberia).

African Development Bank (AfDB). National Rural Water Sanitation & Hygiene Program (NRWASHP) Development Study Briefer: Inception Report. June 2014. Prepared by Egis Eau (France) in association with Trend Group (Ghana) and Cape Resources, Inc. (Liberia).

African Development Bank (AfDB). National Rural Water Sanitation & Hygiene Program (NRWASHP) Development Study Situational Analysis and Concept Note Workshop Event Report. June 2014. Prepared by Egis Eau (France) in association with Trend Group (Ghana) and Cape Resources, Inc. (Liberia).

African Development Bank (AfDB). Project Appraisal Report, Monrovia Water Supply and Sanitation Rehabilitation Project. 2007

African Development Bank (AfDB). Terms of Reference for Feasibility Economic and Technical Study for the Rehabilitation of the Gbarnga, Bong County; Harper, Maryland County; and Sanniquellie, Nimba County Water Supply Systems. 2009.

African Development Bank (AfDB). Terms of Reference for Feasibility Economic and Technical Study for the Rehabilitation of the Robertsport, Voinjama, and Greenville Water Supply Systems in Grand Cape Mount, Lofa, and Sinoe Counties in Republic of Liberia. 2009.

African Development Bank (AfDB). Liberia Monrovia Expansion and Rehabilitation of Three County Capitals [Kakata, Zwedru, Buchanan] Water Supply and Sanitation Project Appraisal Report. December 2007.

African Development Bank (AfDB). Liberia Support to Water Sector Reform Appraisal Report. December 2008.

Benin Sanitation Learning and Exchange Workshop Liberia Delegation. Liberia Note with Action Plan. West Africa Regional Workshop towards Total Sustainable Sanitation, Benin. November 2014.

deVries, P. and Schmitzer, J. Use of a Natural Leader Network in Liberia to Scale Up CLTS, a Sustainable and Cost-Effective Approach. Presented at West Africa Regional Workshop Towards Total Sustainable Sanitation, Benin. 12-14 November, 2013.

European Commission in Liberia. Diagnostic Analysis of the Liberia Water Sector and of Liberia Water and Sewer Corporation. 2006 (est., undated). Prepared by Louis Berger SAS.

GKW Consult. Design Drawings for Water Treatment, Storage, and Distribution Systems in Gbanga. 1979.

GKW Consult. Emergency Rehabilitation Program Report. 2006.

Global Business Solutions, Inc. (GBSI). A Corporate Audit of the Liberia Water and Sewer Corporation (LWSC), Draft Final Report. December 2012.

Hydroplan. Long Term Technical Assistance for the Rehabilitation of the Water infrastructures of Monrovia/Liberia Final Report. 2006.

Initial Environmental Examination and Categorical Exclusion, Liberia Community Infrastructure Project II (LCIP). November 2008. USAID.

Liberia WASH Consortium. Life and Dignity at Risk: The Water, Sanitation and Hygiene Sector in Liberia, June, 2010.

National Water Sanitation and Hygiene Promotion Committee (NWSHPC). WASH-Liberia website ([www.wash-liberia.org](http://www.wash-liberia.org)). Accessed June 2014.

NCL Engineering Services Ltd. and funded by African Development Bank (AfDB). Feasibility Study Report, Monrovia Expansion & Rehabilitation of Three County Capitals Water Supply & Sanitation Project (Final Draft), Volume 1 (Technical), Volume 3 (Design Criteria), August 2009.

Population Services International (PSI). Emergency Distribution of WaterGuard in Liberia Intervention Brief. 2013.

Republic of Liberia Ministry of Public Works, prepared by AB&H, Inc. The Design Works of the Water Treatment Plant, and 36" Pipeline from White Plains [Design Drawings, Specifications, and Bidding Documents]. February 2009.

Republic of Liberia. Liberia WASH Sector Capacity Development Needs Assessment. July-October 2012. Released February 2013.

Republic of Liberia. Liberia WASH Sector Capacity Development Plan. February 2013.

Republic of Liberia. Liberia Water Supply, Sanitation, and Hygiene (WASH) Sector Investment Plan 2012-2017. February 2013.

