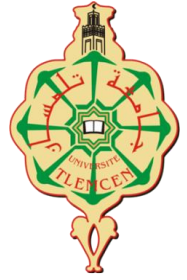




Pan African University
Institute of Water
and Energy Sciences



PAN-AFRICAN UNIVERSITY
INSTITUTE FOR WATER AND ENERGY SCIENCES
(Including CLIMATE CHANGE)

Master Dissertation

Submitted in partial fulfillment of the requirements for the Master degree in
[Water Policy]

Presented by

Margaret sima KIRONDE

**Implication of water Policy and water utility management systems on the performance
of water quality service delivery in Africa**

Case study from Côte d'Ivoire and Burkina Faso

Defended on 21/09/2020 Before the Following Committee:

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**PAN-AFRICAN UNIVERSITY
INSTITUTE FOR WATER AND ENERGY SCIENCES
(Including CLIMATE CHANGE)**

**IMPLICATION OF WATER POLICY AND WATER UTILITY
MANAGEMENT SYSTEMS ON THE PERFORMANCE OF
WATER QUALITY SERVICE DELIVERY IN AFRICA
CASE STUDY FROM CÔTE D'IVOIRE AND BURKINA FASO**

A Research Thesis Submitted in Partial Fulfilment of the Requirements
for the Award of the Degree of Master of Science in Water Policy of Pan
African University Institute of Water and Energy Science (including
climate change) Tlemcen, Algeria

BY
Margaret Sima KIRONDE

October, 2020

CERTIFICATION

I the undersigned, certifies that; I have read and hereby recommends for the acceptance by the University Of Pan African University Institute Of Water and Energy Sciences as a master thesis entitled “Implication of policy and water utility management systems on the performance of water quality service delivery in Africa. Case study from Côte d’Ivoire and Burkina Faso” for the fulfilment of the requirements for the Master of Science degree in Water Policy.

Signature:

Date: 15th October, 2020

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Supervisor

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DEDICATION

I dedicate my Master's thesis dissertation work to my family and friends who supported and cared for me in a very special way throughout the process.

DECLARATION

I, *Margaret Sima Kironde*, hereby declare that this thesis represents my personal work, realized to the best of my knowledge. I also declare that all information, material and results from other works presented here, have been fully cited and referenced in accordance with the academic rules and ethics.

This thesis has been submitted for examination with my approval as the university supervisor

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BIOGRAPHICAL SKETCH

Margaret Sima Kironde is an African Union Scholar from Tanzania and currently finalizing her Masters of Science in Water Policy at Pan African University Institute of Water and Energy Sciences, Algeria. Margaret has Bachelor degree of Environmental Science and Management from Ardhi University, Tanzania. She worked as a Program Coordinator at Young Women Christian Association of Tanzania for more than 3 years where she ensured that women and girl's rights and care for environment are promoted and sustained. She has also worked as an assistant volunteer in SIWI World Water Week to push the agenda of water for society, including all to contribute to attainment of SDG 6. She is a member of Climate Change and Gender Club at the University which is community of students and researchers focused on Energy and Water nexus towards building a resilient Africa in the face of climate change. Margaret has interests in promoting and contributing to SDGs through advocating for good policies and proper interventions that can contribute to water resource management in the face of climate change.

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ABBREVIATION AND ACRONYMS

AfWA- African Water Association

COVID-19- CoronaVirus Disease of 2019

CREPA- Regional center for Low Cost water and Sanitation

EWURA - The Electricity and Water Utilities Regulatory Authority in Tanzania

IBNET- International Benchmarking Network for Water and Sanitation Utilities

MDGs- Millennium Development Goals

MEA- Ministère de l'Eau et de l'Assainissement

MOH- Ministry of Hydraulics

NRW- Non -Revenue Water

NWSC- The National Water and Sewerage Corporation

O & M- Operation and Maintenance

OCCR- Operating Cost Coverage Ratio

ONAD- Office National de l'Assainissement et du Drainage

ONEA- Office National de l'Eau et de l'Assainissement

ONEP- Office National de l' Eau Potable

SAUR - Société d'Amenagement Urbain et Rural

SDE- Sénégalaise des Eaux

SDGs -Sustainable Development Goals

SODECI- Société de Distribution d'Eau de la Côte d'Ivoire

TREND- Training, Research and Networking for Development

WSS- Water Supply and Sanitation

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ABSTRACT

A well performing water utility is the one that is able to provide sustainable high quality water and waste water services to the community. It should be able to cover its financial and operational costs and provide water that is affordable to all. However many African water utilities struggle to deliver service to their customers in a convenient and reliable manner. Most of water utilities finance is unsustainable and unreliable due to dependence on transactions from government and development partners, finance loan accessing is also ineffective. Kayaga et al (2006) argues that inefficient performance causes inadequate access to services by the poor who turn to informal vendors, paying more than double of utility tariffs for water whose quality is uncertain. Therefore this study aimed to analyze the impact of policies and utility management systems on the water quality service delivery performance of Côte d'Ivoire and Burkina Faso water utilities. The qualitative method was adopted for data collection; in terms of sampling, non-probability sampling precisely purposive sampling was used in this study where sample were drawn from a list of experts in the field. Structured questionnaires, and discussions were used to produce primary data. Furthermore secondary data were collected from existing documents, journals, reports and books. Data collected from questionnaires was organized according to performance indicators, translated and analyzed using SWOT analysis method. The results demonstrated inadequacies and gaps in the utility management systems and policies causing deficiencies in water quality service delivery to the populations of respective countries. Therefore, there is a need to have a comprehensive approach that addresses the challenges and gaps so as to have sufficient, reliable, convenient, transparent, financial sustainable, responsive to citizens and safe water services and sanitation, to the communities of Côte d'Ivoire and Burkina Faso.

Keywords: water quality service delivery, Policies, Utility Management Systems

RESUME

Un service d'eau performant est celui qui est en mesure de fournir à la communauté des services d'eau et d'eaux usées durables de haute qualité. Il doit être en mesure de couvrir ses coûts financiers et opérationnels et de fournir une eau abordable pour tous. Cependant, de nombreux services d'eau africains ont du mal à fournir des services à leurs clients de manière pratique et fiable. La plupart des financements des services d'eau ne sont ni viables ni fiables en raison de la dépendance vis-à-vis des transactions du gouvernement et des partenaires de développement, l'accès au prêt financier est également inefficace. Kayaga et al (2006) soutiennent que des performances inefficaces entraînent un accès inadéquat aux services par les pauvres qui se tournent vers des vendeurs informels, payant plus du double des tarifs des services publics pour l'eau dont la qualité est incertaine. Par conséquent, cette étude visait à analyser l'impact des politiques et des systèmes de gestion des services publics sur la performance des services de qualité de l'eau des services d'eau de Côte d'Ivoire et du Burkina Faso. La méthode qualitative a été adoptée pour la collecte des données; en termes d'échantillonnage, l'échantillonnage non probabiliste a été utilisé dans cette étude avec un échantillonnage non probabiliste, où l'échantillon a été tiré d'une liste d'experts dans le domaine. Des questionnaires structurés et des discussions ont été utilisés pour produire des données primaires. En outre, des données secondaires ont été collectées à partir de documents, revues, rapports et livres existants. Les données collectées à partir des questionnaires ont été organisées en fonction d'indicateurs de performance, traduites et analysées à l'aide de la méthode d'analyse SWOT. Les résultats ont mis en évidence des insuffisances et des lacunes dans les systèmes et politiques de gestion des services publics, entraînant des carences dans la fourniture de services de qualité de l'eau aux populations des pays respectifs. Par conséquent, il est nécessaire d'avoir une approche globale qui aborde les défis et les lacunes afin d'avoir des services suffisants, fiables, pratiques, transparents, financièrement durables, adaptés aux citoyens et des services d'eau salubre et d'assainissement aux communautés de Côte d'Ivoire et du Burkina Faso.

Mots clés: prestation de services de qualité de l'eau, politiques, systèmes de gestion des services publics

CHAPTER ONE

1.1 INTRODUCTION

The water utility is responsible for the safe and timely distribution of water and other related services such as waste water treatment to domestic, industrial, and commercial sectors of economy. Utilities can be regional or national. Most of African water utilities are either local or national and the management of water utilities is either public, private or a mixture of public private partnership. In order for a water utility to monitor its performance, performance benchmarking has been adopted by establishing relevant performance indicators that are consistently relevant, apprehensible, and significant to all utilities and decision makers. Performance indicators are system variables that measure the system effective-ness, reliability and cost. According to Berg (2010) effectiveness is the degree to which water utility achieves its targets whereas efficiency is the achievement of established standards.

Water is an essential resource according to Dublin first Principle that fresh water is a finite and vulnerable resource, essential to sustain life, development and the environment. Water demand for human consumption and economic activities has been increasing rapidly while water availability is estimated to shrink as much as two-third by 2050. In Sub-Saharan Africa, 42% of people have no access to basic water supply and 72% have no access to basic sanitation. Africa's population is growing fast more specifically in sub-Saharan countries where urbanization being one of the leading factors to urban migration. As of 2017 the continent is a home of more than 1.2 billion people, and it is estimated that 1 billion people will be added by 2050, causing an increase in demand for services in water and sanitation for Sub- Saharan African countries.

World Bank (2017) reports that for Sub-Saharan African countries to achieve Sustainable Development Goal 6 financial investments needs to be doubled. The capacity of many water utilities to cater for ever growing population and economic activities is very poor due to failure to cover their basic Operation and Maintenance costs (O & M), utilities in Nigeria, Egypt, Pakistan and India are unable to cover operating cost cause of very low tariffs. Most of water utilities finance is unsustainable and unreliable due to dependence on transactions from government and development partners, finance loan accessing is also ineffective. Kayaga et al (2006) argues that inefficient performance causes inadequate access to services by the poor who turn to informal

vendors, paying more than double of utility tariffs for water whose quality is uncertain. Furthermore the water produced can be lost in form of physical and administrative loss.

Despite the fact that most studies on water utilities performance in developing countries indicate the lagging behind of water utilities performance in Africa, World Bank, 2017 report showed some improvements between 2010 and 2013. Utilities sampled were able to slowly improve water coverage, but overall coverage stood still at only 60 percent with a tendency to decline. Utilities such as ONEA, NWSC, SDE improved their performances to higher levels where as for SODECI, financial and operational performance decline during the Ivorian civil wars (2002-2011) but improved its performance from 2014 (Van den berg & Danilenko, 2017) . Baietti et al (2006) stresses that water utilities worldwide have attempted to improve performance by sequencing actions to break vicious cycles that prevent sustainable change. The ability of utilities to provide a safely managed water service and to reach the unserved will be supported by their investment in efficiency improvement, policy and institutional capacity development, access to financing, and ability to respond to climate change even more than infrastructure investments.

Therefore, this study aims to analyze the implication of policies and utility management systems on the performance of African water utilities, by using the AfWA database of member utilities to select a reasonable number of utilities from Côte d'Ivoire and Burkina Faso with various water policy set up, cross-check the various policies implemented at countries level and different utility management systems to finally, analyze the impact of these policies and utility management systems on the performance of these water utilities. The outcomes of this study will help policy makers and stakeholders of the water sector in Africa, to review the existing non effective policies and promote better ones which at the end, could enhance the performance of water utilities to support achieving the SDGs in the water sector in African countries.

1.2 Problem statement

What the public wants from water utilities is sufficient, reliable, convenient, and safe water services. Water provision that is transparent, financially sustainable, and responsive to citizens. Wastewater should be collected, treated, and discharged properly (Soppe et al, 2018). African water utilities are responsible for providing water supply and sanitation (WSS) services, however many African water utilities struggle to deliver service to their customers in a convenient and reliable manner. Nearly one billion people in Africa still lack access to safe drinking water. The SDGs requires that African utilities to provide equitable access to safe and affordable drinking

water for all. Many African utilities are still lagging behind to achieve SDGs due to ineffective management systems causing poor performance issues such as low operating and investment efficiency (Heymans et al, 2016).

Water is politically sensitive and most politicians have not been able to effectively balance the trade-offs between affordability and expansion of coverage to poorer communities with the utility's need for financial viability (Hughes 2003). This is due to ineffective policies, linked with the noncompetitive nature of the sector and poor policies implementation in many African countries. Some governments have tried to improve their water utilities such as SODECI in Côte d'Ivoire and ONEA in Burkina Faso, but unfortunately they have had only limited success.

There is a need to analyze how policies and utility management systems in Côte d'Ivoire and Burkina Faso have impact on water utility performance in order to help policy makers and stakeholders of the water sector in other African countries, to review the existing non effective policies and promote better ones which at the end, could enhance the performance of water utilities to support achieving the SDGs in the water sector in African countries.

1.3 Research objectives

1.3.1 Main objective

To analyze the implication of policies and utility management systems on the water quality service delivery performance of Côte d'Ivoire and Burkina Faso water utilities.

1.3.2 Specific objectives

1. To use AfWA database of member water utilities to identify and map existing policies and management systems
2. To benchmark the performance of water utilities in Côte d'Ivoire and Burkina Faso; and
3. To conduct a comparative evaluation of the performance of Côte d'Ivoire and Burkina Faso water utilities.

1.4 Research questions

General research question

What are the implication of policies and utility management systems on the water service delivery performance of Cote d'Ivoire and Burkina Faso water utilities?

The study states three specific research questions.

1. What are the water sector institutes in Cote d'Ivoire and Burkina Faso from AfWA's database?

2. What are the policies and management systems governing water utilities in Cote d'Ivoire and Burkina Faso?
3. What are the differences and similarities in performances of water service delivery in Cote d'Ivoire and Burkina Faso?

1.3 Research hypothesis

General hypothesis

Utility management systems and policies implementation plays a significant role on performance of water quality service delivery in Côte d'Ivoire and Burkina Faso.

The study states three hypotheses.

1. AfWA database of member water utilities aids in identifying and mapping existing policies and management systems.
2. Benchmarking shows the performance of water utilities in Cote d'Ivoire and Burkina Faso.
3. Comparative evaluation shows the performance of water services delivery in Cote d'Ivoire and Burkina Faso.

1.4 Significance of the study

A well performing water utility is the one that is able to provide sustainable high quality water and waste water services to the community. It should be able to cover its financial and operational costs and provide water that is affordable to all. Sustainable Development Goal six (6) calls to "Ensure availability and sustainable management of water and sanitation for all", however many African water utilities are still lagging behind in delivering quality water services to the communities due to poor management system and to make matters worse ineffective policies implementation hinders the success.

This research study is very important, it will present the key criteria of performance of water utilities, show how policy can impact performance of water utilities and compare the institutional setup of water utilities in Côte d'Ivoire and Burkina Faso. The study will highlight the strength and opportunities of each water utility in service delivery while at the same time it will show the weakness and threats that could hinder utility performance.

In addition, the findings will generate information that will be useful to policy makers and stakeholders of the water sector in Côte d'Ivoire, Burkina Faso and Africa in general to review the existing non effective policies and promote better ones which at the end, could enhance the

performance of water utilities and contribute to achieving the SDGs by 2030 in the water sector in African countries.

1.5 Scope of the study

This study was carried out in Côte d'Ivoire and Burkina Faso, within the major cities of Abidjan and Ouagadougou. The target population of this study were selected from four institutions SODECI, ONEP, ONAD and Ministry of water in Côte d'Ivoire and MEA and ONEA in Burkina Faso. Questionnaires was distributed to the respondents that were department officials in respective institutions.

CHAPTER TWO

Literature review

2.1 Definition of terms

2.1.1 A well performing water utility is a utility that is able to provide high-quality water and/or wastewater services to its customers in a sustainable manner. This definition of a well-performing utility includes elements of good financial and operational performance, but also universal access to water and wastewater services that are affordable to all. Management of wastewater is necessary to protect and ensure both environmental and human health. Water utilities operations may be under municipal authority, they may be managed by regional authorities, or by private entities. Different entities may own and manage the distribution, collection, and treatment systems. (Van den berg & Danilenko, 2017).

2.1.2 Service delivery model refers to the way in which the different responsibilities around services are organized, typically indicating who is directly responsible for the daily tasks of operating, maintaining and administrating the services: the service provider; who is responsible for functions like planning, coordination, monitoring, oversight and support: the service authority, and the roles at the enabling environment such as investment planning and regulation. It also defines the level of services to which users are entitled, costs and technologies through which the service is provided. (Smits, 2014)

2.1.3 Service levels defines the quality of service the user is entitled to. For water and sanitation, water service levels must include quality, quantity and continuity of water supply service whereas for sanitation it requires adequate separation of faecal matter from human contact, the use of sanitation service and environmental impact. (Smits, 2014)

2.1.4 Service life-cycle refers to all stages in the life-cycle of a water or sanitation service. It starts with building a system and establishment of service provision. The second stage is actual service delivery day by day. Finally, maintenance and service expansion. (Smits, 2014)

2.1.5 Benchmarking is a tool for performance assessment that aims at performance improvement. Benchmarking enables performance comparisons overtime, or with other providers, e.g. those providing on-site sanitation and faecal sludge management in the case of the RASOP project participating cities against stipulated guidelines or standards. Best practices are identified, and these can be fine-tuned to suit context specific situations to enhance performance (AfWA, 2016).

