



African Water Association capacity building program



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PARTNERSHIP CAMWATER & ONEA

Beneficiary, Cameroon

Mentor, Burkina Faso



Burkina Faso, ONEA

Cameroon, CAMWATER

INTRODUCTION

According to the United Nations, despite the increase from 76% to 91% (between 1990 and 2015) of the proportion of the world population using an improved drinking water source, 663 million people do not still have access to an improved source of drinking water and at least 1.8 billion people around the world use a source of drinking water that is contaminated with feces.

The African Water Association (AfWA) in keeping with its efforts to support the African Ministers' Council on Water (AMCOW) in achieving the African Water Vision for 2025, is committed to develop programs for supporting the actors in the water and sanitation (WASH) sector. Thus, from 2015 to 2019, AfWA's Capacity Building Program (AfriCap) aims to promote partnerships in the sector of drinking water, with a funding from USAID. Following the Water Operators' Partnership (WOP) developed in 2009, AfriCap Program through its Component 3, supports African water operators including their laboratories for analysis and control of water quality to improve their performance, through facilitating partnerships between the most successful companies (Mentors) and less competitive ones (beneficiaries or Mentees).

For the year 2018, seven (07) partnerships were implemented with the funding support of the United States Agency for International Development (USAID). Among these partnerships, the one between the National Office for Water and Sanitation (ONEA) of Burkina Faso and the Cameroon Water Utilities Corporation (CAMWATER) is the subject of this sharing paper. This partnership in which ONEA drinking water quality laboratory plays the role of Mentor aims to share with the drinking water quality laboratory of CAMWATER, a less competitive laboratory which has been operating for the last eighteen (18) years, the experiments and good practices acquired by the Mentor following twenty-five (25) years of operation in the water sector and more specifically in the field of water quality control. The first exchanges between these two (02) partners took place during the benchmarking mission organized from 1st to 4th November 2017 in Ouagadougou - Burkina Faso, after which a tripartite Memorandum Of Understanding (MOU) between ONEA, AfWA and CAMWATER was signed.

CHALLENGES

Beyond the quantity, the quality of water is an important factor of human health. Water is quickly subject to chemical and / or bacteriological contamination. In such a context, the main challenge of the drinking water quality laboratories arises in terms of reliability in the results of analysis carried out. Indeed, only good quality management of the analysis results produced by drinking water quality laboratories is able to guarantee the reliability of the results produced and indirectly help decision-making.

In Cameroon, the government created CAMWATER in 2005 by decree no.2005 / 493 of December 31, 2005. To achieve its mission to manage the production, transport, distribution and marketing of drinking water, CAMWATER has been endowed with a drinking water quality laboratory in charge of controlling water quality. This young laboratory however faces several challenges in the management of water quality control, maintenance of laboratory equipment, services related to external provision and human resources development.

Through its involvement in the capacity building project of African water operators in water quality management or AfriCap peer-to-peer program, the CAMWATER drinking water quality laboratory would like to benefit through its partnership with ONEA, from the assistance of a more experienced laboratory, with the aim of learning from the latter through short, medium and long-term actions defined in a Performance Improvement Plan (PIP) designed and validated on a consensus basis.

PARTNERSHIP DESCRIPTION

The Laboratory Operator Partnership between CAMWATER and ONEA drinking water quality laboratories aims to adapt and implement, to the context of the CAMWATER drinking water quality laboratory, the good practices of the ONEA drinking water quality laboratory which have earned it a certain level of performance.

Training of a group of laboratory evaluators

A group of thirteen (13) evaluators from the laboratories of the water companies of Benin, Burkina Faso, Cote d'Ivoire, Guinea, Ghana, Mali, Nigeria, Senegal, Sierra Leone and Togo were trained respectively from 05 to 07 October 2016 and from 27 February to 02 March 2017 in Accra, Ghana by Experts of the US Environmental Protection Agency (USEPA).

This training allowed: I) the reinforcement of the capacities of the evaluators in the water quality control II) the exchanges between the evaluators participating in the trainings and III) the elaboration of a Quality Audit Manual. All training contents and documents produced were shared with the CAMWATER drinking water quality laboratory.