Republic of Liberia. Liberia Water Supply, Sanitation, and Hygiene (WASH) Sector Investment Plan Inception Report. Prepared by World Bank Water and Sanitation Program, PEMConsult, and Colan Consult. 2012

Republic of Liberia. Water, Sanitation & Hygiene (WASH) Sector Performance Report. April 2013.

Sanitation and Water for All (SWA). Liberia WASH Compact Review Report. March 2012.

Sanitation and Water for All (SWA). The Development of the Liberia WASH Compact: A Report on the Process. 2011.

Schmitzer, Jennifer. Strengthening the Institutional Framework for Community Led Total Sanitation (CLTS) in Liberia to Trigger Progress. Presented at West Africa Regional Workshop Towards Total Sustainable Sanitation, Benin. 12-14 November, 2014.

Togba, J. Using Social Marketing to Accelerate CLTS in Liberia. Presented at West Africa Regional Workshop Towards Total Sustainable Sanitation, Benin. 12-14 November, 2014.

UNICEF and Oxfam. Liberia WASH Baseline Study. 2013.

US Agency for International Development (USAID). Liberia Water and Sanitation Profile. November 2008. Prepared under the Advancing the Blue Revolution Initiative [ABRI]

US Agency for International Development (USAID). Situational Analysis [Robertsport, Sanniquellie, and Voinjama]. May 2012. Prepared by Tetra Tech under the USAID/ Liberia Municipal Water Project (LMWP).

US Agency for International Development (USAID)., Proposed A&E Task Order, Water Supply Service Provision for Three Liberian Secondary Cities, PowerPoint Slide Presentation Briefing on March 2010 Field Assessment.

WaterAid. Scoping Study to Liberia. 2008.

Webster, James. A Study Looking at Health Seeking Behaviour for Diarrhea in Rural Liberia. June 2011.

World Bank Water and Sanitation Program (WSP). Liberia Waterpoint Atlas, Final Review Version. August 2011.

World Bank Water and Sanitation Program (WSP). Project Summary: Waterpoint Mapping in Liberia Using FLOW Technology [Brochure]. 2011.

World Bank Water and Sanitation Program (WSP). Water Supply and Sanitation in Liberia: Turning Finance into Services for 2015 and Beyond: An AMCOW Country Status Overview. 2010.

### **Non-WASH Specific References**

Liberia Institute of Statistics and Geo-Information Services (LISGIS). Geographic Information System (GIS) mapping and GIS information including 2008 census enumeration area Shapefiles, topographic maps, and GIS Shapefiles for additional information layers.

Republic of Liberia. Agenda for Transformation: Steps Toward Liberia RISING 2030. April 2013.

Republic of Liberia. County Development Agenda (CDA) Reports. Republic of Liberia 2008 – 2012, Prepared by the County Development Committee, in collaboration with the Ministries of Planning and Economic Affairs and Internal Affairs.

Republic of Liberia. Lift Liberia Poverty Reduction Strategy I (2008-2011). 2007.

Republic of Liberia. 2008 National Population and Housing Census Final Results. Liberia Institute of Statistics and Geo-Information Services (LISGIS).

### **Monitoring and Evaluation**

Akvo. Really Simple Reporting (RSR) Profiles and Projects Liberia. October 2013.

Liberia WASH Sector Reporting Task Force. Presentation on Liberia WASH Sector Reporting. September 2013.

L-MEP Guide to Developing USAID Project Performance Management Plans (PMPs). May 27, 2011. Developed by the USAID/Liberia Monitoring and Evaluation Program (L-MEP), prepared by the Mitchell Group.

Republic of Liberia, UNDP, UNECA. Liberia's Progress towards the Millennium Development Goals. 2008.

Republic of Liberia. First Annual WASH Joint Sector Review 2012 Final Report. February 2012. Prepared by UNICEF.

Republic of Liberia. National WASH Reporting Form Validation Workshop Report August, 2013. Prepared by Liberia National WASH Promotion Committee (NWSHPC).

World Bank Water and Sanitation Program (WSP). Water Operators Partnerships-Africa Utility Performance Assessment Final Report. June 2009.

Akvo. Refresher Training Report. October 2013.

**U.S. Agency for International Development**

1300 Pennsylvania Avenue, NW

Washington, DC 20523

Tel: (202) 712-0000

Fax: (202) 216-3524

**[www.usaid.gov](http://www.usaid.gov)**