2.2 Performance Analysis

Performance analysis is defined by three different indicators which are operational performance, financial performance, and customer performance. Performance analysis permit utility managers, policy makers, regulators, and the general public to measure whether utilities are fulfilling their mission, and to form a view on their ability to do so in the future. Performance assessment is done objectively as it is based on internationally recognized indicators and benchmarked against local and global best practice (Van den berg & Danilenko, 2017).

2.2.1 Operational performance is defined as the unweighted average of three indicators: metering, non-revenue water (NRW, as measured in cubic meters per connection per day), and staff efficiency (which measures how much revenues are collected for each U.S. dollar spent on staff costs). Operational performance looks on how utility manages its operations (Van den berg & Danilenko, 2017).

2.2.2 Financial performance is defined by the operating cost coverage ratio (OCCR). The financial performance is measured in terms of how effective the utility is in generating revenues from its operations, and using these revenues to cover its operation and maintenance (O&M) costs (Van den berg & Danilenko, 2017).

2.2.3 Customer performance is defined as the unweighted average of three indicators: population per connection, reliability, and affordability. The population per connection is looked at as a proxy for service levels. When utilities provide only household connections, the population per connection tends to be relatively low (slightly above the average household size). Yet, sharing of connections is common in Africa through the provision of stand posts, the use of water kiosks, and sharing of house connections with several households. The objective of utility is to provide customers with high-quality water services and a bit of waste water service. The quality of water service is measured by ability to provide access to users and the level of service it can provide to customers (Van den berg & Danilenko, 2017).

2.3 Drivers of Utility Performance Analysis

This analysis focuses on assessing indicators of performance, first indicator, utility is considered financially well performing if the Operating Cost Coverage Ratio is equal or greater than 1.19. Second indicator is quality of service, this is the average of three indicators, measured in scale of 0-1, a higher value indicating better performance, population per connection (as proxy for service level with a level of less than 8.3 set as the African benchmark), reliability as measured by hours

of water supplied (African benchmark of 21.6 hours per day or more), and affordability (with water costing consumers less than 1.22 percent of GNI). The third indicator is operational performance is calculated as the average over three indicators: staff efficiency (takes the value 1 if equal to or higher than 4.21), metering (takes the value 1 if equal to 100 percent), and NRW (takes the value 1 if equal to or lower than 0.205 m³ per connection per day).

It was observed by (Van den berg & Danilenko, 2017) that the drivers of utility performance are not closely correlated, therefore performance indicators must be analyzed separately.

2.4 Calculation of Composite Performance Index

The index is determined by three composite performance indicators at different aspects of measurement respectively; operational performance, financial performance and customer performance. The theory suggest that good operational performance interpret to better financial performance due to reduction of operation and maintenance (O&M) costs. Good financial performance enables utility to generate excess funds that translates to improvement to service levels or water coverage. The hypothesis is that once the customer experiences improved service level, the utility will be able to generate more revenues that then can fund further improvements in operational and/or customer performance.

Composite index enables a gain in wider perspective of the situation, for each two performance indexes it provides an insight into variety of aspects of performance. However useful it is, it well known of the advantages and disadvantage of using this index.

The criteria for a well-performing utility with regard to operational performance relate to behaviors that are under management control, including metering, nonrevenue water (NRW) (as measured by NRW per connection per day), and staff efficiency (measuring the revenue generated as a proportion of cost per employee). Customer performance is measured by service level quality (population per connection: the higher the number of people per connection, the lower the service level as there is more dependence on sharing connections, standposts, and kiosks), reliability (number of hours that water is supplied), and affordability, which is mostly under management control

For each variable, the value was calculated for the best-performing quartile of utilities, and then the variance with this threshold. The larger the deviance toward the well-performing threshold, the lower the value. The maximum value that a utility can achieve on the indicator is 1. In theory,

the lowest value is zero, but in reality utilities will constantly produce some level of service. Yet, the minimum operational performance using African benchmarks (2010-2013) is set at only about 0.10, with a maximum value of 1.00. Hence, there is a wide variation in operational performance between the utilities in the sample (Van den berg & Danilenko, 2017).

2.5 Institutional Performance Analysis

According to (Van den berg & Danilenko, 2017) institutional performance analysis uses of more general institutional data, such as type of service delivery (national, regional, or municipal service delivery), the presence of an (independent) regulatory agency, and the scope of services (that is, utility provides only water or provides multiple services).

Regulation of water utilities ensures good governance, the role of regulator is to provide protection to customers but does not translate to improvements in financial and operational sustainability or increase in coverage compared to utilities. Regulation is a tool for improved utility performance. Three forms of regulation exists (a) through government ministries or departments; (b) regulation by contract; and (c) a regulatory authority or agency. Many utilities in Africa are under the regime of regulatory agency such as utilities in Tanzania, Zambia, Kenya, Mozambique, Niger and few fall in other forms of regulations. A t-test analysis conducted by Van den berg & Danilenko (2017) shows that the presence of regulatory authority does not translate to better performance. Table 2.1 below shows the impact of a Regulatory Agency on Utility Performance, customer performance measured in terms of service quality is higher in utilities under regulatory authority while water coverage is lower in utilities under regulatory regime. Utilities with regulatory authority perform poor in terms of financial and operational performance.

Table 2.1 Impacts of a regulatory authority on utility performance

Indicator	With a regulatory agency	Without a regulatory agency	t-test	Significance
Customer performance				
Customer performance as measured by quality of service	0.69	0.63	-3.25	0.0006
Water coverage	0.57	0.65	1.75	0.040

Financial performance (measured by OCCR)	1.06	1.05	-0.28	0.612
Operational performance	0.68	0.76	3.01	0.001

Source: Van den berg & Danilenko (2017)

2.6 Water policy implementation in Cote d’Ivoire

In order to set up a new institutional and legal framework and adopt an integrated approach to water resources management. The government of Cote d’Ivoire adopted a law n ° 98-755 of 23 December 1998 on the water code. The main object of the Water Code is the integrated management of water resources, hydraulic works and structures.

As of 2012 the Government of Côte d’Ivoire (GOCI) had not passed the implementing regulations for the Water Code, without clarity of how the law is implemented, its standards remain unclear(N’Guessan 2012; Mémoué 2012). Currently, there is not validated water policy in Cote d’Ivoire.

The code has eleven (11) principles which guides the integrated management of water resources and facilities and structures hydraulic.

1. the precautionary principle;
2. the principle of prevention;
3. the principle of correction;
4. the principle of participation;
5. the user pays principle;
6. the polluter pays principle
7. the principle of planning and cooperation
8. water, a vital natural resource, is part of the common heritage
9. National
10. Respect for previously acquired rights constitutes the limit to the use of
11. water resources the principle of participatory and integrated management of all stakeholders in the development of water resources, facilities and structures hydraulic systems are admitted at all levels (planners, decision-makers, specialists, operators and users);

12. The existence of sacred waters is tolerated and their use in accordance with the general and the requirements of maintaining and strengthening social cohesion and of national unity.

The Ivorian government wishes to see the rate of access to drinking water increase from 82% to 95% by 2020. With this in mind, on February 6 2020 the government announced it plans to give a budget of nearly 291 billion CFA francs (445 million euros) to the National Drinking Water Office (ONEP). The funds will be invested in the construction of drinking water supply networks. The installations aims to improve water supply to the population (Magoum, 2020)

The investment is part of the government's "Water for All" programme, which aims to achieve a 100% national rate of access to drinking water by 2030. ONEP will direct 36 drinking water supply systems for the benefit of people living in semi-urban areas (Magoum, 2020).

Institutional

The water code is a piece of legislation that governs the use of surface water, ground water, rainfall and territorial seas in Côte d'Ivoire. Water resources are government's part of national heritage and the government is responsible for provision of integrated management of all water resources, facilities and structures.

The government's water priorities are (1) providing drinking water; (2) protecting, conserving and managing water resources; and (3) satisfying other human water-related needs. The government duties in water management are: maintaining quality of water resources, preventing waste, ensuring availability; preventing waterborne diseases; and developing and protecting water facilities and structures (GOCI 1998b)

Under the Water Code, the right to use water is connected to the right to use land. The code has economic principle of water management by issuing usage fee to water users. (GOCI 1998b).

The water code allows for improved coordination and collaboration among stakeholders and decision makers, in 2011 the Ministry of Water and Forests (MINEF) is responsible for implementing the Water code. MINEF collaborates with other ministries in charge of economic infrastructure, environment, agriculture, health and animal resources and fisheries to ensure integrated management of Cote d'Ivoire's water resources (GOCI 2012d). As a result of uncoordinated approach to water management, in 1996, the State created the High Commission on water to lead water policy reform and coordination.

In June 2012, the HCH approved the National Action Plan for Integrated Management of Water Resources (Plan d'Actions National de Gestion Intégrée de Ressources en Eau, or PLANGIRE), which further reforms the institutional framework on water management. The goal of PLANGIRE is to achieve water security and environmental sustainability through 2040 (N'Guessan 2012).

There are four levels of institutions under the National Action Plan for Integrated Management of Water Resources: national, basin, regional/departmental and local.

Technical

From 2009 to 2011, the government of Cote d'Ivoire made several improvements to the water sector to ensure access to safe drinking water in rural, suburban and urban areas. The government established the Presidential Emergency Program in 2011 that aimed to improve infrastructure post-electoral crisis, in urban areas the government collaborated with partners to improve twenty water treatment stations (GOCI 2012e). As a member of the intergovernmental Niger Basin Authority, the government participated in the Niger-Hydrological Cycle Observing System (Niger-HYCOS) project, which aimed to collect data on water heights and flows in the Niger River Basin. During this first phase, the ABN installed two data collection platforms in Côte d'Ivoire. In 2011, the GOCI and ABN signed an agreement for implementation of Phase Two of the project (GOCI 2012e; WHYCOS 2007).

Economic

The government of Cote d'Ivoire has classified water into five different categories: social; domestic; normal; industrial; and administrative and charges fee for each category which goes into the National Water Fund (FNE) and Water Development Fund (FDE) for operation, maintenance and development of new water systems (AfDB and OECD 2007). SODECI under the agreement with the State collects tariff surcharge from connected customers and manages the fund for network expansion and household subsidizing. The contract calls for tariff revisions every after five years but the process was delayed during the conflict and currently SODECI has not collected funds to sustain maintenance costs. (Tremolet et al. 2002; Fall et al. 2009; Foster and Pushak 2010).

Social

To access water supply services the households in urban areas of Cote d'Ivoire must have a legal rights to the places where they live. This is a challenge to residents in illegal settlements because they have no right to land meaning SODECI cannot install water meters hence lack access to water

services. (AfDB and OECD 2007; Collignon et al. 2000; Kariuki et al. 2003; Gulyani and Connors 2002).

Environmental

The water code is linked with the 1996 Environmental Code, established by Law No. 96-766, which lays out the legal framework for protection of the environment against pollution and degradation, and contains provisions related to water management (Gadji 2003; FAO 2005).

Côte d'Ivoire is a member of the Niger Basin Authority and the Volta Basin Authority, intergovernmental organizations that foster cooperation in managing and developing the resources of the Niger River Basin and Volta River Basin, respectively. Côte d'Ivoire ratified the Convention on Wetlands, an intergovernmental treaty committing members to protect and sustainably use wetlands (GOCI 1998b; ABN 2012; Modern Ghana 2006; Ramsar 2005).

2.7 Water policy implementation in Burkina Faso

The government of Burkina Faso has codified in two main laws which are the water management act 2001 which sets principles for integrated management of water resources and for development of various water uses and 2004 Decentralization law which sets the responsibilities for the delivery of basic services including water supply and sanitation.

In 2016 the government adopted a National Water Supply and Sanitation Program (PN-AEPA) 2016-2030 to achieve the millennium development goals, so as to meet the drinking water need of the population in terms of quantity and quality. The total cost of FCFA 1,461 billion (approximately \$ 2.5 billion) was divided into three (3) phases, the PN-AEPA aims to increase the access rate from 65% in 2015 to 100% in 2030. But also to increase the proportion of the rural population served by standpipe from 8.7% in 2015 to 24% in 2030, to increase the proportion of the rural population served by private connection (BP) by 0.3% in 2015 to 56% in 2030 ('Burkina Faso, 2019').

For the year 2020-2022 the government of Burkina Faso plans to invest approximately 84.7 billion FCFA for water and sanitation works. This was announced in October 21, 2019 ('Burkina Faso', 2019).

Institution

The government owns all the water resources, water withdrawal requires permit from the government except for domestic purposes and with limited volumes. The ministry for Agriculture,

Water and Fisheries are sole responsible for setting national policies for water supply. The National Water Utility (ONEA) is responsible for domestic water supply (Cotula 2006).

2.8 Overview of utility performance in Africa

The Sustainable Development Goals (SDGs) aim to achieve universal and equitable access to safe and affordable drinking water and sanitation for all by 2030. The SDGs are also calling on more sustainable use of water resources through, amongst others, improving water quality by reducing pollution by halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse. Access to safe, affordable drinking water is a human right and, as such, it is the duty of the water utility to ensure that this right is protected, upheld, and respected.

Africa's urban population between years 2000 and 2015, increased by more than 80 percent from 206 million to 373 million people. Although access to piped water increased over the period (from 82 million urban dwellers with piped water in 2000 to 124 million in 2015), African utilities were not able to keep up with the rapid urbanization as reflected in the decline of piped water as a primary source of water supply in percentage terms. The urban population served with piped water on the premises declined from 40 percent in 2000 to 33 percent in 2015. The total population with improved services increased, but most of that increase came from an increase in the access to piped water off premises and self-supply. Meaning that the performance of water utilities has been seriously lagging behind as there seems to be no lack of demand for improved water supplies. (Danilenko et al., 2014).

The reason many utilities are lagging behind is due to failure to cover Operation and Maintenance costs, hence decline of enough funds to expand access. Dependence on government hinders their ability to improve financial performance. It is observed that generally the overall decline in performance has not been investigated in much detail in Africa. Therefore, the drivers of success in utility performance are still rather elusive for two major reasons. The first is a lack of agreement on what constitutes good performance which leads to conflicts and trade-off. Second, lack of empirical work, there is little clarity on what drives performance in utilities. Water utilities in Africa vary greatly from their institutional setup, organization, and reporting requirements. Lack of empirical work in a great deal mean that sector professionals employ results from one utility or one country (often utilities in developed countries) to utilities in other countries with, often, very different institutional, political, and economic environments. (Danilenko et al., 2014).

2.8.1 Poor performance utility in Africa

Majority of utilities in sub Saharan Africa and many other countries are performing poor. Tariffs set are low due to political reasons, therefore not allowing utilities to pass the full cost of service on to consumers. Many countries such as Egypt, India, Nigeria, Indonesia and Pakistan are examples of large low and middle income countries with tariffs so low that utilities are not able to cover operating costs under these circumstances, WSS utilities fail to meet minimum performance benchmarks in nonrevenue water, staff productivity, working ratios, and debt service coverage. Consequently, a large proportion of consumers resort to self-provisioning.” (World Bank, 2017). Poor communities are the mostly affected accessing water at a higher price and of dubious quality from informal water vendors. For example, “in Nigeria, informal providers commonly charge 10 to 100 times more than a utility would charge” (World Bank, 2017).

Most utilities cannot cover operation and maintenance costs thus carrying on the culture of financial dependence (World Bank, 2017). Utilities rely on unsustainable and unreliable finances from government and more from developing partners. Out of 605 developing country utilities in the IBNET database (2013), just 17% cover their Operation and Maintenance costs and create a surplus (World Bank, 2016).

2.8.2 Good performance utility in Africa

Good performance is a crucial condition for improving access to service delivery in developing countries. It enables the available financial resources to be extended out and adds more impact of investment in urban water sector. Good utility performance also attracts increased levels of financing. Well-performing utilities such as SDE in Senegal, ONEA in Burkina Faso, NWSC in Uganda and Nyeri in Kenya have shown that they are able to attract financing to meet their investment needs (Heymans et al, 2016).