Exploratory evaluation missions

Exploratory evaluation were carried out in ten (10) drinking water quality laboratories within water companies, including the CAMWATER Laboratory. These are:

1. Cameroon Water Utilities Corporation (CAMWATER)
2. Ghana Water Company Limited (GWCL)
3. Ogun State Water Corporation (OGSWC)
4. National Office of Drinking Water of Côte d'Ivoire (LACQUE/ONEP)
5. Côte d'Ivoire Water Company (SODECI)
6. Guinea Water Company (SEG)
7. Niger Water Company (SEEN)
8. Mali Water Company (SOMAGEP)
9. Federal Capital Territory Water Board of Abuja (FCTWB) and
10. Togo Water Company (TdE)



The exploratory evaluation of the CAMWATER's drinking water quality laboratory took place from 07 to 08 August 2017. This mission was conducted by AfWA evaluators: Mr. Oscar Vivier (SEG), Mr. Eso-Nana Tébé (TdE) and Mr. Gilles Djagoun (AfWA), and helped to achieve the following results: i) summarize the level of performance of the laboratory and ii) identify possible improvements in policy and strategy, institutional, organizational, legal, technical and financial issues in order to identify, in the short, medium and long term,

the major challenges and improvement actions to be taken up by CAMWATER drinking water quality laboratory and (iii) identify and propose support to be provided by ONEA as Mentor for improving water quality management.

During this mission, major findings were noted by the evaluators. These findings include: Lack of staff, poor management, non-standardized workspace, lack of laboratory equipment, non-existence of a procedure manual, and non-existence of safety and laboratory waste management plan.

Benchmarking visit

From 1 to 4 November 2017, a delegation of four (04) laboratory operators from three (03) countries conducted a benchmarking visit to ONEA and the National Public Health Laboratory (LNSP) of Burkina Faso. These are CAMWATER, SEG, LACQUE/ONEP and SODECI.



During this mission, presentations and field visits allowed participants to learn about ONEA's experience in quality control and management of water standards: institutional, operational and administrative aspects of the water sector in Burkina Faso. The choice of this country is justified by the fact that during the past years, ONEA through its drinking water quality laboratory has developed several initiatives, in terms of water quality analysis, and sometimes in partnership with water companies in Europe (Walloon Region) and Morocco (National Office of Electricity and Water - ONEE) and water companies in Africa (Benin, Togo, Chad, Burundi). In addition, ONEA benefits from the expertise of the National Public Health Laboratory of Burkina Faso, which has technologically advanced equipment for the control of water quality. This gives ONEA drinking water quality laboratory a proven and good level of experience on water quality analysis and standards management. This is why AfWA has integrated ONEA as Mentor in AfriCap Program and

especially in component 3 aiming to improve water quality control by the operators involved.

After two days of learning, the CAMWATER drinking water quality laboratory and other participants were immersed in the experiences of ONEA and identified their needs.

Development of a Performance Improvement Plan

A technical assistance mission conducted from 26 to 28 February 2018 by AfWA group of evaluators trained for this purpose led to the development of a Performance Improvement Plan (PIP) for CAMWATER drinking water quality laboratory. This mission took place following the development of a PIP template with support from USEPA and members of AfWA Water Quality Task Force (WQTF). CAMWATER drinking water quality laboratory now has its own PIP for improving its performance. The implementation and monitoring of this PIP will be carried out with the support of ONEA of Burkina Faso (Mentor).



Table 1: Performance Improvement Plan

PERFORMANCE IMPROVEMENT PLAN	
Human resources	
❖	Establish / Sign job description
❖	Develop / Validate and implement the validated organization chart
❖	Assess training needs
❖	Develop a training plan
❖	Train the laboratory staff
❖	Organize team building activities
❖	Evaluate the staff performance
❖	Determine the occupancy rate of employees
❖	Reorganize the workforce if necessary
❖	Establish the criteria for handover and handover plan
❖	Disseminate to all employees the handover plan
❖	Hold/establish meetings between the Director of the laboratory and staff
❖	Improve the internal communication of the laboratory
External Services (Services)	
Not applicable	
Maintenance of Laboratory Equipment	
❖	Make an inventory / Acquire specific equipment for certain analyzes
❖	Acquire specific equipment
❖	Validate the management plan for Measurement and Test Control Equipment (MTCE)
❖	Develop a MTCE verification schedule
❖	Disseminate the validated MTCE management plan
❖	Implement validated MTCE management plan
❖	Perform a safety audit of the laboratory
❖	Implement the recommendations of the security audit
Management of Water Quality Control	
❖	Develop a waste management plan
❖	Operationalize the waste management plan
❖	Identify an alternative source of electrical power (at least for microbiology)
❖	Purchase an alternative source of electrical power
❖	Maintain the alternative source of electrical power
❖	Implement the monitoring plan