Table 2.2 below shows a list of countries among the least developed but yet with utilities performing better than other utilities. These countries have high level of access to piped water, have high capacity of taking loan finances a crucial key indicator of sustainability. They also use tariff revenue collected which is sufficient to cover their operation and maintenance costs.

Table 2.2 Performance of well-performing urban water utilities compared to median performance in Sub-Saharan Africa

Utility (country)	SDE (Senegal)	Nyeri (Kenya)	ONEA (Burkina Faso)	NWSC (Uganda)	Median (SSA)
Access to piped water	97%	91%	90%	78%	68%
Hours of supply	24	24	23	18	18
Operating cost coverage ratio	1.39	1.39	1.18	1.28	0.93
Cash collection efficiency	98%	-100%	97%	-100%	91%
Nonrevenue water	20%	18%	18%	28%	38%
Staff productivity	3	3	4	6	10

Sources: Case studies, Heymans et al (2016) and IBNET (for median data). The IBNET database may not be representative of all African utilities as it relies on voluntary reporting. Consequently, the median for all utilities is likely to be lower than that for utilities reporting performance data.

2.9 Challenges facing service delivery to low-income urban communities in Africa

Although most utilities do not perform well in Africa, there are still many utilities that are performing very well. Fisher et al (2006) argues that management problems experienced by water utilities across sub-Saharan Africa are similar. Low revenues means O &M costs are not covered hence poor water service coverage especially to urban poor. Poor institutional arrangements impedes service provision. Most utilities in Africa lack clear strategies and actions for reaching out to low income households. Moreover lack of inter-agency coordination causes doubling of efforts and lack of consistency. Lack of strong policies and strategies to address the needs of low income communities and reduce poverty (Kariuki et al, 2003).

To make matters worse many utilities have not established a strong commercial approach. Rapid population growth in urban areas is calling for urgent strategies for improving effectiveness of operation and meeting population demand (Fisher et al, 2006). Among many other challenges faced by water utilities poor human resource capacity, inadequate management structures contributes to limited prioritization and knowledge in service delivery to low income households. It was argued by Kariuki et al (2003) almost half of urban Africans about 300 million people will be living in slums by 2020. Kariuki et al (2003) observes a common characteristic of slums is lack of access to affordable water supply and sanitation services due to high population density, lack of road access and the areas are officially unrecognized by government hindering delivery of water service in these areas leaving behind a significant big number of population with lack of access to water supply. Furthermore, pricing policies, tariff structures, and low income has intensified the problem, making it seem like service delivery to low income households is a loss making business (Kariuki et al, 2003).

CHAPTER THREE

MATERIALS AND METHODS

3.1 Introduction

This chapter briefly describes the study areas, the research design and methodology used. The research was conducted in six water sector institutions, four in Abidjan, Côte d'Ivoire, the MOH, SODECI, ONEP and ONAD and two in Ouagadougou, Burkina Faso ONEA and the Ministry of water and sanitation. Data were collected using questionnaires and analyzed using SWOT analysis.

3.2 Description of study areas

3.2.1 Location

3.2.1.1 Côte d'Ivoire

Côte d'Ivoire is a sub-Saharan country located in Southern West Africa. The country is geographically situated at the Gulf of Guinea peninsula of the Atlantic Ocean. The country located at 8°00'N, 5°00'W covering 322,463 km². Côte d'Ivoire is bordered by the Gulf of Guinea, Liberia and Guinea to the west, Mali and Burkina Faso to the north, and Ghana to the east. It has twelve (12) districts with the administrative capital Yamoussoukro and the largest city and the defacto capital being Abidjan (U.S. Library of Congress, n.d). Figure 3.1 below shows a map of Côte d'Ivoire



Figure 3.1 Map of Côte d'Ivoire

Source: U.S. Library of Congress

3.2.1.2 Burkina Faso

Burkina Faso, is a landlocked country located in the middle of West Africa's "hump." Covering 274,000 square kilometers. It lies between Sahara desert and the Gulf of Guinea mostly between latitudes 9° and 15°N and longitudes 6°W and 3°E. Burkina Faso is bordered on the north and west by Mali, on the northeast by Niger, on the southeast by Benin and on the south by Togo, Ghana, and Côte d'Ivoire. The country is divided into thirteen districts with the capital city, Ouagadougou. (Deschamps, n.d). Figure 3.2 below shows a map of Burkina Faso.



Figure 3.2 Map of Burkina Faso (Source Encyclopædia Britannica, Inc)

3.2.2 Climate

Climate of Côte d'Ivoire is a transition from equatorial to tropical, generally warm and humid. There are three seasons: warm and dry (November to March), hot and dry (March to May), and hot and wet (June to October). Heavy rains fall between May and July in most years, and shorter rains during August and September. The minor dry season still brings sparse rainfall during October and November, followed by the major dry season from December to April. Temperatures average between 25 and 32 °C (77.0 and 89.6 °F) and range humidity from 10 to 40 °C (50 to

104 °F). Temperatures are higher in the south but may exceed 30° C even in the far north (U.S. Library of Congress, n.d)

The climate of Burkina Faso is mostly sunny, hot and dry. The northern part is semiarid steppe (Sahelian zone), characterized by three to five months of erratic rainfall while the southern part “Sudanic zone”, the climate is increasingly of the tropical wet-dry type, with greater variability of temperature and rainfall in comparison to the north. From October to May is a dry season, the country experiences a hot dry wind which blows from the desert. The rain season which is from May to September, the country receives between 600 and 900 millimeters whereas this season is shorter in the northern part of the country (Deschamps, n.d).

3.2.3 Population size/ demographics

According to National Institute of Statistics of Côte d’Ivoire the population of Côte d’Ivoire as of 2019 census is 25,808,000 inhabitants. Whereas the population in Burkina Faso as of 2019 was estimated by United Nations to be 20,321,378 inhabitants.

3.3 Research design

The study was a case study research design. Data was collected in different times for the case study areas via online platform. The qualitative method was adopted for data collection, according to (Morse, 1994), qualitative research can be applied when little is known about the topic or situation, or when the results are not quantifiable. The objective of this study and the testing of hypothesis are difficult to be quantified. Therefore, the qualitative method was adopted for the data collection; in terms of sampling, non-probability sampling precisely purposive sampling was used in this study where the researcher had a choice of selecting respondents, samples were drawn from a list of experts in the field. Structured questionnaires, and discussions were used to produce primary data. Furthermore secondary data were collected from existing documents, journals, reports and books. Data collected from questionnaires was analyzed using SWOT analysis method. Figure 3.3 below shows an illustration of research design.

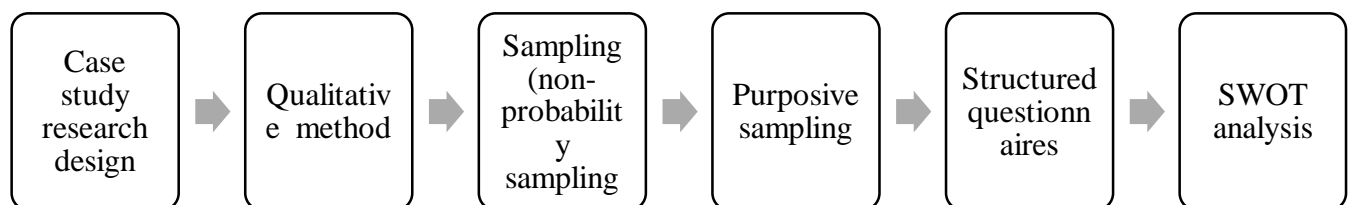


Figure 3.3 illustration of research design

3.4 Target Population

This research was carried out in urban areas of Côte d'Ivoire and Burkina Faso. The population of this study considered respondents from a water utility (SODECI), sanitation institution (ONAD), water utility regulatory authority (ONEP) and Ministry of water in Côte d'Ivoire, furthermore respondents from a water utility (ONEA) and Ministry of water and sanitation (MEA) in Burkina Faso.

The respondents interviewed were department official(s) in the field of water sector at different institutions.

3.4.1 Sampling and Sample Selection

Non- probability sampling was adopted for this research, where the researcher had a choice of selecting respondents, moreover purposive sampling method was used, the reason behind was to select responsible department official (s) so as gather information on the water service quality delivery in case study areas. At ONEP, Director of Operation and Asset control was selected, they are responsible for regulating water utility (SODECI). Similarly at ONAD, main actors of sanitation in Côte d'Ivoire, Director of Planning and Mobilisation of Funding was purposively selected. Also, Technical adviser in charge of hydraulics from Ministry of Hydraulics (MOH) was selected and interviewed.

In Burkina Faso at MEA, Director General of sanitation was selected and at ONEA which is the main water utility in Burkina Faso, respondents from different departments were selected to answer the questionnaire with a Regional Director of Ouagadougou being the leading person.

3.5 Methods of Data Collection

3.5.1 Questionnaire

Primary data was collected using open ended questionnaires which was divided into four sections institutional performance, operational performance, financial performance and customer performance. The questionnaires were distributed online and filled by respondents purposively selected from respective institutions who had information on the water service quality delivery and water utility performance in Côte d'Ivoire and Burkina Faso.

3.5.2 Literature Review

Secondary data were obtained from different existing literatures both published and unpublished such as reports, journals, books, internet sources, AfWA database of member water utilities and

from International Benchmarking Network for water and sanitation utilities (IBNET) toolkit and database.

3.6 Data Processing and Analysis

Data collected was analyzed in a qualitative approach. The responses from the questionnaires after being collected were translated, classified, restructured and tabulated according to aspects of Strength, Weakness, Opportunity and Threat (SWOT) for each institution. Data analysis was done using SWOT analysis method within the institution and across institutions for comparative evaluation of the performance.

3.7 Ethical Considerations

In this research, the respondents were told in advance on the purpose of the study from the introduction email by AfWA, and were assured that their names will remain confidential. The respondents volunteered to participate in the study and answered questions accordingly.

3.8 Limitations of the Study

During the course of the research study several limitations were encountered as follows

- Due to the pandemic COVID-19 which led to lockdown and closure of offices, the process of data collection was affected from being conducted physically (face to face) to online data collection. This affected further information sharing through follow up questions with the respondents.
- Time allocated for data collection took longer than expected due to lack of face to face meetings, this affected the work plan set. However data were collected despite the constraints.

CHAPTER FOUR RESULTS AND DISCUSSION

4.1 Introduction

This chapter describes the findings of the study. The findings are based on research objectives and hypothesis which were used to guide the research. A comparative evaluation approach was undertaken to compare data obtained from four water sector institutions in Côte d'Ivoire and two water sector institutions in Burkina Faso.

4.2 General respondents

A total of 13 high level officials responded to the online questionnaires from different water sector institutions including the Director of Operation and Asset control at ONEP, Director of Planning and Mobilisation of Funding at ONAD, a Technical adviser in charge of hydraulics at the Ministry of Hydraulics (MOH) from Côte d'Ivoire. Furthermore the Director General of sanitation at MEA and Regional Director of Ouagadougou and several other officials from different departments at ONEA from Burkina Faso. It should be noted that due to COVID-19 pandemic, physical interviews with the above mentioned respondents did not happen due to closure of offices and lockdown which restricted movement and so further information follow-up from the respondents was hindered.

4.3 PERFORMANCE OF WATER SECTOR INSTITUTIONS IN CÔTE D'IVOIRE

4.3.1 Ministry of Hydraulics (MOH)

4.3.1.1 Institutional performance

Ministry of hydraulics in Côte d'Ivoire was formed on July 10, 2018 by the president of the Republic following the growing needs of the population in terms of drinking water supply, threats of climate change and shortages of water experienced in certain cities of North and center of the country especially in Bouaké. The ministry is responsible for the implementation and monitoring of the government's policy in terms hydraulics. The main function of the Ministry of hydraulics is defined by decree N ° 2019-755 of 18 September 2019 relating to the attribution of members of the government in its article 38. From the decree the MOH is responsible for the following actions in conjunction with the other ministerial departments concerned:

- Participate in the monitoring and protection of water resources;
- Management of drinking water infrastructure;
- Development of drinking water supply infrastructure in urban and rural areas;

- Development and monitoring of regulations in the areas of studies, construction and operation of human hydraulic works.

The ministry is well organized as defined in decree N ° 2018-955 of 18 September 2018 as shown in table 4.1, to ensure good performance on its mission and roles.

Table 4.1 Organizational structure of the Ministry of Hydraulic (MOH)

No	Departments	Composition
	Minister's office	<ul style="list-style-type: none"> • Cabinet's director • Chief of staff • 5 technical advisers • 5 feasibility studies experts • Project manager • Private head of secretariat
	The directorates and services	<ul style="list-style-type: none"> • The General Inspection; • The Financial Affairs Department; • The Human Resources Department; • The Planning, Statistics, Monitoring and Evaluation Department; • The Project Coordination Department; • The Documentation and Archives Service; • The Communication and Public Relations Department; • The Service for International Cooperation; • The IT and ICT Department;
	Central department	<ul style="list-style-type: none"> • The Department of Drinking Water Supply; • The Department of Legal Affairs and Regulation; • The Hydrology Department;
	The regional services	<ul style="list-style-type: none"> • 31 Regional Directorates of the Ministry distributed throughout the national territory

In addition to its organization, the Ministry of Hydraulics is backed by an institutional and regulatory framework as shown in table 4.2 which ensures its governance and its performance.

Table 4.2 Institutional and regulatory framework including several actors

No	Institutions	Functions and responsibilities
	Ministry of Hydraulics	Technical supervision of water sector and implementation and monitoring of policies in terms of hydraulics.
	Ministry of economy and finance	Setting up budget and financial supervision
	The National Office for Drinking Water (ONEP)	Acts on behalf of the state for the operationalization of the drinking water sector in close collaboration with SODECI.
	Water distribution company (SODECI)	Distribution of drinking water throughout Côte d'Ivoire. Management, operation and maintenance of water infrastructures.
	Local authorities	Decentralization policy in 2003 gave power to local authorities to ensure water and sanitation infrastructure in rural sub-sector

On ensuring the effective implementation of water and sanitation policies in the country, the results show that regulation via the lease contract, convections and various contracts between state and private entities have been signed and various funds set up , all being integral part of institutional and regulatory framework accelerates effectiveness on implementation of water and sanitation policies in Côte d'Ivoire.

The MOH works closely with ONEP and SODECI on ensuring delivery of quality water services in Côte d'Ivoire. Institutionally, the MOH plays the role of contracting authority in provision of water service. ONEP has been delegated on behalf of the state of Côte d'Ivoire represented by the MOH with regards to technical supervision and Ministry of economy and finance with regards to financial supervision by a project management agreement to ensure provision of water service; Under the agreement ONEP must control the operation of public water service provided by

SODECI under a lease contract between the state and SODECI. ONEP is responsible for providing periodic reports to the MOH to allow monitoring of service provided.

SODECI is bound to the state by lease contract for 15 years from 2008, SODECI works in urban areas only whereas the state has set up rural hydraulic system with ONEP to ensure the supply of water in rural areas. In case of failure of SODECI's performance the results shows that the MOH will be ready for another farmer to resume the activities since urban infrastructure belongs to the state, however that situation has not been envisaged at the moment.

The MOH through Human Resources Department (HDR) ensures capacity building of stakeholders in the sector to improve performance and knowledge via trainings every year of executives and operating agents, at the same time the executives and agents from ONEP and SODECI are also capacitated through targeted training structure.

However good the implementation of water and sanitation policy in Côte d'Ivoire, the policy was highly affected by the political situation and instability in the country for ten years, where during these times investments were lacking causing the backward growth of water service delivery in the country. The results highlights the gaps in the policy, the policy lacks with regards to drinking water a sectoral drinking water policy as well as management and maintenance policy for waterworks hydraulic infrastructure in rural areas.

As the MOH works closely with SODECI to ensure drinking water distribution throughout Côte d'Ivoire. The results underline the challenges associated with working with SODECI,

- First lack of transparency from SODECI side, as they don't share reliable information on operations and lease contract with the government.
- Rapid population growth in Côte d'Ivoire and climate change threats affects access to water to current and future generations.
- Being a technical supervisor the MOH cannot guarantee the quality and quantity of drinking water and at the same time the quality of services provided to customers by SODECI, also continuity of drinking water services for the population served.
- Another challenge the MOH is facing is negotiation of water tariff with SODECI and control of factor costs.

4.3.1.2 Financial performance

To realize its mission the water sector is financed by the state of Côte d'Ivoire through the Ivorian public treasury. The results indicate that funding is also done through donors and multilateral organizations and donations. There are two funds that support drinking water sector, the Water Development Fund (FDE) and the National Water Fund (FNE). The first fund is mainly for provision of new works and ensure sustainability of drinking water operation service and the latter is to reimburse loans signed with financial partners.

4.3.1.3 Customer performance

Regardless of the rate of access in rural areas which is more that 73% whereas that of urban is 83%, a lot still need to be done, the MOH is responsible for rural water supply. The MOH priority needs in delivering efficient water services in rural areas lies in structural and organizational reforms. The results show that the MOH is working towards ensuring sustainable water service in rural areas by setting up a structure that will specifically address challenges of repairs, maintenance of structures and supervision of rural population, also providing them with high performance motor pumps whose promoters can provide after-sales service. Table 4.3 summarizes the analysis of the MOH by using SWOT analysis.

Table 4.3 SWOT analysis for Ministry of Hydraulics

Strength	Weakness
<p>Institutional performance</p> <ul style="list-style-type: none"> • Institutional and regulatory framework • Well organized structures • Contracts between state and private entities (ONEP and SODECI) • Partnership with ONEP and SODECI • Capacity building of stakeholders via training • Setting structures that ensures sustainable water services in rural areas where the rate of access is about 73% behind that of urban areas 83%. <p>Financial performance</p> <ul style="list-style-type: none"> • Funds from the State of Côte d’Ivoire through the Ivorian public treasury. • The Water Development Fund (FDE) for sustainability of drinking water operations and the National Water Fund (FNE) for reimbursing of loans from donors. • Funds from donors, multilateral organizations and donations 	<p>Institutional performance</p> <ul style="list-style-type: none"> • Gaps in policy, lack of sectoral drinking water policy and; management and maintenance policy for water infrastructures in rural areas.

Opportunity	Threat
	<p data-bbox="760 310 1117 342">Institutional performance</p> <ul data-bbox="808 363 1425 1066" style="list-style-type: none"> <li data-bbox="808 363 1425 457">• Lack of transparency from SODECI on operations and lease contract <li data-bbox="808 478 1425 625">• Rapid population growth and climate change affects availability of water resource for current and future generations <li data-bbox="808 646 1425 951">• Being a technical supervisor the MOH cannot guarantee the quality and quantity of drinking water, quality of services provided to customers by SODECI, also continuity of drinking water services for the population served. <li data-bbox="808 972 1149 1003">• Control of factor costs <li data-bbox="808 1024 1401 1066">• Negotiation of water tariffs with SODECI

4.3.2 Société des Eaux de Côte d'Ivoire (SODECI)

4.3.2.1 Institutional performance

Société des Eaux de Côte d'Ivoire (SODECI) is a private drinking water utility company and sanitation responsible for operation and maintenance of all urban water in all cities and towns of Côte d'Ivoire created in 1959. It has a public-private partnership with the State of Côte d'Ivoire. It is considered to be the oldest PPP water utility in developing country. The PPP has persisted difficult times and showed resilience even after the civil wars in Cote d'Ivoire from 2002-2007 and later on 2010-2011 (Marin et al, 2009).

Activities of SODECI are governed by two agreements with the State of Côte d'Ivoire. Concession agreement for the public urban drinking water distribution services and the affermage agreement for the maintenance and operation of sewerage and drainage networks and structures in the city of Abidjan. In 1987, at the end of the affermage contract of SODECI, a new institutional framework and contractual was implemented. The state signed with SODECI a new contract for a period of 20 years, excluding village wells and boreholes. The contract with the State allows SODECI to operate public service drinking water in urban areas of Côte d'Ivoire, operate public service of sanitation on the waste water and rainwater drainage networks, maintain and renew works belonging to the state heritage and also is responsible for customer management (SODECI, 2014).

SODECI has a clear organizational and institutional framework that governs its performance. The institutional framework defines responsibilities, regulations, plans or contracts so as to meet the needs of the population taking into account economic realities, demographics and climatic conditions (SODECI, 2014).

Listed on the stock exchange in 1985 and listed on the BRVM (regional Stock Exchange) of Abidjan, its share capital is mainly held by the company Eranove (46.07%). The state of Ivory Coast has 3.25% of its capital, while the employees of SODECI own 6.72% of the company's shares. The organizational framework is made up of board of directors and management team that regularly meet to decide on the company's strategic directions. The board of directors within it includes a diversity of skills, techniques, strategic and managerial which guarantees shareholders the objectivity of its missions assigned.

According to Collignon (2002) SODECI's priority needs to ensuring quality services to the community is centered on the policy set by the company. The results highlights three main of

elements in policy to be; increasing the connection rate among poor families through cross-subsidy; making the water tariff affordable to low-volume users; and extending a reasonable level of service into informal settlements. This led to the establishment of FDE (Development Fund of the Water) which aims at ensuring continuity of the service. FDE was established by the government in 1987, it makes capital available to SODECI for agreed and monitored purposes notably financing of subsidized connections. FDE contributes about 30% of its annual budget to networks construction and extension in small towns and peri urban areas. This funds further helps SODECI to develop small towns about six hundred (600) connection from money raised from large cities especially Abidjan through the surtax paid by customers.

SODECI works to improve and maintain the quality services to the community by embracing new technologies in face of population growth and climate change conditions. The results indicate actions like the modernization of production tools has been deployed throughout the company to improve technical and economic performance. The company has invested and innovated on billing rate tools to produce better results, portable input terminal makes index reading more reliable, customer management software to improve services provided to consumers (SODECI, 2014)

Furthermore, SODECI strives to build the capacity of staff to increase productivity and competence due to presence of progressive human resources policies set that allows periodic training to encourage good performance, this led to establishment of a Trades Center de l'Eau (CMEAU) located in Abidjan (Yopougon) to provide initial training and retraining to staff (SODECI, 2014)

Although the Public-Private partnership is recognized as one of the successful partnership in Africa, the results have highlighted the challenges faced by SODECI and the government relationship such as

- The separation of sewerage and water supply and failure to expand sewerage coverage.
- Unclear and continuous changing roles of different public agencies.

At the same time, the partnership with AfWA has added value to SODECI by offering a platform where SODECI can share its experience, assistance and experts to other water production and distribution companies in Africa and even elsewhere.

4.3.2.2 Financial performance

According to Collignon (2002) SODECI uses an increase block tariff to make water affordable to low volume users. SODECI has set tariffs structures that is related to per capita income of the population served by applying three mechanisms to help the poor; subsidizing household connections from surtax on water bills dispensed by a public-sector fund (FDE). The middle and low income users are charged 40 USD connection charged much lower to the actual cost of 150 USD. The difference is financed by FDE, the aim is to increase individual household connections. The rising block tariff which is a form of cross subsidy from large to small consumers. SODECI charges 0.7 USD/m³ for 30m³ per month.

The licensing of resellers in informal settlements enables SODECI to exert an indirect influence on the cost and quality of service in such places, in which its own contract forbids it to work directly.

Results also highlight that SODECI biggest revenue source comes from the city of Abidjan because of the large scale industrial, administrative and domestic consumers which constitutes the core of SODECI's financial viability. Water revenues collected from customers are allocated in three parts:

- SODECI tariff to cover operating costs of water supply services
- FDE surcharge to finance renewal expenditures, system expansion and social connections.
- FNE surcharge to cover the sector's debt service.

Nevertheless, SODECI addresses economic losses through billing and collection ratios to ensure economic sustainability. The efforts made after crisis made it possible for SODECI to achieve billing ratio of 76.1% in 2014, this is partly due to the fight against fraud and losses on the network, the recovery rate reached 95% in 2014 (SODECI, 2014)

Still the results indicate the threats posed as a result of partnership where the unpaid bills for State water consumption has threatened investment in a long run. In addition, slowness in issuing a decree for the application of new tariffs threatens financial sustainability of the water sector. Tariffs have been constant since 2004 where average tariff CFAF 393 per m³ or US\$0.67, in time this has proven to be insufficient to finance all components of the FDE which remains underfunded hindering extension of services as the population increases. Without unclouded picture of the

financial situation of the sector, it is quite challenging to clearly understand the financial needs of the sector or the need for tariff increases (World Bank, 2019).

4.3.2.3 Customer performance

Until late 2015, SODECI served 964 villages and 13,745,067 inhabitants that is a national coverage of 68% (SODECI, 2014). The rate of urban and peri urban water coverage has regularly increased for the last ten (10) years. The results further indicate strategies adopted by SODECI to ensure efficiency in water service delivery;

- Operation and management of distribution networks.
- Maintenance works and repairing.
- Extension of network.
- Having and implementing the code of conduct.

Table 4.4 below summarizes the strength, weakness, opportunities and threats analysis of SODECI.

Table 4.4 SWOT analysis for SODECI

Strength	Weakness
<p>Institutional performance</p> <ul style="list-style-type: none"> • Institutional and regulatory framework. • Clearly defined organizational structure. • Public-private partnership with the State of Côte d’Ivoire. • Two kinds of agreement signed with the State of Côte d’Ivoire (concession agreement and affermage agreement). • Listed in regional stock exchange with Eranove being the main shareholder. • Clear policy definition to serve the poor. • Capacity building of staff members. • Adoption of new technologies to improve technical and economic performance. <p>Financial performance</p> <ul style="list-style-type: none"> • Tariff structures for different user groups • Subsidizing households connection • Application of pricing policy to generate enough revenue • Increase billing and collection rates <p>Customer performance</p> <ul style="list-style-type: none"> • National water coverage rate is 68%. • Extension of networks. 	<p>Institutional performance</p> <ul style="list-style-type: none"> • Failure to expand sewerage coverage • Public-private partnership setbacks

<ul style="list-style-type: none"> • Maintenance and repairing of networks. 	
<p>Opportunities</p>	<p>Threats</p>
<p>Institutional performance</p> <ul style="list-style-type: none"> • Presence of FDE and FNE funds from the State • Partnership with AfWA has added value and visibility of SODECI. 	<p>Financial performance</p> <ul style="list-style-type: none"> • Constant tariffs threatens financial sustainability. • Unpaid water bills by the State threatens investments

4.3.3 The National Office of Sanitation and Drainage (ONAD)

4.3.3.1 Institutional performance

The National Office of Sanitation and Drainage (ONAD) is a State Company, created by decree n ° 2011-482 dated 28 December 2011. The National Office for Sanitation and Drainage (ONAD) is responsible for ensuring access to sanitation and drainage facilities, in a sustainable manner and at competitive costs, for the entire national population. The Office is the sole national actor acting within the framework of an agreement for the delegation of public service missions, in matters of sanitation and drainage with the State of Côte d'Ivoire. ONAD has institutional and regulatory framework which governs its performance, ONAD has board of directors created by decree n ° 2011-482 of December 28, 2011 and is governed by law n ° 97-519 of September 04, 1997, defining and organizing state companies.

In order to attain its mission of ensuring populations to have access to adequate sanitation, both in rural and urban areas, the results shows that ONAD applies methods to monitor day to day activities. The department's heads are responsible to monitor implementation of the tasks assigned to teams on daily basis. Weekly meeting are organized for each department, a weekly technical meeting provides information on the activities of the office whereas the executive board meeting summarizes the work done with efforts and proposes the corrective measures.

ONAD's initiatives are coherent with State's sectoral policy, the results highlights six (6) strategies applied by ONAD to achieve its objectives:

- Plan and regulate the development of sanitation and drainage infrastructure,
- Provide technical support for the mobilization of financial resources in the sector,
- Rehabilitate and develop collective sanitation and drainage infrastructures,
- Strengthen the maintenance and operation of collective sanitation and drainage infrastructure.
- Improve the management of on-site sanitation and,
- Sensitize the population, strengthen the capacities of public and private actors and develop coordination.

Concurrently ONAD works closely with partners on ensuring proper sanitation services to the community. The results indicates that the office has a performance contract with the State of Côte d'Ivoire, there are indicators that are monitored on a basis of quarterly and annual contractual reports to assess the state of its implementation. ONAD implements co-funded donor projects such

as the Sanitation and urban resilience project, quarterly progress reports are prepared and submitted to the donors for monitoring and evaluation. The capacity building of stakeholders is ensured through annual trainings that are organized by ONAD.

However the performance of ONAD in managing sanitation works and drainage, still there are challenges that ONAD encounters in delivering services. The challenges highlighted from the results shows that ONAD faces challenges of speeding up the rate of access to sanitation for the population as shown in 2016 report by MIC, the sanitation coverage is only 49%. Another challenge is treatment of collected waste water and fecal sludge management in such a way to guarantee the protection of receiving environment, lastly, the transformation of sanitation into commercial sector.

The results further highlights that sanitation policy in the country has contributed to achieving ONAD's goals of ensuring sanitation in rural and urban of Côte d'Ivoire by supporting the mobilization of financial resources by the state. To maximize asset management in the face of diverse challenges like climate change and population increase ONAD has secured land reserves to serve as sites for flow control works (retention dams) in the future.

At the same time, AfWA has added value to ONAD through creating a platform where ONAD exchanges experience with other sanitation actors in Africa and enhancing increased visibility of ONAD on the African level.

4.3.3.2 Operational performance

ONAD works to guarantee long term operation of sanitation services in Côte d'Ivoire, the sanitation coverage in urban areas is 49% (MICS report, 2016). The results indicates different methods used by ONAD to ensure long term operations as follows;

- Maintaining and operating the sanitation and drainage networks and works.
- Developing programs to extend the networks and works such as programs to improve access to the connections and construction of wastewater treatment plants for collective sanitation.
- Development of programs to promote on-site sanitation in neighborhood or areas not served by collective sanitation furthermore establishment of fecal sludge treatment plants and the recovery of treatment by-products and;

- Development of drainage construction work programs and avoid floods by regulation of rainwater flow rates.

The office is also developing programs for construction and extension of sanitation and drainage networks and structures as well as waste water treatment plants. ONAD is developing support programs for the private sector to increase their entrepreneurship capacity.

4.3.3.3 Financial performance

In order to guarantee operation and maintenance costs of sanitation are covered, the results shows that ONAD has structured the tariff to ensure delivery of affordable and sustainable service to the users. The price takes into account all of the services such as costs of personnel, energy costs, renewal and rehabilitation of networks and sanitation works, investment for the service and social connections.

To increase sanitation coverage in the community, the results indicates that the financing mechanism for the sanitation and drainage sector in Côte d'Ivoire is supported by the “National Fund for Sanitation and Drainage” (FDA), created by decree n ° 2011-483 dated December 28, 2011 following an institutional reform adopted in 2011.

Simultaneously ONAD mobilizes resources to maximize funds for sanitation projects from three sources;

- The tariff for the sanitation service limited only to the city of Abidjan on the perimeter of the lease contract through sanitation fee.
- Loans and grants mobilized from donors and other technical and financial partners through funding requests on basis of ODA studies. Projects must have environmental and social impact assessment and resettlement action plans (PAR).
- Share of property tax intended for sanitation and other subsidies imposed on other charges and taxes allocated to sanitation.

4.3.3.4 Customer performance

As part of raising awareness of the population on the proper use and maintenance of sanitation and drainage works, ONAD periodically organizes awareness raising caravans with the aim of encouraging the community to respect, use and maintain sanitation and drainage works to guarantee the safety of people and property, safeguard public health and maintain a healthy living

environment. Table 4.5 below summarizes the strength, weakness, opportunities and threats analysis of ONAD.

Table 4.5 SWOT analysis for ONAD

Strength	Weakness
<p>Institutional performance</p> <ul style="list-style-type: none"> • Institutional and regulatory framework • Good organizational structure • Performance contract with the State of Côte d'Ivoire • Monitoring of indicators on quarterly and annual basis • ONAD's initiatives are coherent with sectoral policy • Monitoring of day to day activities by department heads • Departmental weekly meeting • Capacity building of stakeholders <p>Operational performance</p> <ul style="list-style-type: none"> • Urban sanitation coverage 49% • Operating and maintaining sanitation and drainage networks • Construction of wastewater treatment plants for collective sanitation. • Extension of networks to improve access to sanitation. • Promotion of onsite sanitation to areas not served by collective sanitation. 	<p>Institutional performance</p> <ul style="list-style-type: none"> • Rate of sanitation access to the population is still low. • Transformation of sanitation to commercial sector. • Treatment of collected waste water and fecal sludge management in such a way to guarantee the protection of receiving environment.

<ul style="list-style-type: none"> • Establishment of fecal sludge treatment plants and the recovery of treated by-products • Development of drainage construction work programs to regulate rainwater flow rates. <p>Financial performance</p> <ul style="list-style-type: none"> • Sanitation tariff structure that is comprehensive, affordable and ensures sustainable services. <p>Customer performance</p> <ul style="list-style-type: none"> • Awareness raising to community on the use and maintain of sanitation works. • Safeguard public health and maintain healthy environment. 	
Opportunity	Threat
<p>Institutional performance</p> <ul style="list-style-type: none"> • Sanitation policy guarantees mobilization of funds by the State. • Land reserves for retention dams in future. • Partnership with AfWA has enhanced visibility of ONAD on the African level. 	