Date	Country	Activity
05 to 07 October 2016	Accra (Ghana)	Training of group of experts evaluators
07 to 08 August 2017	Douala (Cameroun)	Exploratory evaluation mission
01 to 04 November 2017	Ouagadougou (Burkina Faso)	Benchmarking visit
26 to 28 February 2018	Douala (Cameroon)	Technical assistance mission for PIP development
02 May 2018 to 30 April 2019	Douala (Cameroon)	Implementation of PIP
08 to 09 November 2018	(To be determined)	Mid-term evaluation workshop
09 to 10 July 2019	(To be determined)	Final evaluation workshop



WAY FORWARD

Following the activities carried out under this partnership, namely: the exploratory evaluations, the benchmarking missions as well as the development of the Performance Improvement Plan (PIP) of the CAMWATER drinking water quality laboratory; the implementation of this PIP is planned over a one (01) year period, starting from May 2018. Two (02) evaluations are also planned to measure the progress of the laboratory: a first mid-term evaluation and a second evaluation at the end of the implementation period.

LESSONS LEARNED

Through bilateral working visits with ONEA, the CAMWATER drinking water quality laboratory has learned the following lessons:

- The development of laboratory assessment tools and the training of evaluators provided the group of expert evaluators with tools to implement the process for improved performance
- Starting from the exploratory mission, the CAMWATER drinking water quality laboratory learned of its major challenges and defined improvement actions
- The involvement of the Top Management of the two (02) Water Companies visited is a proof of the improvement of laboratories performance in controlling and monitoring the quality of water.



Presentation of Mentee

The Cameroon Water Utilities Corporation (CAMWATER) is a public company created in 2005. Its mission is to ensure the public service of drinking water in Cameroon through planning, studies, project management, research and management of financing for all infrastructures and works necessary for catchment, production, transport, storage and distribution of drinking water.

CAMWATER in numbers :

–Population served (Cities)	: 109
–Length of network (Km)	: 6 758
–Sales revenue (USD)	: 79 080 083
–Volume of treated water (m ³)	: 157 713 644

Drinking water quality laboratory in numbers :

–Years of experience (Year)	: 18
–Number of samples analyzed / year	: 5 460
–Number of laboratories spread over the territory	: 05
–Staff (workforce)	: (To be determined)



Presentation of Mentor

Burkina Faso's National Office for Water and Sanitation (ONEA) is a state-owned company created on July 28, 1985. The mission of ONEA is to create, manage and protect water catchment facilities, supply, treatment, and distribution of drinking water. Its expertise includes the quality control of natural waters (drinking water from wells-boreholes-dams-lakes-rivers-) as well as the control of wastewater.

ONEA in numbers :

–Population served (Cities)	: 4 935 404
–Length of network (Km)	: 9 473
–Sales revenue (USD)	: 71 080 866
–Volume of treated water (m ³)	: 95 320 198

Drinking water quality laboratory in numbers :

–Years of experience (Year)	: 25
–Number of samples analyzed / year	: 76 394
–Number of laboratories spread over the territory	: 10
–Staff (workforce)	: 20

Implemented in Africa since 1 December 2015 for a period of four (04) years, AfriCap Program has been institutionalized as a sub-program of the African Water Association (AfWA). It has been operating since then thanks to the technical and financial support of several partners including the United States Agency for International Development (USAID), the African Ministers' Council on Water (AMCOW), the International University of Florida (FIU), the Water Supply, Hygiene and Sanitation Program/West Africa (USAID WA-WASH), the United States Environmental Protection Agency (USEPA), Population Services International (PSI) and beneficiary countries of West Africa. Partnerships between Laboratory Operators are exchanges and mutual working visits between two or more operators in the water sector. The goal is to mutually reinforce their capacities to improve their performance and play their roles in health monitoring and water quality control for all.

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