<ul style="list-style-type: none"> • Exchange of knowledge and experience with other sanitation actors across Africa. <p>Financial performance</p> <ul style="list-style-type: none"> • Presence of the “National Fund for Sanitation and Drainage” (FDE) from 2011. • Sanitation fee only to the city of Abidjan. • Loans and grants mobilized from donors and other technical and financial partners. • Share of property tax. 	
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4.3.4 The National Office for Drinking water (ONEP)

4.3.4.1 Institutional performance

ONEP was established by Decree 2006-274 of August 23rd, 2006, The National Office for Drinking water (ONEP) is a state corporation governed by Law No. 97-519 of September 4, 1997. The objective of ONEP is to provide assistance to the State and local authorities ensuring access to drinking water for the entire population and management of the public and private assets of the city.

The ONEP is placed under the technical supervision of the Ministry of Economic infrastructures and the financial supervision of the Ministry of finance.

ONEP has institutional and regulatory framework that governs its work and performance.

Organizational structure

ONEP has a board of Directors made up of seven (7) members from the ministries that constitute the stakeholders of drinking water. This board of directors was appointed by decree number 2013-24 of 10 January, 2013.

ONEP is headed by a Director-General assisted by a Deputy Director-General. It is structured in two poles: A technical unit consisting of the following directions as shown in table 4.6 and table 4.7 below:

Table 4.6 Technical unit departments at ONEP

No	Department	Functions
	The department of studies and planning (DEP)	Planning the development of human hydraulics, programming investments in the drinking water
	The management of exploitation and heritage department (DCEP)	Control licensed operations and monitoring the integrity of the assets.
	The projects Department (DP)	Steering all projects
	The Directorate of Mobilization and Protection of Water Resources (DMPRE)	Management and protection of water resources being exploited, develop and execute research for water resources

	The Directorate of the Laboratory for Analysis and Control of Water Quality (DLACQUE)	Evaluating the quality and compliance of public drinking water with national and international standards throughout the country
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Table 4.7 Administrative and financial center departments

No	Department	Functions
	The Directorate of Supply and Markets Logistics (DLAM)	Procurement and monitoring of contracts, planning of purchases of goods and services
	The Financial and Accounting Department (DFC)	Development of financial plans and debt relief, development of business plans for project expansion under supervision of general management, financial and accounting management of investments in the drinking water sector
	The Audit and Quality Department (DAQ)	Ensuring establishment, implementation of quality management systems, maintain the internal control and risk management system
	The Human Resources Department (HRD)	Staff assessment, staff training, define, develop and monitor HR strategy and policy in collaboration with all departments.

ONEP is well structured in such a way to ensure transparency, also the organization has integrated the aspect of gender equality, where both women and men experienced in drinking water sector and management of public services are given equal chance of leading. ONEP makes sure capacity

building of WASH actors through trainings is done, by collaborating with academics and various partners.

On ensuring access to drinking water in Côte d'Ivoire, ONEP works closely with SODECI monitoring its performance in delivery of water supply through controlling its operations and contractual reports submitted. ONEP is responsible in designing, establishment, control and monitoring of various contracts for the delegation of public drinking water services.

Since ONEP is a sole responsible in planning supply and demand for drinking water, the results shows that mobilizing funds necessary to achieve the water for all objective is quite challenging, also ONEP highlights the difficulties on improving SODECI's operation performance.

ONEP being ambitious and open to advancement, the results shows that the company is already taking the opportunity to embrace new technologies especially during the implementation of project financed by donors. Simultaneously, AfWA has sought over the years to building the capacity of African water utilities and influence sector policy this has opened an opportunity window for ONEP sharing good experience with other actors in water sector across Africa and benchmarking its performance.

4.3.4.2 Financial performance

Additionally, results shows that ONEP allocates budget for SODECI this is done during the annual work plan preparation, the funds come from The Water Development Fund (FDE). In dealing with degenerating pipes, the results further highlights how ONEP maximizes investments in renewals of deteriorated pipelines and joints, ONEP performs check-ups and monitoring the performance. Lastly, ONEP has put in place strategies to maintain relationships with donors so as to raise funds via proposal writings and various forums.

4.3.4.3 Customer performance

ONEP works to ensure good drinking water service delivery to customers, however ONEP faces challenges, degeneration of pipes which causes leakages leads to unreliable water services to the community.

Table 4.8 below summarizes the strength, weakness, opportunities and threats analysis of ONEP.

Table 4.8 SWOT analysis for ONEP

Strength	weakness
<p>Institutional performance</p> <ul style="list-style-type: none"> • Institutional and regulatory framework that governs its work and performance. • Good organizational structure ensuring transparency and gender equality. • Capacity building of WASH actors via trainings. • Designing, establishment, control and monitoring of contracts of public drinking water services. • Monitoring of SODECI’s performance in delivery of water services through contractual reports. <p>Financial performance</p> <ul style="list-style-type: none"> • Budget allocation for SODECI from “the National Development Fund” (FDE). • ONEP maximizes investments in renewals of deteriorated pipelines and joints via monitoring of performance. • Maintaining relationship with donors to raise funds. 	<p>Institutional performance</p> <ul style="list-style-type: none"> • Challenges in improving SODECI’s operational performance. <p>Financial performance</p> <ul style="list-style-type: none"> • Mobilizing funds necessary to achieve the water for all objective is quite challenging. <p>Operational performance</p> <ul style="list-style-type: none"> • Degeneration of pipes causing leakages.
Opportunity	Threat

<p>Institutional performance</p> <ul style="list-style-type: none">• Embracing new technologies especially during the implementation of project financed by donors.• Partnership with AfWA has opened an opportunity window for ONEP sharing good experience with other actors in water sector across Africa and benchmarking its performance.	
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4.4 PERFORMANCE OF WATER SECTOR INSTITUTIONS IN BURKINA FASO

4.4.1 MINISTRY OF WATER AND SANITATION

4.4.1.1 Institutional performance

The Ministry of Water and Sanitation is responsible for defining, developing, coordinating the implementation of the national policy for the sector, developing partnerships, and seeking funding.

The Ministry of Water and Sanitation is organized into specific Technical Departments to ensure performance within its framework of mission and roles. The ministry is responsible for the implementation of the national water policy, results further highlight that the national water policy is made up of five (5) national operational programs that are;

- National Drinking Water Supply Program (PN AEP)
- The National Sanitation and Wastewater Program (PN AEUE)
- The National Water Resource Management (PN IWRM)
- Piloting and Support Program (PPS)

The policy has a clear organization, and maintains a permanent consultation of all the sectors to ensure collaboration with all actors. In addition, the Ministry regularly holds consultation meetings bringing together all the players in the sector, and has a monitoring and evaluation system which evaluates the Ministry's performance every six months. Simultaneously, the results indicates the role of the ministry on ensuring capacity development of stakeholders in water sector through trainings and equipment, interstate and international technical cooperation, and research.

The Ministry of water and sanitation works closely with a national water utility (ONEA) in delivering water and sanitation services to the population. The results shows that the ministry monitors ONEA's daily activities in providing water services through an objective-based plan contracts signed by ONEA with specific targets for service quality which are evaluated every six (6) months to ensure compliance with obligations.

In case of the situation where ONEA no longer functions, the results highlights the Ministry's plan to cover the whole of Burkina Faso with water supply through the central departments in relation to; development projects, decentralized structures (regional councils and municipalities) and technical and financial partners.

Ministry's performance is affected by the gaps in water and sanitation policy, results shows several gaps or setbacks, first, there is insufficient dissemination of the policy for good knowledge of all

stakeholders, unstable state budget for water supply and sanitation, non-operationalization of national programs, skills transfer to municipalities, which are not yet able to assume it and strong centralization of the missions of the project implementation units.

4.4.4.2 Operational performance

Results indicates that collaboration between Ministry and ONEA faces some challenges, lack of an established strong structure for orientation and monitoring of management, lack of permanent technical consultation with central structures and lastly, good communication with financial partners, and with customers.

4.4.4.3 Financial performance

In mobilizing funds for water supply and sanitation coverage in Burkina Faso, the sector is financed by different sources as follows; the state budget, state and non-governmental partners, donations from populations concerned and large commercial enterprises.

4.4.4.4 Customer performance

Although in Burkina Faso water coverage is good, rural water coverage is still lagging behind. The Ministry of water and sanitation is working towards prioritizing the provision of efficient water services in rural area through;

- Substantial funding for the implementation of operational programs whose targets are set on the Sustainable Developments goals (SDGs)
- Efficient decentralized structures
- Good collaboration with decentralized structures
- A political and financial priority for the sector
- Strong support from technical and financial partners (TFPs)

Table 4.9 below summarizes the strength, weakness, opportunities and threats analysis of the Ministry of Water and Sanitation.

Table 4.9 SWOT analysis for Ministry of water and sanitation

Strength	Weakness
<p>Institutional performance</p> <ul style="list-style-type: none"> • Well organizational structure to ensure performance within its framework of mission and roles. • Implementation of national water policy • Policy allows participation of all actors in water sector. • Capacity building of stakeholders • Provision of efficient water supply to rural areas • Efficient decentralized structures • Collaboration with decentralized structure • Political and financial priority for the water sector <p>Operational performance</p> <ul style="list-style-type: none"> • Objective- based plan contract with ONEA with targets for quality service. • Evaluation and monitoring ONEA’s performance every six (6) months to ensure compliance. <p>Financial performance</p> <ul style="list-style-type: none"> • Substantial funding for the implementation of operational programs whose targets are set on the Sustainable Developments goals (SDGs). • Support from technical and financial partners. 	<p>Institutional performance</p> <ul style="list-style-type: none"> • Setbacks and gaps in water and sanitation policy. • Strong centralization of mission of implemented projects. • Insufficient dissemination of the policy for good knowledge of all stakeholders <p>Financial performance</p> <ul style="list-style-type: none"> • Unstable state budget for water supply and sanitation. <p>Operational performance</p> <ul style="list-style-type: none"> • Non-operationalization of national programs due to incapability of municipalities.

Opportunity	Threats
Financial performance <ul style="list-style-type: none">• Funds from state-budget, non-governmental partners, and donations.	

4.4.2 L'Office National de l'Eau et de l'Assainissement (ONEA)

4.4.2.1 Institutional performance

ONEA is today a benchmark company in the distribution of drinking water and sanitation in Africa. ONEA's excellence is the culmination of a transformation that has begun and has been fully experienced since the 1990s. Indeed, from 1985 (date of creation of ONEA) to 1990, the financial viability of ONEA was mortgaged by solvency, pricing, very low cost recovery and a lack of cost control. A combination of elements which increased the risk of payment default by the Office.

At the beginning in 1990's ONEA's performance was very poor with only 24 percentage household connection in urban areas, the utility was not able to cope with the growing demand (Marin et al, 2010). In the start of 2000, production and improvement of water distribution extended to almost two million people in four principal urban areas where as in the capital city the number of people with access to water more than doubled in the period of six years (Newborne, 2011). Vigorous structural reform efforts, undertaken since 1992 until 2011, and the Office's engagement in new challenges, have made it possible to correct the above-mentioned shortcomings and place ONEA on the orbit of dynamic societies at the African level.

ONEA has a public- public partnership with the State of Burkina Faso. ONEA is bound to production and distribution of drinking water and waste water treatment and excreta in the urban centers of Burkina Faso while maintaining the company's financial balance. ONEA has a three year plan contract with the State, it sets duties and obligations between two parties. ONEA also develops and implements a strategic plan every five years, a document which defines and guides all actions intended to enable the execution of its contract vis-à-vis the State. ONEA's performance is assessed through annual reports, and meeting with the State.

ONEA works to ensure quality service to the population through

- Ensuring a one hundred percent (100%) coverage of its financing needs for timely execution of its investments.
- Application of pricing policy which would ensure the financial equilibrium of the sector
- Modernization of the operating systems and management of installations and equipment for the production and distribution of drinking water

While climate change and population growth are threat to provision of water services, ONEA is faced with challenges of changing water needs and constraints related to resource availability and investment costs. The results shows that ONEA is embracing new technologies to ensure quality

service provision to the community. Today ONEA is in the process of creating drinking water production centers (CPE) from high flow deep drilling and surface water.

ONEA works to ensure capacity development of stakeholders in the sector. The results shows, continuous training by highly experienced professionals in the sector are provided to improve actor's skills. CEMEAU (ONEA's training center) constantly develops, adapts training content and make it available to stakeholders in the sector such as Municipalities and elected official (central, decentralized levels). Municipalities for example are strengthened in terms of governance of drinking water supply, hygiene and sanitation services. In addition their capacities in terms of decision making, planning, organization, monitoring and evaluation are strengthened so as to achieve SDG 6.1(universal access to drinking water) and SDG 6.2 (universal access to sanitation). But beyond the training delivered by CEMEAU, ONEA, with its long years of experience, puts its expertise at the service of other actors in the sector, whether at the decision-making or operational level, central level or decentralized.

The results highlighted the challenges faced by ONEA in delivering quality water services and sanitation. Scarcity of water resource, costs of investments, population growth, urbanization and increasingly demanding customer base, from the framework of Millennium Development Goals (MDGs) to Sustainable Development Goals (SDGs) access to both water and sanitation have been set but achieving them has been an ongoing challenge in the context of collaboration between the State and ONEA due to the above mentioned setbacks.

As a result of decentralization, ONEA is a privileged partner of local communities. As a result, it has positioned itself more and more as prime contractor and is given a mission to support communities in the realization and management of works for the production and distribution of drinking water and sanitation.

The partnership with AfWA has added value to ONEA and this is reflected in several actions at different levels:

- Capacity building for stakeholders and the company as a whole.
- Training of experts on several themes in particular unbilled water, the audit of water analysis laboratories.
- Master class organization.
- Exposure and signing of partnership agreements with international institutions such as USAID, Bill and Melinda Gates.

- Strengthening the credibility and image of ONEA.
- Enhanced the visibility of ONEA in Africa and in the world.
- Technical and financial support.
- Forming partnerships such as “peer to peer” partnership where ONEA has contributed to improving the performance of water companies in terms of improving water access
- Partnerships with companies such as TDE, REGIDESO, STE, SOMAPEP, CAMWATER, SEEN, SOMAGEP, STE, SPEEN, and SEG have positioned ONEA as a mentor to bring its expertise in the development of the governance of water and sanitation companies.
- Enhanced ONEA to be up to date with the evolution of technologies in the water sector.
- Increased opportunities and exchange of knowledge and skills during different platforms such as high level meeting, congresses, meeting of scientific and technical advice with different water companies and stakeholders.

4.4.2.2 Operational performance

ONEA works to improve its operational performance, the results shows how ONEA is dealing with leaks, illegal connections and counting errors. The number of leaks varies from year to year and depends on several factors. The average number is 9,000 leaks per month. The number of frauds is not precisely determined because it is completely unknown. However, there were 24 frauds recorded in 2019. Fraud is treated according to the legislation in force in Burkina (treated as cases of theft). However, ONEA has its own code of conduct for handling fraud cases.

In the past five (5) years the volume of water lost has remained more or less the same such that the reduction has not been significant. ONEA loses an average of 1,000,000 m³ of water each month. ONEA experts have set different strategies to address NRW. ONEA has specified experts involved; Customer management (meter readers, branch managers, connection agents etc.), IT management (invoicing, data processing etc.), Regional directorates (Network, production and customer management), the public external to ONEA (those who report leaks, frauds etc.). The annual cost is around 120, 000 FCFA.

Simultaneously, results shows several methods adopted by ONEA to reduce the level of NRW such as;

- Establishing a water balance
- Auditing of unbilled water
- The search for a leak

- Repair of leaks
- Changing defective meters

Lastly, ONEA has set up an action plan to scale up NRW management in the future which is aligned with the strategy to reduce water losses.

Capacity building is an essential component for achieving the objectives of ONEA's strategic plan. ONEA develops and implements a three year training plan which has main three objectives

- Increase effectiveness and efficiency of the organization
- Increase and improve staff skills at all levels of the organization
- Promote changes as techniques and technologies are constantly evolving

The training program to increase staff productivity is done by Water Trade Center (CEMEAU). In addition staff benefit from diploma training, exchange of experience in framework of partnership with other institutions and coaching between seniors and juniors.

4.4.2.3 Financial performance

In order to cover its operating costs, ONEA has adopted water and sanitation tariff structure for different group of customers as shown below.

For households

- A subscriber service fee
- An autonomous sanitation and / or collective sanitation fee
- 18% VAT applied on the charge, autonomous sanitation charge, collective sanitation charge and water consumption > 50 m³.

For industries, municipalities, administrations

- A subscriber service fee
- Single rate with no billing range
- An autonomous sanitation and collective sanitation fee
- 18% VAT applied on the fee, autonomous sanitation fee, and collective sanitation fee and water consumption without abatement.

Customers with standpipes, stand-alone water stations

There are customers who are not connected in water network for various reasons such as houses (households) 50 m far from the network, unplanned areas,

- Price of water at standpipes is 188 f / m³ and sanitation fee is 10 f / m³ without ceiling limitation without ceiling limitation

- Price of water at stand-alone water station is 95 f/ m³ and sanitation fee is 10 f/ m³ without ceiling limitation

Raw water customers

These are large houses or industrial customers with a raw water connection (untreated water) used mainly by industries.

- Price of raw water is 439 f/ m³ and a sanitation fee of 52 f/ m³ without ceiling limitation.

The results demonstrate further that tariff structure for water and sanitation is related to per capita income of the population served. Equalization system is applied where the wealthiest subsidize the poorest and the more you consume water the more you pay. Low income consumers are in the social bracket of the tariff which is between 0 to 8 m³ at the price of 188 f/ m³. Low income consumers who cannot pay for water connection are taken into account in the rate for standpipe. A 20-liter bucket = 5 FCFA, 40-liter bucket = 10 FCFA, 220-liter barrel = 60 FCFA.

Despite the many difficulties linked to the mobilization of financial and technical resources, large projects such as ZIGA II and many others across the country now make it possible to supply large urban centers, all of which contributes to the increase in water access rate in Burkina.

The results indicates that ONEA has put in place a water loss reduction strategy to address the issues of volumetric water loss however ONEA rarely conducts economic loss assessment of this volumetric water loss.

ONEA experiences an estimated economic loss of 125,000,000 CFA per month, which is linked to water not billed to ONEA. Despite the water loss reduction system put in place in recent years the losses are still significant and largely impacting operations of ONEA.

4.4.2.4 Customer performance

The results indicates ONEA's water coverage connection (rate of access of drinking water) in urban Burkina Faso to be 92.4%. ONEA has adopted various methods to ensure efficiency in the provision of water services such as;

- Continuous monitoring of the production and distribution of drinking water
- Continuous monitoring of the quality of the water produced both internally and by the National Public Health Laboratory.
- The organization of different meetings at the organizational unit level

- The implementation of a customer listening system through the call center to facilitate the management of complaints.
- The organization of a survey on satisfaction of customers every year.
- The establishment of an internal and external communication system
- The establishment of a device to make connections on time
- The establishment of capacity building mechanisms for internal players to meet customer requirements through continuous training

Table 4.10 below summarizes the strength, weakness, opportunities and threats analysis of ONEA

Table 4.10 SWOT analysis for ONEA

Strength	Weakness
<p>Institutional performance</p> <ul style="list-style-type: none"> • Institutional and regulatory framework • Structural reform. • ONEA has a public- public partnership with the State of Burkina Faso. • A renewable three year plan contract with the State. • A strategic plan every five years. • Embracing of new technologies to ensure quality service provision to the communities. • Capacity development of stakeholders in the sector via CEMEAU. <p>Financial performance</p> <ul style="list-style-type: none"> • Ensuring a one hundred percent (100%) coverage of its financing needs for timely execution of its investments. • Application of pricing policy which would ensure the financial equilibrium of the sector. • Auditing of unbilled water. • Water and sanitation tariff structure for different group of customers per income. • Cross- subsidies between the wealthiest and poor customers. <p>Operational performance</p>	<p>Institutional performance</p> <ul style="list-style-type: none"> • Attainment of 100% water and sanitation coverage is still a challenge. • Failure to strengthening capacities of local actors in terms of water governance, hygiene and sanitation services. <p>Financial performance</p> <ul style="list-style-type: none"> • Lack of economic loss assessment on volumetric water loss

<ul style="list-style-type: none"> • Modernization of the operating systems and management of installations and equipment for the production and distribution of drinking water. • Setup of experts to address NRW. • Establishing a water balance • The search for leaks • Repair of leaks • Changing defective meters • Setup action plan to scale up NRW management in the future • Training to increase staff productivity • Continuous monitoring of the production and distribution of drinking water • Continuous monitoring of the quality of the water produced both internally and by the National Public Health Laboratory. <p>Customer performance</p> <ul style="list-style-type: none"> • Rate of access of drinking water in urban Burkina Faso is 92.4%. • Establishment of call center to manage customer complaints. • Conducting survey on customer satisfaction every year. 	
Opportunity	Threat
<p>Institutional performance</p> <ul style="list-style-type: none"> • Privileged partner of local communities for production and distribution of drinking water and sanitation. 	<p>Operational performance</p> <ul style="list-style-type: none"> • The number of frauds is not precisely determined and is unknown.

<ul style="list-style-type: none">• Partnership with AfWA has added credibility, visibility and value of ONEA on Africa level and worldwide.	<ul style="list-style-type: none">• Scarcity of water resources• population growth• Urbanization• Increasingly demanding customer base• Costs of investments <p>Financial performance</p> <ul style="list-style-type: none">• An estimated economic loss of 125, 000, 000 CFA per month due to unbilled water.
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4.5 Implication of management systems and policies on performance of water sector institutions in Côte d'Ivoire and Burkina Faso

4.5.1 National levels (MOH/ONEP and Ministry of water and sanitation)

Table 4. 11 Similarities and differences in performance of quality service delivery at national levels

No	Performance	Similarities	Differences
1.	Institutional	<ul style="list-style-type: none"> • All institutions are defined by decrees that determines their organizational structures, institutional and regulatory frameworks to ensure good performance of their missions and roles. • Both countries have a national water policy. • The policy calls for participation of all actors in water sectors. • Ministries are sole implementers and monitoring of National water policy. • Both policies in respective countries calls for a clear structural organization and ensures consultation and collaboration of all actors in the sector to guarantee water quality service delivery. • Both national water policies have gaps that hinders proper implementation. • Reforms in water sector policy. • Decentralization in rural water supply. 	<ul style="list-style-type: none"> • The ministry in Côte d'Ivoire has a public-private partnership with a water utility company (SODECI) whereas the Ministry of water and sanitation in Burkina Faso has a public-public partnership with a water utility (ONEA). • Ministry of Hydraulic (MOH) in Côte d'Ivoire is solely involved with hydraulics while contracting another actor ONAD for sanitation service provision, whereas for Burkina Faso the Ministry of Water and sanitation exclusively deals with water and sanitation service delivery in the State. • MOH has contract with ONEP to monitor SODECI's performance and ONAD to provide access to sanitation and drainage facilities while in Burkina Faso the ministry of water and sanitation has a direct contract with ONEA to provide access water and sanitation and monitors its performance. • In Côte d'Ivoire decentralization was done 2003 while in Burkina Faso decentralization was done in 2009.

		<ul style="list-style-type: none"> • Both ministries deal with rural water supply. • Both ministries involve and collaborate with actors and stakeholders. • Ministries act a role of contracting authority. • Both ministries monitors and evaluates the quality of services provided by the delegated institutions and to ensure compliance with obligations through periodic reports. • Capacity building of stakeholders and staff via trainings. • Prioritizing and setting strategies to ensure efficient rural water supply. • Climate change and population growth. 	
2.	Operational	<ul style="list-style-type: none"> • In case of failure of water service delivery by SODECI or ONEA both Ministries have set strategies and structures to overcome the situation. 	<ul style="list-style-type: none"> • The MOH monitors and evaluates ONEP's performance, who is responsible in controlling and monitoring SODECI's quality water service delivery performance. Whereas the Ministry in Burkina Faso monitors and evaluates ONEA's performance in every six (6) months.
3.	Financial	<ul style="list-style-type: none"> • Both ministries receive funds from the State to support water sector 	

		<p>development and programs.</p> <ul style="list-style-type: none"> • Receive funds from donors, multi-lateral organizations and donations. • Mobilizing funds necessary to achieve the water for all objective is a challenge for both ministries. 	
4.	Customer	<ul style="list-style-type: none"> • The rate of access of water in urban areas is way better compared to rural areas for both countries. • The rate of access to sanitation in urban areas is better compared to rural areas. 	<ul style="list-style-type: none"> • Côte d’Ivoire water coverage in urban areas is 83% whereas for Burkina Faso water coverage in urban areas is 92.4% according to data from MOH and ONEA. • Rural water coverage in Côte d’Ivoire is 73% according to MOH while in Burkina Faso is 65.3% according to World Bank report 2017. • Urban sanitation coverage is 49% in Côte d’Ivoire according to MIC report while in Burkina Faso sanitation coverage is 37% as of 2016 according to indicators of performance at ONEA.

Table 4.11 above shows the similarities and differences in performance between the water sector institutions in Côte d’Ivoire and Burkina Faso at national levels that is, between the MOH, ONAD, ONEP and the Ministry of water and sanitation. From the analysis it is evident that the two institutions have set different management systems and policies that govern and affects their water service delivery in respective countries.

There is a clear organizational, institutional and regulatory frameworks that govern the missions and performances of the institutions involved in water sector in the two countries. ONEP goes further in its organizational structure by ensuring gender equality is integrated. The two ministries have demonstrated similarities in managing, monitoring and evaluating of the quality of service

delivery by signing contracts and agreement with water sector institutions, the MOH has signed a lease contract with SODECI and at the same time ONEP has signed a project management agreement with the MOH to monitor SODECI's performance. In Burkina Faso, the Ministry of Water and Sanitation signs a three year plan contract with ONEA. The contracts define, guide and bind all actions intended for water services provisions and attainment of different targets set. To ensure compliance with obligations set, both ministries have set strategies that binds the institutions to periodically report their performance through reports and meeting.

The policy implementation in both countries allows collaboration and consultation with different actors and stakeholders in water sector furthermore capacity building of actors and stakeholders that is done periodically via training so as to improve the knowledge and performance of water sector actors.

To date, the national water policy in both countries have gaps that have hindered effective water service delivery. Although Burkina Faso is benchmarked as one of the best performing utility in Africa, the impacts of the gaps in water policy are quite evident, in 2009 decentralization in rural water supply took place giving rural municipalities responsibilities in managing and ensuring rural water supply and sanitation while ONEA remaining the main supplier in urban areas. However, decentralization was not complete as central and local governments needed to improve their service delivery capacity before undertaking the provision of public services such as water and sanitation (World Bank, 2018). This explains the failure of local authorities to implement projects due to lack of enough skills and financial resources and so many projects delegated to municipalities are carried out by the national agencies. The setbacks in policy further affects the water sector budget causing insufficient funds for expansion of waterworks and non-operationalization of national programs.

According to World Bank report, 2019, Côte d'Ivoire, the political crisis greatly affected the water and sanitation policy, underinvestment and proper maintenance during the period led to a drop in water production in a country causing poor water access between 2000 and 2011. Even though services resumed properly from 2014 and large investment programs to close the gaps were established, reliability and sustainability of service delivery dropped during the crisis and the impacts are still acute and evident to date. The policy lacks management and maintenance aspects

for hydraulic infrastructure in rural areas, this can further explain the lagging behind of rural water coverage in the country.

On ensuring quality water service delivery the two ministries have taken the role of contracting authority by signing contracts and agreements that aims to improve the water sector performance. From the results it is noticed, the different kinds of partnerships the two ministries have developed with water utilities. The public-private partnership that the MoH in Côte d'Ivoire has with SODECI has been named as the oldest running partnership in developing countries and a success story for many other countries in Africa. The Ministry of water and sanitation in Burkina Faso has a public-public partnership with ONEA which has been named as one of the successful partnership in Sub-Saharan Africa.

Although the two partnerships are success stories for many other water utilities in Africa, they are faced with many challenges in managing the partnership with respective water utilities. Since SODECI is a private company the MOH faces challenges in negotiating water tariff and control of factor costs with SODECI. Merely being a technical supervisor the MOH has highlighted the challenge of not being able to guarantee the quality and quantity of drinking water, quality of services provided to customers and continuity of drinking water services for the population served. At the same lack of transparency from SODECI on operations and lease contract with the government hinders proper management and improvement of SODECI's performance. The public-public partnership in Burkina Faso is faced with challenges of the lack of an effective and strong structure for monitoring the performance of ONEA.

4.5.2 Institutional levels (SODECI AND ONEA)

Table 4.12 Similarities and differences in performance of quality service delivery at institutional levels

No	Performance	Similarities	Differences
1.	Institutional	<ul style="list-style-type: none"> • Both institutions have a clear defined institutional and regulatory framework that governs their performance. • Both have agreement and contract with the State in respective countries. • Both ONEA and SODECI are bound to production and distribution of drinking water and sanitation in urban areas of respective countries. • Both institutions embrace new technologies in water service delivery. • Both have established training centers to build the capacity of actors in water sector. • Both SODECI and ONEA are members of African Water Association (AfWA). 	<ul style="list-style-type: none"> • SODECI has a public-private partnership with the State of Côte d’Ivoire while ONEA has a public-public partnership with the State of Burkina Faso. • SODECI has two contract agreement with the MOH while ONEA has one contract with the Ministry of water and sanitation. • SODECI is a private water utility created in 1959 whereas ONEA is a public water utility created under a decree in 1985. • Sanitation sector is dedicated to a public agency (ONAD) works to increase access to quality sanitation services in Côte d’Ivoire while in Burkina Faso ONEA is responsible for sanitation services.
2.	Operational		
3.	Financial	<ul style="list-style-type: none"> • Both institutions are using increasing block tariffs to cater for different consumers’ needs • Both institutions have established prices structures to serve 	<ul style="list-style-type: none"> • SODECI subsidizes households connection to promote individual households connection whereas ONEA only uses increasing block tariffs to subsidize low volume users • SODECI uses FDE from the government to subsidize

		populations in peri urban and unplanned settlements.	household's connections from surtax in water bills to ensure continuity of water services and FNE to cover sectors debts whereas ONEA generates enough revenue from tariffs to cover O & M costs.
4.	Customer	<ul style="list-style-type: none"> Both institutions have established call center to manage customer's complaints and improve performance. 	

Table 4.12 above shows the similarities and differences in performance between the water utilities in Côte d'Ivoire and Burkina Faso at institutional levels that is, between the SODECI and ONEA. SODECI being a private water utility in Côte d'Ivoire and ONEA a public water utility in Burkina Faso. From the SWOT analysis of each institution it is evidently clear that they both have institutional and regulatory framework that governs their works and performance. Both are bound to production and distribution of drinking water services and sanitation in urban areas of Abidjan and Ouagadougou, while ONEA is responsible for waste water treatment and excreta in the urban areas in Côte d'Ivoire a public sector ONAD is a sole actor in sanitation and drainage services in the state of Côte d'Ivoire. The separation of water supply and sewerage in Côte d'Ivoire to be delegated to different institutions could be a reason behind Côte d'Ivoire performing better in sanitation coverage compared to Burkina Faso.

The private water company SODECI and public water company ONEA have both signed agreements that bind them with certain indicators of performance to guarantee quality water service and sanitation to the community. Although both have signed contracts and agreements, the results have identified the difference on the type of contracts signed. SODECI signed concession agreement in 1959 for public urban drinking water distribution services and affermage contract which was signed on 1987 for the maintenance and operation of sewerage and drainage networks and structures in the city of Abidjan and interior of the country, in 2008 the affermage contract was renewed for 15 years until 2023. ONEA signs a plan contract with the State every three years, moreover ONEA develops and implements a strategic plan every five years which aims to achieve the execution of the agreements signed with the State. According to Marques and Berg, (2010), both short and long term contracts both affects performance of a company, a short term contract

which is between 1 to 3 years tends to encourage competition and does not require much supervision by public partner for contract management. In case of poor performance by private actor likelihood of contract renewal is reduced whereas the long term contract experience indicate difficulties in monitoring service quality by the public partner the same challenge the MOH is facing in monitoring SODECI's performance in Côte d'Ivoire. The short term contract advantages between ONEA and public actor expatiate further the reason behind the good performance of ONEA compared to SODECI due to competitive advantages of the contract.

On financial performance, similarities in pricing policy between the two institutions have been identified. Both use increasing block tariffs so as to cross subsidize low volume consumers from large consumers and also reduce water wastage (Collignon, 2002). SODECI and ONEA have put strategies to reach out to poor populations with quality water services and also to generate enough revenue to cover O &M costs. According to World Bank report 2018 ONEA has been performing well financially covering its O &M and even making partial contribution to capital investments from revenue collected whereas for SODECI coupled with the political crisis that lasted for almost ten years and the tariffs that have been constant since 2004, this has led to financial constraints in the sector to self-finance renewals and expand investments to cater for the growing population need of quality water services.

At the same time SODECI has a subsidy policy that promote individual household connections which is backed up with the fund from the government (FDE) from surtax paid on water bills especially from large cities such as Abidjan to ensure continuity of service and extension of services to small towns and peri urban areas (World Bank, 2019) . ONEA's main source of revenue more than 60% comes from the water supply services in the city of Ouagadougou hence cross subsidizing other small towns (World Bank. 2018).

For insurance of sustainability of water and sanitation services, capacity building of staff and stakeholders involved in the sector is of paramount importance. Both institutions have developed training centers to capacitate stakeholders such as municipalities and staff through periodic trainings on governance, water supply and sanitation services to encourage good performance so as to achieve SDG 6, SODECI established Trades Center de l'Eau (CMEAU) located in Abidjan (Yopougon) and ONEAs training center is called CEMEAU located in Ouagadougou.

Knowing the importance of involving customers in proper water usage, planning and management and catering to their concerns, both institutions have developed customer management platform where customers can call, send message and receive the assistance they are looking for. SODECI and ONEA have established a customer listening system through call center, raise awareness to consumers on proper water usage and consumption and environment conservation.

Lastly forming partnership with AfWA has added value and credibility to both ONEA and SODECI by transferring and sharing of good practice knowledge with other water actors in Africa furthermore SODECI and ONEA partnerships with their respective States has been a success story that many water utilities in Africa that are member states of AfWA are learning from. In addition the partnership with AfWA has enhanced visibility of institutions at Africa level and the world which has paved a way for partnership for technical and financial support from different partners.

4.5.2.1 Limitations of the data from SODECI

It should be noted that the data obtained and analyzed from SODECI is merely from online sources meaning the data is limited to only what is available online as the private water institution did not cooperate by filling the required information from the questionnaires sent or accept a scheduled interview with them even after the opening of offices in Abidjan as a result of loosening up the barrier measures put due to COVID-19 in Côte d'Ivoire.

Table 4.13 Benchmarking operational performance between Côte d'Ivoire and Burkina Faso

Indicators	Côte d'Ivoire	Burkina Faso
Number of service connections	1,028,930	350,686
Access to piped water (urban areas, %)	71	86
Household connections ratio (%)	70	65
Average service hours per day	20	23
Non-Revenue Water (NRW) (%)	27	23
Bill collection ratio - private clients (%)	85	98
No. of staff per 1,000 connections	2.0	2.7
Average water tariff (West African francs (CFAF)/m3)	401	504

Compliance with bacteriological standards (% of samples)	96	100
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Source: ICEA-Espelia, 2018. Technical audit of the contracts and agreements in the urban water sector

The table 4.13 above shows a clear difference in performance based on operational performance indicators of ONEA and SODECI. ONEA is way ahead of SODECI in terms of good performance, however SODECI performs better in maximizing individual household connection due to its long term established strategies of promoting individual household connections. In managing NRW, ONEA has clearly highlighted strategies set to curb the situation and reduce water losses in networks such as search and repair for leaks, changing defective meters and setting up action plans to scale up NRW management in the future.

CHAPTER FIVE

Conclusion and recommendations

5.1 Conclusion

This research study aimed to analyze the implication of policies and utility management systems on the water quality service delivery performance of Côte d'Ivoire and Burkina Faso water utilities by using qualitative research method and swot analysis and based on performance indicators the result indicated the strength, weakness opportunity and threat for each water sector institutions. It can be concluded that utility management systems and policies implementation plays a significant role on the performance of water quality service delivery in respective countries. The water utilities from the two countries have been benchmarked as the good performing utilities in Africa one having a public- private partnership and the other one a public- public partnership, however the results have indicated the gaps and challenges each institution faces in delivering water quality services to the community.

Results have clearly illustrated a defined regulatory and institutional frameworks for each institution however there are some inadequacies in management structures including the lack of coordination between stakeholders such as MOH, ONEP and SODECI, binding of the performance of water utilities through contracts which have shown deficiencies in respecting of the agreements signed, political aspects is also another reason that affects the implementation of contracts signed and the service delivery. Capacity building of staff and collaboration with stakeholders to improve efficiency in service delivery through establishment of training centers.

To improve the performance of water and sanitation services delivery both countries implemented reforms in management structures of water utilities. The gaps in national water policies both in Côte d'Ivoire and Burkina Faso have hindered water quality service delivery. Both countries introduced decentralization as a way to improve rural water coverage however failure to clearly separate functions, strengthen and capacitate municipalities has caused both countries to lag behind with Burkina Faso performing behind Côte d'Ivoire. The gaps in policy impacts water sector budget, the continuous stagnant tariffs in both countries affects financial sustainability of the sector hindering further expansion of the water networks, and also affects O & M costs coverage. Sanitation is as equally as important as water supply in order to achieve SDG 6 however sanitation coverage is lagging behind for both countries especially in rural areas. Although many efforts and initiatives have been implemented by both countries to improve sanitation services including

raising awareness to the community, we can't escape from the fact that Sanitation sector has not been an attractive sector for most investors impeding its performance.

The two partnership regime despite the good performance they are faced with challenges. Results indicated deficiencies in coordination and monitoring the operations, quality of services and affermage contract between the MOH and SODECI coupled with lack of transparency on the operation and performance from the private operator. Furthermore the public-public partnership faces setback by lacking effective and strong structure to monitor ONEA performance. All these challenges affects proper management and improvement of performance.

Sustainability of good water quality service delivery are hindered with rapid population growth, urbanization and climate change in respective countries with water sources being the same and no replenishment, financial instability of the water sector it is evident reaching a one hundred percentage (100%) water and sanitation coverage might be a dream that will never be achieved by 2030 unless new measures are implemented soon enough.

In conclusion there is no a more desirable form of partnership in water sector, both private-public and public-public are as important in fostering good water quality services. The success is possible for each institutional structure if proper management systems and policies are implemented at national, local, and utility level.

5.2 Recommendations

The following recommendations are derived from study findings that will enhance the provision of good water quality services to populations of Burkina Faso and Côte d'Ivoire;

Institutional performance

Government as a regulator must put in place comprehensive strategies and plans to addressing the inadequacies in institutional and regulatory frameworks that impede good services provision.

The governments in both countries should address the gaps in national water policy that hinder good service delivery especially in rural areas.

It is essential for the governments in respective countries to address the poor management structures that adds to limited prioritization and knowledge in service delivery to low income communities

Setting up of strong institution structures and competent management teams to regularly monitor the performance of water utilities.

Strengthen capacities of local actors in terms of water governance, sanitation and hygiene through periodic training and raising awareness to increase access to water and sanitation.

It is necessary for all actors involved in water and sanitation service delivery to be on the same level of knowledge and understanding of national water policies of the respective countries

Operational performance

It is necessary for the public partners to regularly evaluate the contracts signed in delivering water and sanitation services to the population.

Short terms contracts can be another way forward for public-private partnership to increase competitiveness and efficiency in water service delivery.

Holding the water utilities accountable for the lack of transparency and poor performance.

To achieve good service delivery, it is important if a single entity is responsible for both operation and investment, separation of heritage ownership and operation has proven to bring some setbacks in Côte d'Ivoire between SODECI and ONEP causing lack of consistency.

To improve rural water coverage, it is crucial to capacitate municipalities and allow full decentralization to take place.

Proper management and maintenance of rural water infrastructure is very important to allow continued water supply to rural areas.

It is important for water utilities to invest in data management information systems, transparency in data is crucial in improving services and monitoring performances.

The water sector utilities should invest in new technologies that are reliable, efficient and easy to use to attract more customer for water supply and sanitation services.

Financial performance

The governments should negotiate tariffs regularly with water utility operators as the water demand is increasing due to population growth so as to enable them to fully recover O & M costs

and contribute to capital investment and extend water networks especially for urban poor and rural communities and minimize gaps in service delivery.

Water sector budget should set aside enough financial funds to support the operations of water utilities especially investing in sanitation services which is still lagging behind for both countries respectively.

Water is perceived as a risk business, government interventions are crucial in establishing strong commercial approaches that will attract more investors especially for sanitation services.

Customer performance

It is important for the policies set to address and prioritize the communities living in unplanned and peri urban areas with water supply and sanitation services through cross subsidies and incentives to increase water coverage.

5.3 Recommendations for further research work

The study focused on analyzing the impact of policies and utility management systems on the water quality service delivery performance of Côte d'Ivoire and Burkina Faso water utilities. The methodology adopted for data analysis was SWOT analysis within the institution and across institutions for comparative evaluation of the performance of water sector institutions in Côte d'Ivoire and Burkina Faso.

SWOT analysis aimed to identify Strength, Weakness, Opportunity and Threats for each institution. While some information were identified using this method, there are some areas where information is lacking, in particular the external factors that can influence organization operations in order to become more competitive.

PEST analysis which stands for (Political, Economic, Social and Technological) is a management method whereby an organization can assess major external factors that influence its operation in order to become more competitive in the market. This tool can be used concurrently with SWOT analysis to produce more comprehensive results that can provide a solid basis for decision making.

PEST analysis can be used as an additional tool for further research on water institutions in Côte d'Ivoire and Burkina Faso so as to obtain more information especially on existing or future challenges or threats, so as to enable effective ways to address the threats and challenges. Also

taking advantages on the available opportunities. The information will be useful to decision makers on clear understanding of the internal and external factors affecting the performance of water utilities, this will enhance better decision making and successful implementation of planned activities.

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APPENDICES

APPENDIX 1



The African Water Association (AfWA)

The African Water Association (AfWA) is an International NON-PROFIT ORGANIZATION which aims to cover all facets of the water cycle. The Institution's mission is to serve as a continental network for Sanitation and Water professionals and to share best practices for sustainable management. Advisory Member with Consultative Status of the United Nations' Economic and Social Commission since 2004, AfWA is a professional Association of Organizations, Utilities and Operators working in the Water, Sanitation and Environment related sector in Africa.

AfWA has more than 100 - Member Utilities in over 40 countries in Africa, and is headquartered in Abidjan, CÔTE D'IVOIRE – West Africa (AfWA, 2016).

Background history of AfWA

Afwa started off as UAWS, which was created in the late 1970's after many negotiations. The motivation and objective for creation was due to decreased rainfall and population growth, sanitation and different problems facing water sector. The preparatory meeting was in Abidjan in February 1979. Several president across Africa have led the fate UAWS hence giving the union a continental call.

The union came to reality after the first congress held in Abidjan in February 1980, eighteen (18) new members joined, new agreements on various issues and appointment of important positions in the union.

In March 1988 the unions headquarters was set to be in Abidjan, Côte d'Ivoire and the functions and administrative secretary was to be taken care by the Société de Distribution d'Eau de la Côte-d'Ivoire (SODECI) (water supply utility of Côte d'Ivoire).

Until to date many congresses have been held about twelve, seminars and workshops have been organized on various topics dealing with water, sanitation and environment. The congresses are international involving experts from all over the world.

In early 2000's new lines of actions of the union were set. UAWS changed its name to the Association Africaine de l'Eau (AAE) in French and African Water Association (AfWA) in English on 25th April 2003. Individual members such as professionals, scholars, researchers and everyone who worked on water, sanitation and environment sector joined the union.

Water Utility Partnership (WUP) programme was launched in 1996 on the reforming of water sector in Africa International conference. It is an African regional capacity building programme with a focus on urban and peri-urban water utilities. The programme was initiated by the African Water Association (AfWA), the Regional center for Low Cost water and Sanitation (CREPA), the Training, Research and Networking for Development (TREND) and the World Bank.

For more than 30 years, a currently known as the African Water Association (AfWA) wants to win the challenge for sustainable access to portable water and sanitation services for African populations (AfWA, 2016).

Mission and objectives of AfWA

- To coordinate the search for knowledge and latest development in the technical, legal, administrative and economic fields for Drinking water production, supply and of sanitation,
- To promote the exchange of information on methods, processes and procedures of drinking water production and supply and sanitation,
- To initiate, encourage and promote any action of cooperation and exchange in professional training.

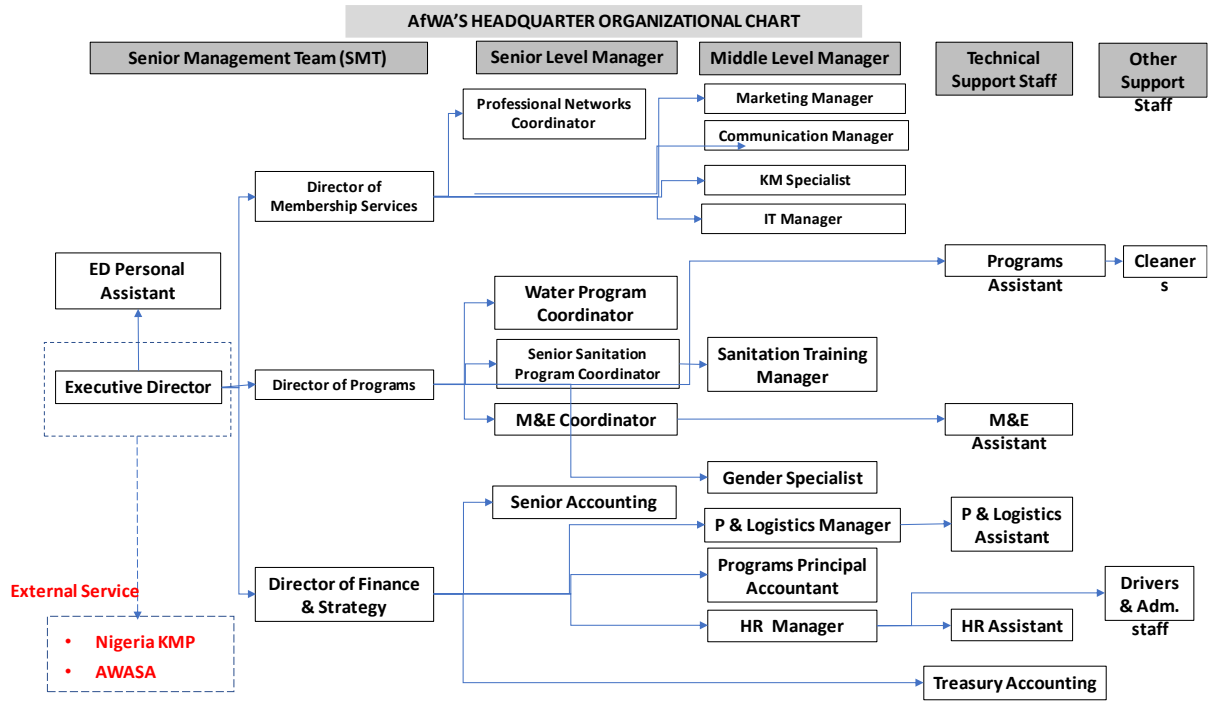
How it works

AfWA is now the unique lead-representation of the professional organizations in the water and sanitation sector in Africa. The Association contributes to the sector agenda-setting, policy development, needs identification, promote innovation and new approaches. By so doing, AfWA seeks to be at the upfront in implementing the African Head of State Sharm El-Sheikh 2008 Declaration aiming at enhancing coverage on water and sanitation in Africa to achieve the MDGs target and the now SDGs.

Over years AfWA has sought to facilitate capacity development of utilities and influence sector policy by providing sound professional outlook on emerging issues and engage other actors (AfWA, 2016).

The African Water Association aims to:

- Provide its members with the results of studies, research and surveys in all branches of activity in the drinking water, sanitation and environment sector;
- Encourage measures of general interest that will help upgrade professional skills;
- Maintain close relations with all regional, continental and international organs devoted to issues relating to the objectives of the Association;
- Organize congress, symposia, seminars, workshops and technical sessions;
- Institute awards and distinctions to promote and stimulate members' performances.



Organizational chart of AfWA

QUESTIONNAIRE FOR MINISTRY OF HYDRAULICS

Références de la personne répondant aux questions:

References of the person answering the questions:

- **Nom/Prénom :**
- **Name/Surname :**
- **Fonction :**
- **Position :**
- **Contact (s) (courriel et/ou téléphone) :**
- **Contact (s) (email and/or telephone):**

Questions d'introduction :

1. Quelle est la fonction principale du Ministère de l'Hydraulique dans le secteur de l'eau en Côte d'Ivoire ?
What is the main function of the Ministry of Hydraulics in the water sector in Cote d'Ivoire?
2. Comment le Ministère est-il organisé pour assurer sa performance dans le cadre de sa mission/rôle ?
How is the ministry organized to ensure its performance on his mission/role
3. Quels sont les besoins prioritaires du Ministère de l'Hydraulique pour assurer des services d'eau efficaces dans les zones rurales?
What are the priority needs of the Ministry of Hydraulics to ensure efficient water services in rural areas?
4. Selon vous, quels sont les revers (lacunes) de la politique de l'eau et de l'assainissement en Côte d'Ivoire?
5. **In your opinion, what are the setbacks (gaps) of the water and sanitation policy in Côte d'Ivoire?**
6. Selon vous, quelle est l'efficacité de la mise en œuvre des politiques de l'eau et de l'assainissement ?
In your opinion, how effective is the implementation of water and sanitation policies?

Performance institutionnelle

1. Quel est le rôle du Ministère dans le suivi des activités quotidiennes de la SODECI et de l'ONEP dans la fourniture du service de l'eau ?
What is the role of the Ministry in monitoring the daily activities of SODECI and ONEP in the provision of the water service?
2. Quels sont les défis de la collaboration avec des institutions privées comme la SODECI?
What are the challenges of working with private institutions like SODECI?
3. Comment le ministère est-il prêt à couvrir l'ensemble de la Côte d'Ivoire avec l'approvisionnement en eau au cas où la SODECI ne fonctionnerait plus?
How is the ministry ready to cover the whole of Côte d'Ivoire with water supply in the event that SODECI no longer functions?
4. Les questions de financement du secteur de l'eau?
Questions of financing the water sector
5. Comment est assuré le développement des capacités dans le secteur des acteurs ? Quel est le rôle joué par le Ministère dans ce sens ?
How is capacity building of sector stakeholders ensured? What role does the Ministry play in this direction?

QUESTIONNAIRE POUR LA SODECI

A. Références de(s) la personne(s) répondant aux questions

References of the person (s) answering the questions

- **Nom/Prénom :**
- **Name / First name**
- **Fonction :**
- **Function**
- **Contact (s) (courriel et/ou téléphone) :**
- **Contact (s) (email and / or phone)**

B. Performance opérationnelle

Operational performance

1. Existe-t-il une stratégie spécifique pour la SODECI en ce qui concerne l'Eau Non Facturée (ENF)? Si oui, qui est impliqué ? Quel est le coût annuel? Si non, pourquoi?
Is there any specific strategy for SODECI to address NRW? If so, who is involved? What is the annual cost? If not why?
2. Quel est le nombre de fuites, de connexions illégales et d'erreurs de comptage qui sont signalées par an ? Et de quelle manière la SODECI fait-elle face à la situation?
How many leaks, illegal connections and counting errors are reported per year? And how is SODECI dealing with the situation?
3. Quelles méthodes la SODECI a-t-elle utilisées pour réduire le niveau de l'ENF?
What methods has SODECI used to reduce the level of NRW?
4. Quel a été le niveau de l'ENF au cours des 5 dernières années?
What has the level of NRW been for the past 5 years?
5. Quels sont les plans pour augmenter le niveau de gestion de l'ENF à l'avenir?

6. What are the plans to increase the level of NRW management in the future?

C. Performance financière

Financial performance

1. Quelle est la structure tarifaire de l'eau adoptée par la SODECI?

What is the water tariff structure adopted by SODECI?

2. Comment les tarifs de l'eau sont-ils liés au revenu par habitant de la population desservie?

How are water prices related to the per capita income of the population served?

3. Quel est le montant des revenus que la SODECI tire de l'eau fournie ? Est-ce suffisant pour couvrir entièrement les coûts d'exploitation et de maintenance?

What is the amount of income that SODECI derives from the water supplied? Is this enough to fully cover the operating and maintenance costs?

4. Quelles sont les pertes économiques liées à l'ENF?

What are the economic losses associated with NRW?

5. Comment l'institution traite-t-elle les pertes économiques?

How does the institution deal with economic losses?

D. Performance des clients

Customer performance

1. Quelle est la couverture des branchements d'eau en milieu urbain et par milieu urbain?

What is the coverage of water connections in urban areas and by urban area?

2. Quelles méthodes utilisez-vous pour garantir l'efficacité de la fourniture de services d'eau?

What methods do you use to ensure efficient delivery of water services?

E. Performance des institutions

Institutional performance

1. Quelles sont les technologies adoptées par SOCEDI pour fournir des services de qualité à la communauté face au changement climatique et à l'augmentation de la population?
What technologies has SOCEDI adopted to provide quality services to the community in the face of climate change and population growth?
2. Quels sont les besoins prioritaires de la SODECI pour assurer un service de qualité aux populations?
What are SODECI's priority needs to ensure quality service to populations?
3. Quels sont les défis de la collaboration avec les partenaires publics? Et comment les relever?
What are the challenges of working with public partners? And how to meet them?
4. Dans quelle mesure le renforcement des capacités est-il fait pour augmenter la productivité du personnel?
To what extent is capacity building being done to increase staff productivity?
5. Comment l'AAE apporte-t-elle une valeur ajoutée à la SODECI?
How does the AAE bring added value to SODECI?
6. Comment est assuré le développement des capacités dans le secteur des acteurs ? Quel est le rôle joué par la SODECI dans ce sens?
How is capacity development ensured in the stakeholder sector? What role does SODECI play in this regard?

QUESTIONNAIRE FOR ONAD

Références de la personne répondant aux questions:

References of the person answering the questions:

- **Nom/Prénom :**
- **Name/Surname :**
- **Fonction :**
- **Position :**
- **Contact (s) (courriel et/ou téléphone) :**
- **Contact (s) (email and/or telephone):**

F. Performance opérationnelle

1. Comment l'ONAD assure-t-il le fonctionnement à long terme des services d'assainissement?
How does ONAD ensure the long-term operation of sanitation services?
2. Quelle est la couverture des services d'assainissement dans les zones urbaines?
What is the coverage of sanitation services in urban areas?

G. Performance financière

1. Quelles mesures ont été prises par l'ONAD pour maximiser les fonds destinés aux projets/activités d'assainissement ?
What measures have been taken by ONAD to maximize funds for sanitation projects / activities?
2. Comment la tarification est-elle structurée pour assurer la couverture des coûts d'exploitation et de maintenance des services d'assainissement ?
How is the pricing structured to cover the operating and maintenance costs of sanitation services?

H. Performance des clients

1. Comment l'ONAD collabore-t-il avec la communauté pour s'assurer que la sensibilisation et les pratiques d'assainissement sont bien mises en œuvre ?

How does ONAD collaborate with the community to ensure that awareness-raising and sanitation practices are well implemented?

I. Performance institutionnelle

1. Comment l'ONAD travaille-t-il avec ses partenaires pour assurer des services d'assainissement adéquats à la communauté?

How does ONAD work with its partners to provide adequate sanitation services to the community?

2. Quelles sont les méthodes appliquées par ONAD pour le suivi des services d'assainissement au quotidien?

What are the methods applied by ONAD for monitoring daily sanitation services?

3. Quelles stratégies utilisent-ils pour maximiser la gestion des actifs face aux divers défis tels que le changement climatique et l'augmentation de la population?

What strategies do they use to maximize assets management in the face of various challenges such as climate change and population growth?

4. Quels sont les principaux défis auxquels l'ONAD est confronté ? Et comment y répondent-ils

What are the main challenges facing ONAD? And how do they respond to it?

5. Quelle est l'efficacité de la politique d'assainissement pour contribuer aux objectifs de l'ONAD?

How effective is the sanitation policy in contributing to the objectives of ONAD?

6. Comment l'AAE apporte-t-elle une valeur ajoutée à l'ONAD?

How does AfWA add value to ONAD?

7. Quelles stratégies l'ONAD utilise-t-il pour assurer la réalisation des objectifs de l'ONAD?

What strategies does ONAD use to ensure the achievement of ONAD's objectives?

8. Comment est assuré le développement des capacités dans le secteur des acteurs ? Quel est le rôle joué par l'ONAD dans ce sens?

How is capacity building of sector stakeholders sector ensured? What role does ONAD play in this?

QUESTIONNAIRE FOR ONEP

Références de la personne répondant aux questions:

References of the person answering the questions:

- **Nom/Prénom :**
- **Name/Surname :**
- **Fonction :**
- **Position :**
- **Contact** (s) (courriel et/ou téléphone) :
- **Contact** (s) (email and/or telephone):

J. Performance opérationnelle

Operational Performance

1. Existe-t-il une stratégie spécifique de l'ONEP pour traiter le problème de l'Eau Non Facturée (ENF)? Si oui, qui est impliqué ? Quel est le coût annuel ? Si non, pourquoi?
*Is there a specific ONEP strategy to deal with the problem of Non-Revenue Water (NRW)?
If yes, who is involved? What is the annual cost? If not, why?*
2. Quelles mesures ont été prises par l'ONEP pour sensibiliser la communauté à la problématique de l'ENF?
What measures have been taken by ONEP to sensitize the community to the problem of NRW?
3. Quelles sont les principales causes de fuites et comment l'ONEP gère-t-il la question?
What are the main causes of leaks and how is ONEP handling the issue?

K. Résultats financiers

Financial Performance

1. Quel est le coût de la gestion des ressources en eau (réparation/remplacement des installations de distribution d'eau)?
What is the cost of water resource management (repair / replacement of water distribution equipments)?

2. Comment l'ONEP maximise-t-il l'investissement dans le renouvellement des canalisations et des joints les plus détériorés?

How is ONEP maximizing investment in the renewal of the most deteriorated pipes and joints?

L. Performance des institutions

Institutional Performance

1. Quelles sont les stratégies mises en place pour suivre la performance de la SODECI dans la fourniture d'eau aux populations?

What strategies have been put in place to monitor SODECI's performance in providing water to populations?

2. Quelles sont les stratégies mises en place pour maintenir la relation avec les donateurs ou bailleurs de fonds?

What strategies have been put in place to maintain the relationship with donors or financial partners?

3. Comment l'ONEP alloue-t-il et suit-il le budget pour répondre au mieux aux besoins de la SODECI?

How does ONEP allocate and monitor the budget to best meet SODECI's needs?

4. Quelle est la fenêtre d'opportunité dont dispose l'ONEP pour adopter les nouvelles technologies en matière d'investissement dans l'eau ?

What is the window of opportunity available to ONEP for adopting new technologies in terms of investment in water?

5. Quels sont les défis auxquels l'ONEP doit faire face?

What are the challenges ONEP has to face?

6. Comment l'ONEP aborde-t-il les défis rencontrés?

How does ONEP approach the challenges encountered?

7. Comment l'AAE apporte-t-elle une valeur ajoutée à l'ONEP?

How does AFWA add value to ONEP?

8. Comment est assuré le développement des capacités dans le secteur des acteurs? Quel est le rôle joué par l'ONEP dans ce sens?

How is the capacity building of sector's stakeholders ensured? What role does ONEP play in this?

QUESTIONNAIRE FOR THE NATIONAL OFFICE OF WATER AND SANITATION
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Références de la personne répondant aux questions:

References of the person answering the questions:

- **Nom/Prénom :**
- **Name/Surname :**
- **Fonction :**
- **Position :**
- **Contact (s) (courriel et/ou téléphone) :**
- **Contact (s) (email and/or telephone):**

M. Performance opérationnelle

1. Existe-t-il une stratégie spécifique pour l'ONEA en ce qui concerne l'Eau Non Facturée (ENF)? Si oui, qui est impliqué? Quel est le coût annuel? Si non, pourquoi?
Is there a specific strategy for ONEA with regard to Non-Billed Water (ENF)? If yes, who is involved? What is the annual cost? If not why?
2. Quel est le nombre de fuites, de connexions illégales et d'erreurs de comptage qui sont signalées par an? Et de quelle manière l'ONEA fait-elle face à la situation?
How many leaks, illegal connections and counting errors are reported per year? And how is ONEA coping with the situation?
3. Quelles méthodes l'ONEA a-t-elle utilisées pour réduire le niveau de l'ENF?
What methods has ONEA used to reduce the level of NRW?
4. Quel a été le niveau de l'ENF au cours des 5 dernières années?
What has been the level of NFE in the past 5 years?
5. Quels sont les plans pour augmenter le niveau de gestion de l'ENF à l'avenir?
What are the plans to increase the level of management of NFE in the future?

N. Performance financière

1. Quelle est la structure tarifaire de l'eau adoptée par l'ONEA?
What is the pricing structure for water adopted by ONEA?

2. Comment les tarifs de l'eau sont-ils liés au revenu par habitant de la population desservie ?

How are water prices linked to the per capita income of the population served?

3. Quel est le montant des revenus que l'ONEA tire de l'eau fournie? Est-ce suffisant pour couvrir entièrement les coûts d'exploitation et de maintenance?

How much income does ONEA get from the water supplied? Is it enough to fully cover the operating and maintenance costs?

4. Quelles sont les pertes économiques liées à l'ENF?

What are the economic losses linked to NFE?

5. Comment l'institution traite-t-elle les pertes économiques?

How does the institution deal with economic losses?

O. Performance des clients

1. Quelle est la couverture des branchements d'eau en milieu urbain et par milieu urbain?

What is the coverage of water connections in urban areas and by urban area?

2. Quelles méthodes utilisez-vous pour garantir l'efficacité de la fourniture de services d'eau ?

What methods do you use to ensure the efficiency of the provision of water services?

P. Performance des institutions

1. Quelles sont les technologies adoptées par l'ONEA pour fournir des services de qualité à la communauté face au changement climatique et à l'augmentation de la population?

What technologies have ONEA adopted to provide quality services to the community in the face of climate change and population growth?

2. Quels sont les besoins prioritaires de l'ONEA pour assurer un service de qualité aux populations?

What are the priority needs of ONEA to provide quality service to populations?

3. Quels sont les défis de la collaboration avec les partenaires publics, et comment les relever?

What are the challenges of working with public partners, and how can we meet them?

4. Dans quelle mesure le renforcement des capacités est-il fait pour augmenter la productivité du personnel?

To what extent is capacity building done to increase staff productivity?

5. Comment l'AAE apporte-t-elle une valeur ajoutée à l'ONEA?

How does the AAE add value to ONEA?

6. Comment est assuré le développement des capacités dans le secteur des acteurs? Quel est le rôle joué par l'ONEA dans ce sens?

How is capacity development in the stakeholder sector ensured? What role does ONEA play in this?

QUESTIONNAIRE FOR ONEA

Références de la personne répondant aux questions:

References of the person answering the questions

- **Nom et prénoms :**
Last name and first names
- **Fonction :**
Function
- **Contact (s) (courriel et/ou téléphone) :**
Contact (s) (email and / or phone)

Questions d'introduction :

Introductory questions:

1. Quelle est la fonction principale du Ministère de l'Eau et de l'Assainissement dans le secteur de l'Eau et de l'Assainissement au Burkina Faso?
What is the main function of the Ministry of Water and Sanitation in the Water and Sanitation sector in Burkina Faso?
2. Comment le Ministère est-il organisé pour assurer sa performance dans le cadre de sa mission/rôle ?
How is the Ministry organized to ensure its performance within the framework of its mission / role?
3. Quels sont les besoins prioritaires du Ministère de l'Eau et de l'Assainissement pour assurer des services d'eau efficaces dans les zones rurales?
What are the priority needs of the Ministry of Water and Sanitation to provide efficient water services in rural areas?
4. Selon vous, quels sont les revers (lacunes) de la politique de l'eau et de l'assainissement au Burkina Faso?
In your opinion, what are the setbacks (gaps) of the water and sanitation policy in Burkina Faso?

5. Selon vous, quelle est l'efficacité de la mise en œuvre des politiques de l'eau et de l'assainissement?

In your opinion, how effective is the implementation of water and sanitation policies?

6. Quel est le rôle du Ministère dans le suivi des activités quotidiennes de l'ONEA dans la fourniture du service de l'eau?

What is the role of the Ministry in monitoring the day-to-day activities of ONEA in the provision of water service?

7. Quels sont les défis de la collaboration avec des structures comme l'ONEA?

What are the challenges of collaborating with structures like ONEA?

8. Comment le ministère est-il prêt à couvrir l'ensemble du Burkina Faso en approvisionnement en eau au cas où l'ONEA ne fonctionnerait plus?

How is the Ministry ready to cover the whole of Burkina Faso with water supply in the event that ONEA no longer functions?

9. Comment est assuré le financement du secteur de l'eau et quels sont les principaux défis?

How is the financing of the water sector secured and what are the main challenges?

10. Comment est assuré le développement des capacités dans le secteur des acteurs? Quel est le rôle joué par le Ministère dans ce sens?

How is capacity development of the sector's stakeholders ensured? What role does the Ministry play in this direction?